Spring 2012 YES Meeting Minutes
Hotel Terra
Teton Village, Wyoming
April 18-19, 2012

Attendees:
Mary Gibson Scott, Grand Teton National Park
David Hallac, Yellowstone National Park
Jose Castro, Bridger-Teton National Forest
Dave Myers, Beaverhead-Deerlodge National Forest
Brent Larson, Caribou-Targhee National Forest
Mary Erickson, Gallatin and Custer National Forests
Joe Alexander, Shoshone National Forest
Chuck Mark, Beaverhead-Deerlodge National Forest
Steve Schmidt, Idaho Fish and Game
Pat Flowers, Montana Fish Wildlife and Parks
Tom Ryder, Wyoming Game and Fish
Gregg Losinski, Idaho Fish and Game
Maureen Davey, Montana County Commission – Stillwater County
Leander Watson, Shoshone Bannock Tribes
Mark Haroldson, USGS Interagency Grizzly Bear Study Team
Mark Sattelberg, USFWS – Wyoming
Mark Wilson, USFWS – Montana
Ty Matthews, USFWS – Idaho
David Kampenwerth, USFWS – Idaho
Chris Servheen, USFWS Grizzly Bear Recovery Coordinator
Tim Bozorth, BLM – Montana
Mike Stewart, BLM – Wyoming

WELCOME Mary Gibson Scott – YES Chair

- Introductions
- Motion to accept 2012 Work Plan by Pat Flowers, Seconded by Maureen Davey. *Motion carried.*
- Motion to approve fall 2011 Meeting Minutes by Tom Ryder, Seconded by Mark Sattleberg. *Motion carried.*

2011 POPULATION STATUS UPDATE - Mark Haroldson (USGS IGBST)

We use the Chao 2 estimator of females with cubs to track population change. We compete a linear model and a quadratic model of that Chao 2 estimate of number of females with cubs on an annual basis and assess whether the linear model fits the data better than the quadratic model. This is the first year since 2006/2007 that the model weight shifted from the linear model to the quadratic model. We ended up with a model

average Chao 2 estimate of 55.6 females with cubs. That translates into a total population estimate of 593 bears. The margin of error is from 533-652.

Occupancy

- Same as what was presented at the fall 2011 meeting – 17 of 18 Bear Management Units (BMUs) were occupied during 2011. 18 of 18 have been occupied at least 4 of the last 6 years.

Mortaility

At the fall 2011 YES meeting we had 34 known and probable mortalities documented. 31 were human caused, 0 were natural, and 3 were undetermined causes.

- Eleven of these were independent aged females,
- 13 were independent aged males,
- 7 were human caused mortality of dependent young, and there was 1 additional loss of a dependent young from an undetermined cause.
- Two of the 34 known and probable mortalities were attributed to bear deaths that occurred in 2010. One of which we know the sex of because it was a radio collared bear mortality and the other was a carcass that was found and they could not determine sex. At this time none of the mortality limits had been met.
- Where we ended up was 42 known and probable mortalities, 37 human caused, 1 natural, and 4 undetermined cause. That DNA result we were waiting for came back female.

For independent aged females there were:

- 6 management removals,
- 0 radio marked loss,
- 10 reported losses (most were hunter related).

For independent aged males there were:

- 10 management removals (most livestock related),
- 0 radio marked loss,
- 6 reported losses.

For dependent young there were:

- 7 human caused mortalities
- 1 undetermined caused mortality.

In 2011, mortality limits for both independent aged females and independent aged males were exceeded. With the addition of the 2 female mortalities attributed to 2010, we exceeded the 2010 independent aged female mortality limit as well. Between the

years 1986-2011 independent aged female mortality limits have been exceeded 5 times and independent aged male mortality limits have been exceeded 7 times.

GRIZZLY BEAR CONSERVATION STRATEGY 101: POPULATION STANDARDS AND MONITORING - Chris Servheen (USFWS)

This session is designed to reacquaint the YES managers with the content of the Yellowstone Grizzly Bear Conservation Strategy.

All of us are committed to use the best available science to understand the status of the population and to implement new information as the science becomes available on ways to understand the vital rates of grizzly bears and the status of grizzly bears in this ecosystem.

- In the 1993 recovery plan we had a series of demographic standards related to sustainable mortality limits and those were based on sightings of females with cubs and coming up with a minimum population estimate, and then allowing no more than a certain percentage of that total population to die based on the numbers of the bears we thought we had seen in the system.
- We started to revise that in 2000, based on all the new information gathered by the Study Team, with the idea that we would incorporate this new information into the Conservation Strategy (CS) which is intended to be the post-delisting management document.
- We did that through a process of building the best scientific information, putting it out for public comment, and then finalizing the CS.
- The standards that I will talk about today exist in the CS. Simultaneously we made changes in the CS so we had to make revisions to the recovery plan chapter associated with the Yellowstone Ecosystem and so the same changes we put into the CS were implemented into the revised recovery plan chapter, all of this done prior to 2007.

Demographic Criteria

Standard #1:

- Maintain a minimum of 48 females with cubs-of-the-year (COY) in the Yellowstone ecosystem as indicated by the model average Chao 2 estimate for that year. The number of females with COY cannot fall below 48 for any 2 consecutive years. The origin of the 48 number is that 48 females with COY is equivalent to a total population of at least 500 grizzly bears which is the goal for the Yellowstone Ecosystem.

Standard #2:

- Distribution. 16 of 18 Bear Management Units (BMUs) within the recovery zone must be occupied by females with young with no two adjacent BMUs unoccupied during a 6 year sum of observations. This provides a way to make sure that

bears are reproducing throughout the area that we have provided for grizzly bears.

Standard #3:

- Mortality Limits. Using this standard we estimate the population size and we count the number of dead bears in 3 different cohorts (independent females, independent males, and dependent young) and we establish mortality levels that cannot be exceeded for those 3 different cohorts. When we count mortalities we count known mortality and then we count a certain number of unknown/unreported mortalities based on recalculation of how many bears were found with collars versus reported from the public.
    - For independent females (at least 2 years old) the mortality limit shall not be exceeded in 2 consecutive years. Includes all sources of mortality, this mortality limit is 9% of total number of independent females.
    - For independent males (at least 2 years old) the mortality limit shall not be exceeded in 3 consecutive years. Includes all sources of mortality, this mortality limit is 15% of total number of independent males.
    - For dependent young (<2 years old) the mortality limit shall not be exceeded in 3 consecutive years. Includes only known and probable human caused mortalities and this is 9% of total number of dependent young.

These mortality limits were developed with the idea that if we are under these mortality limits then the population would have a high probability of being stable to increasing.

- In fact, if you look at the independent female mortality limit (9%) and turn that over – 9% female mortality means that 91% of the females survive from one year to the next. With a 91% adult female survival that gives us a probability of 95% that the population is stable to increasing from one year to the next.

Very conservative estimate of mortality limits for the 3 age classes we look at.

- These mortality limits were re-evaluated and new recovery criterion was developed in the 2000 time period based on new information and better ways to estimate the population size and to estimate the number of unknown and unreported mortalities that occur in the system.
- Prior to the development of this criteria, we knew that there were unknown and unreported mortalities in the system, we made assumptions that for every 2 mortalities that we knew about there was 1 that we didn't know about.
- In the early 2000 time period there was some work done to provide a way to estimate the number of unknown and unreported mortalities.

Demographic parameter data are collected and analyzed by the USGS – IGBST and presented each year.

Questions:
Steve Schmidt: What is the management goal of this ecosystem?
Chris Servheen: We need to move from a program of recovery to a program of management for the Yellowstone population. We must realize we are not in the state we were when we started this recovery process (three times as many bears on the landscape now). We need to balance needs of bears and those of people who live, work, and recreate here.

Ty Matthews: What happens when we exceed the mortality limits?
Chris Servheen: We undergo a Biology and Management Review – outlined in the Conservation Strategy. The Study Team pulls together all the demographic data on the population and tries to understand why the mortality limit has been exceeded? Then we explain this in detail and make management recommendations to the YES on how we can minimize conflicts.

Steve Cain: How, mechanistically, do demographic parameters in the Conservation Strategy change?
Chris Servheen: The Conservation Strategy is adaptable and should reflect best available science and these changes need public comment.

- Come to the YES and have IGBST present the new best available science that indicates we need to make some changes to the parameters. YES agrees and asks IGBST to pursue changes at which point we would provide scientific basis for the changes.
- Public Comment.
- YES then finalizes.

<u>IGBST DEMOGRAPHIC REVIEW</u> – Mark Haroldson (USGS IGBST)
A number of demographic workshops started in 2011. In the February 2012 meeting we incorporated a review of our demographic analysis which we started last fall. A lot of Study Team members and outside experts reviewed this data.

- Population trend is assessed annually using counts of females with cubs using the Knight Rule Set which is a distance based method. This was constructed originally to minimize what we call *Type 1 Error* of calling one family 2 different families – essentially making paper bears. We have been using this since the early 1990's.

- In the 2000's we started applying a Chao 2 estimator to the sighting frequencies of those unique families in an effort to correct for sighting heterogeneity. We assess trend using a linear regression and compete that against a quadratic – a line that can have a bend in it, that can allow a population to change trajectory. We compete those two models to assess trend.
- Key assumption is that the trend in the female with cubs segment is representative of the population as a whole.

One of the criteria in the revised demographic recovery criteria that were appended to the recovery plan in 2007 was that if the AIC weight changes to favor the quadratic term it triggers a full demographic review. This is the process that we met last fall for the first time and starting in November (2011) we undertook a full demographic review.

- In 2006-2007 when we started running these models 75% of the support was on the linear model.
- 2008 it started to change, tipping toward the quadratic model.
- In 2011 the AIC weight had more support for the quadratic model which shows that the trajectory of this population using this estimator has changed.
- What we have been basing our population estimate on all along is an average between the two and this is probably still appropriate because the weight is pretty darn close – just tipped slightly over towards the quadratic.

Last fall we began a demographic review because we met this trigger. It was primarily done by Frank van Manen (population ecologist from TN detailed to the IGBST), myself, Dan Bjornlie and Dan Thompson (WYG&F), Rich Harris (U of MT), Shannon Podruzny and Karrie West (IGBST).

- We used the data that was collected from 2002 – 2011, the data collected since we published our Monograph in 2006 that looked at demographic rates and population trajectory data from 1983-2001.
- We used same methods that we applied previously. We were looking specifically at vital rates of cub survival, yearling survival, independent aged bear survival, fecundity (expression of how many cubs females have on an annual basis), and then changes in population growth rate from 2002 – 2011.
- What we found when we compared to the previous time period, this recent time period (2002 -2011) we have seen a decline in cub survivorship, a decline in yearling survivorship, a little bit of change in the proportion of females with cubs in the population, a little bit of change in the fecundity.
- But, we have run a whole lot of models that look at different temporal and individual covariates and out of the suite of models the ones that floated to the top with cub and yearling survival suggested stronger evidence for density dependent effects.

- The suite of models we ran for the proportion of females with cubs in the population point to stronger evidence for a white bark pine effect over density dependence.
- When we looked at independent female survivorship it has basically stayed the same, and male survivorship has increased.
- If we look at the population growth rate that we derive from those survivorship and fecundity rates, previously 1983-2001 we were looking at a 7-8% growth rate per year, or looking at the alternative survivorship schedule it was about a 4% growth rate per year.
- In the recent time period there has been a decline in the growth rate, using the known mortalities we are looking at a 2% growth rate per year, or alternatively, looking at the assumed dead data we are at a flat or stable population.
- Since 2002, we are looking at a 2% growth rate per year or a flat growth rate depending on which survivorship model we use.
- Truth is probably somewhere in between.

Question
Joe Alexander: Between the two lines which was more accurate given what we know.
Mark Haroldson: Truth is somewhere in between.

If we go back to this Chao 2 Estimate and if we do a linear change point analysis where we run a bunch of linear models what it finds is that it wants to put a change point somewhere between 1999 and 2000.

- If you look at the rate of growth between 1983-1999 it suggests 5% rate of increase annually and basically a flat line during the most recent period. Here you have an independent, different data set that is basically showing us the same thing – that the growth rate for the population has changed.

Evidence from multiple analyses that point to the same conclusion – the growth rate for the GYE grizzly bear population has declined.

- The rates we have been showing are the average rates. In reality the population can be going up and down during this time period.
- We have to acknowledge that the data presented here are all point estimates and there are margins of error.
- And we still have a real conservative pop estimate because it is derived from the Chao2 estimate using the Knight Rule Set which we know is biased low and becomes more biased at higher population numbers.
- We still see evidence of range expansion in the population.
- So, we do have competing hypotheses about what is driving some of these changes.

    - Density dependent effects – we expected to see this 10 years ago when we started the monograph work. We expected to see a decline in cub and yearling survivorship, and probably an increase in male survivorship.
    - Problem is we have a decline in White Bark Pine (WBP) - a loss in a key resource that could be affecting some of these vital rates.
    - We would expect to see the same impacts in cub and yearling survivorship from WBP decline that may be attributable to density dependent effects.
- There could be other things going on that we don't have a good handle on.
- The changes we see are probably attributed to both density dependent effects (changes we saw in analysis really started before we saw WBP decline), they may have been exasperated by WBP decline.
- We have a summary of the workshops and the demographic review in draft form and we hope it is out early summer 2012.

Questions
Tom Ryder: Given the demographic review you just shared with us, are those survivor data and other things that you use to drive the most recent demographics analyses coming from the existing BMUs or the entire system, including areas outside the BMUs?
Mark Haroldson: They are coming from the entire system, including areas outside the recovery zone.

Mary Erickson: When we looked at the Yellowstone grizzly bear population we would have all presumed that over time that we would have had a stabilizing trend. I understand that there is some confounding information as to why. But the troublesome thing as a land manager is that people will look at this information and there is likelihood that they will draw a different conclusion as to the "why". What is the scientific method to help tease out the answers to the "why"? What do we do next – to make sure that we don't jump to conclusions as to what is causing this without really having a scientific basis.
Mark Haroldson: We have developed a suite of individual and temporal covariates that we bring in and we compete these models to see which covariates float to the top. Bottom line – we might be able to get an inkling as to what is causing this but no one knows for sure.

Joe Alexander: What work has been done by the WBP subcommittee to look at annual sighting of bears to see if there is a change in the distribution of the bears related to WBP loss?
Mark Haroldson: We are trying to bring those coverage's into these analyses now and are working towards exactly what you are talking about. We have done a lot of work on

this – the evidence shows no sign of a collapse of the bear population. If anything we are showing stable – increasing populations and multiple analyses point to the same thing and this WBP issue thing will play out. So far we are doing okay.

Dave Myers: Where the bears are expanding to now - is it viewed as lesser habitat then the core of the PCA?
Mark Haroldson: Not – it is not seen as lesser habitat.

Tim Bozorth: Is the decline of the Northern Elk Herd also one of the factors you are trying to include in this analysis?
Mark Haroldson: Yes. The group has had a number of discussions relative to ungulates. Wyoming will point out that the herds to the south have not declined. The northern range herd has declined. I don't know about the herd units in ID – are they going down?
Steve Schmidt: Our elk population in Island Park has gone down but we attribute this to our harvest. Total number of elk has declined.
Tom Ryder: Elk herds in Wyoming are above objective. The herds in the greater GYA, in the northern most herds, specifically Sunlight Basin, we are seeing similar things such as declining calf survival. Interestingly, while the herd is at objective, the migratory segment of the population that summers in Yellowstone and migrates to the east and winters in Sunlight Basin - that population has seen major declines in both the survival of calves and the number of elk. The resident population along the Beartooth front is doing very well. Segments of the herd are experiencing different demographic factors based on a variety of things.

<u>POPULATION SIZE ESTIMATORS</u> – Mark Haroldson (USGS IGBST)
Megan Higgs and Gary White came up with this idea.

- Idea is to use aerial surveys ONLY to determine population size.
- Fly 2 times a year inside and outside the PCA to
    - 1) see how many radio collared females with cubs we see during flights
    - 2) count the number of unmarked females with cubs we see during each flight.
- This is desirable because it does not use the Knight rule set which underestimates our current population.
- Pilots and observers will not use telemetry to find bears – but if they see a female with cubs they will turn on the telemetry to see if female is collared.
- We will get a proportion of females that were seen on both flights, on 1 flight and on neither flight.

- We will know how many collared females with cubs we have on the landscape and how often we are seeing them.
- Key assumption – the proportion of seeing marked females is the same as for unmarked females.
- The problem is for our data, the females only have cubs on average every three years - our sample sizes are small. And we don't see the females with cubs a lot.
- The way the guys are getting around this is they are lumping the data over all years to build the basic model and then we will use annual sighting stuff to pull into the model to estimate the year totals.
- Problem 1 – we don't have a lot of collared bears, specifically females with cubs using moth sites in SE portion of the ecosystem. If we don't account for this, our estimates will be biased high.
- So we have a protocol that we are working on now to apply this Mark-Resight estimator in all portions of the ecosystem except the moth sites.
- In the moth sites we would do a moth site only flight to count the females.
- We will sum the two estimates and can propagate the uncertainty, or margin of error in both estimates, to be able to produce a population estimate of females with cubs with a confidence around it.
- Both Gary and Megan think this methodology has a lot of potential and provides a foundation for future work and something we can begin to implement now - but we have to work out the moth site issue and we hope to have a protocol in place to start doing this this year and start transitioning to this method for estimation of females with cubs in the near future.
- This work has been submitted to a peer reviewed journal.

Pat Flowers: Have you figured out the minimum number of collared females you would need to provide the appropriate level of statistical reliability?
Mark Haroldson: It will work with what we currently have on the landscape, if we get more of them out in more places it will work better. We need to get more collars out in some places where we don't currently have efforts and we also have to add more areas that we will need to fly.

Tom Ryder: Trying to get my head around the data you just showed and why the data points on the earlier years of the comparison are more closely aligned than the ones from 2001 on.
Mark Haroldson: What we think is going on is that the Chao2 estimator is negatively biased at higher population numbers so we were at lower population numbers back then and Chao2 worked better and it is probably not working as well here (current).

Marueen Davey: Which agency or agencies collar grizzlies?
Mark Haroldson: Right now IDF&G, WYF&G, USGS and NPS. MTFW&P is collaring management bears and will help with research bears.

Joe Alexander: Statistically the Chao 2 is no longer valid – is that why we are switching?
Mark Haroldson: We know it is conservative, biased low, and we know that the bias increases as population increases.

Jose Castro: Are you looking at mortality just in the recovery zone or all over the ecosystem?
Mark Haroldson: All bears everywhere.

IMPLICATIONS OF DEMOGRAPHIC REVIEW AND RECOMMENDATIONS FOR FUTURE MONITORING - Mark Haroldson (USGS IGBST)
These recommendations were generated at the workshops this winter. We are trying to come up with a more accurate population estimate in the GYE and we wanted to provide continued security for the core grizzly population while possibly providing managers more flexibility regarding mortality limits. We would like the committee to consider the following recommendations.

Recommendation #1

- Over next two field seasons implement the mark-resight method to estimate # of females with cubs in the ecosystem. Acknowledging that we are going to have to develop an adjustment for females with cubs on the moth aggregation sites in the SE corner of the ecosystem. Acknowledge that we are going to continue to do the Chao2 estimate until we can prove the mark-resight method works.
    - Advantages – more accurate estimate of females with cubs in the ecosystem than what the Chao2 is currently providing us and this will allow us to more accurately assess mortality limits.
- We keep bumping up and exceeding the mortality thresholds partly because the population estimate we derive from Chao2 is biased low.
- We will have to maintain the sample of marked females in the system and we would like to have more marks out there.
- We need to address moth site issue. We will have to delineate more bear observation units and do a little more flying as well.

Recommendation #2

- We would like the committee to consider adopting the USFWS suitable habitat boundary that they presented in 2007 as part of the delisting package as the area within which the population estimate will be derived and mortality limits will be counted.
- We are also proposing a modification to this original line that encompasses areas that are potential sinks.
- Another modification if we do this is that all portions of the recovery zone will be in the modified suitable boundary.
    - Advantages: defines same area for population estimate and counting mortalities.
    - Mortalities outside the core area would not be counted against mortality limits.
    - It does allow for continued expansion, bears that occur outside suitable habitat will be allowed to live there as long as they are not causing conflicts, and they would be managed if they did.
- The consideration is for a hard boundary for mortality and population estimates. Requires expanding observation flight areas.

Questions
Marureen Davey: Do you have disadvantages?
Mark Haroldson: No. We think it is the right thing to do. Right now we are being penalized for success. We have bears leaving the core and getting into trouble in peripheral areas and getting removed from the population and they are counted against mortality limits. In one sense, these bears have already left the population.

Steve Schmidt: Do you think we can maintain 500 bears and just count mortality in the Primary Conservation Area?
Mark Haroldson: I can't answer that right now.
Steve Schmidt: My concern is I think we need to think carefully about what it might mean in the future to create the biologically suitable area as our line in the sand – my question is will that limit our management options in the future for bears that are within the biologically suitable area?
Mark Haroldson: Limit it how?
Steve Schmidt: We know that bears inside the biologically suitable habitat will get into trouble and will we be at a point sometime in the future where it will be difficult to remove those bears because they are within the biologically suitable boundary?
Mark Haroldson: I don't know if I can answer that question. One thing I would comment on is that right now we have competing hypotheses on what is influencing the change in the demographic rates – is it density dependent or white bark pine? Let's just say it is white bark pine - one of the management considerations you could make if we

continue to loose white bark pine and it comes out that it was a really important food and it overrides the density dependent effect. You could make an argument that you need to expand the recovery zone to allow bears more options. This would maybe work towards accommodating that need.

Tom Ryder: Getting back to the fact that the existing boundary line essentially penalizes us for animals that are removed outside of the suitable habitat zone, just curious if you have looked at, year after year, how many of the mortalities that have occurred outside of the blue zone would have potentially pushed the system over the mortality limits essentially where if they weren't counted that particular year we wouldn't have exceeded those limits?
Mark Haroldson: We haven't done that analysis. We have looked at the trend over the last 8-10 years and looked at what was outside that suitable line and the numbers for males and females were basically flat until the last 3-4 years and then they have been going up. As time goes on we are getting more bears outside that proposed suitable line.
Tom Ryder: In Wyoming's portion without question those mortalities that are occurring outside the suitable habitat zone (blue line) are occurring in areas where those animals are just not socially acceptable. Bottom line for us is that it makes a lot of sense to go with this recommendation.

Dave Hallac: Is it possible to go with this recommendation but still present data annually on the number of mortalities that are occurring outside this area.
Mark Haroldson: Yes, we would still track everything. We will still count mortalities wherever they occur, they just won't be counted against our proposed mortality. The same thing is true for females with cubs. We will still count them wherever they are seen, but if outside that line they won't be used for the Chao2 estimate or the mark-resight stuff.

Maureen Davey: I am just hoping that expanding this line doesn't threaten future grazing allotments that might be included in this.
Mark Haroldson: No, I don't think so. We are talking about pulling back the area where we are counting by half.

Chair: We have two recommendations and I think these need to be two separate motions

- Transitioning from Knight Rule Set/Chao 2 to Mark-Resight during two field seasons – 2012 and 2013 – where you would track both.
- Derive our population estimates and count mortalities only within this fine-tuned suitable habitat boundary.

Tom Ryder: I would like to move that YES adopt workshop recommendation #1 allowing the study team over the next 2 field seasons to implement the Higgins et al mark-resight method to estimate the number of females with cubs of the year with the caveats listed under the main recommendation.
Pat Flowers: Seconds motion.
Tom Ryder: I will commit our department to help expand aerial surveys wherever we need to and we will also commit our large carnivore personal to step up their trapping efforts in places where we need marked bears.

Motion passed to accept Recommendation #1

Chair: Recommendation #2 is to accept the USFWS suitable habitat line as the line where we derive population estimates and count mortalities. All females with cubs and mortalities outside the suitable habitat line will still be recorded.

Steve Schmidt: This is a very important question and I want to make sure we have talked it through. I would like to take a break before we address this.

Chair: Okay, 20 minute break.

Tom Ryder: I would like to recognize the effort that the study team has put into this recommendation and move that YES adopt workshop recommendation #2.
Pat Flowers: Seconds.

Discussion
Steve Schmidt: I would like to offer an alternate motion when you are ready. How would you like to proceed?
Chair: Let's discuss this motion first.
Mary Erickson: I am in support of this motion as I understand it. If we come to an agreement on this, there is a public process that the USFWS has to put this out for public comment.
Chris Servheen: Develop a document that would explain this in a lot more detail and where we would make adjustment to the CS and the recovery plan chapter about Yellowstone and put this out for public comment, take public comment, respond to public comments, and then finalize the final document based on the public comments received.
Tom Ryder: If we chose a different boundary then what was presented to us then the study team would have to do more analysis.
Joe Alexander: What are Steve's concerns?

Steve Schmidt: Mortalities outside the PCA would not be applied to limits on the CS. I was not suggesting that we dramatically alter the way we deal with bears outside the PCA, just a matter of accounting. My thought was looking into the future wondering what the ramifications would be of suggesting that bears outside the recovery area but within the biologically suitable area are essential to the population and Mark couldn't tell me how essential they were and I understand that there might have to be more analysis to determine if we can maintain 500+ bears in the system. The existing recovery area is the PCA boundary. By making this change are we suggesting now that the recovery area is now the biologically suitable area? Are we making this assumption and if so will this make management options inside the biologically suitable area more cumbersome in the future? My alternate motion would be for us to back the line clear up to the PCA boundary and still accomplish all of our objectives.
Mark Haroldson: At one of the workshops where we discussed this line, it was brought up briefly going back to the recovery zone and the 10 mile perimeter which was in effect before the delisting rule and it gained no traction with the group at all. Nobody wanted to go back to that line. I think the sense was that it would be taking a large step backwards.
Steve Schmidt: It seems that with the new population estimator we could very well maintain our overall population objectives and not count mortalities outside the PCA.

Chair: On the question with the change of management – can you address this Chris?

Chris Servheen: There is no proposed change of management with what we are proposing here. We are just proposing a change in where we count mortalities. There is no inference that we would have to expand habitat management outside of the PCA. When we began the recovery process and the Conservation Strategy process we never considered the PCA as the area we would try to constrain bears. There are a lot of bears that live outside the PCA.
Steve Schmidt: My motion would be that we only count mortalities against the limits inside the PCA boundaries.

Chair: We have a motion (to accept the new USFWS suitable habitat line where we would derive population estimates and count mortalities against limits) ready for a vote and then we can consider this second motion after that.

Motion Passed
Noted that Steve Schmidt was opposed

Steve Schmidt: My motion would be that we only count mortalities against the limits inside the PCA boundaries.

Maureen Davey: For the sake of discussion I will second this motion.

Chair: What would the Study team do and how would this change our management?

Chris Servheen: Just for a clarification, you are proposing that we count mortalities against the limits just inside the PCA but we count the population size for the entire area?
Steve Schmidt: Yes. I am assuming that with the new population estimate we are more than achieving our minimum of 500 bears in the system and therefore the value of mortalities outside the PCA are of lesser value.
Chris Servheen: Those mortality limits are established based on a percentage of each of the age classes for the population. I don't know how we would functionally do this?
Steve Schmidt: I believe the objective is to make sure the grizzly bear population is healthy inside the recovery area so that is the most important place to monitor mortalities.
Pat Flowers: The distribution standard calls for 16 of the 18 BMUs be occupied. Those 18 BMU go beyond the PCA so if we adopted this motion we would have to revisit this. To me, numbers as well as distribution are important standards for recovery. We will never get a population delisted based on the PCA after we have already spent 20 years of commitment towards a need for larger distribution of bears. I couldn't vote for your motion just for that reason.
Joe Alexander: This motion seems to go counter to everything the study team is trying to do. I couldn't support this motion.
Chair: I would not be comfortable supporting this. Any other discussion?

Motion did not carry.

Mark Haroldson: One more thing. I want to alert the committee to the fact that using the 2002 -2011 data - vital rates and sex ratios for the population indicate that they have changed. If we move forward with some of our changes to the demographic estimation processes some of these vital rates and sex ratios will be used in that. We are not ready to make a recommendation at this time but we wanted to inform the committee that we are still working on some of this data, particularly the sex-age structure of the population. We will likely have another recommendation in the near future to adopt the changes in vital rates and sex ratios indicated by the most recent data which we consider our best available science and incorporate those rates and sex ratios in our estimation of population size and our evaluation of mortality limits.

Brent Larson: If we adopt these new rates and ratios would the population estimate still be conservative.

Mark Harlodson: If we continue to use the Chao2, then yes it would likely be conservative. If we transition to the mark-resight stuff it would be less conservative. Our feeling is that the demographic rates have changed and the best available science is we would incorporate the new rates and ratios in our estimation of population size and our evaluation of mortality limits. At this time we have a little more work to do.

NINTH CIRCUIT COURT RULING – GRIZZLY BEAR RECOVERY AND DELISTING UPDATE – Chris Servheen (USFWS)

The Yellowstone grizzly bear population is recovered. We delisted it in 2007 and it was delisted for just about 2 years. We were litigated on the delisting as expected. A Federal District Court overturned the delisting based on 2 issues;

- The Conservation Strategy (CS) was inadequate to manage the grizzly bear population,
- We hadn't adequately explained that the decline in White Bark Pine (WBP) wouldn't threaten the grizzly bear population.

The USFWS appealed the ruling to the 9th circuit and the 9th circuit decided last fall.

- They overturned the district court on their view that the CS was inadequate.
- But the 9th did not overturn district court on the WBP issue – they agreed that the USFWS did not sufficiently explain how a decline in WBP would not threaten the grizzly bear population.

We have spent a considerable time and effort on this and making a better case on the relationships between the decline in WBP and the health of the grizzly bear population. We have discussed this with a number of outside experts.

- We expected to see this population of grizzly bears to reach carrying capacity and that the population growth would start to level out because of density dependent regulation - competition between individual bears as they compete for resources.
- When you see density dependent regulation in an animal population you expect to see declines in survival for sub-adults, which is exactly what we are seeing right now.
- You tend to see more males and more older females in these density regulated populations because there are more, bigger older animals and it is a risky place to grow up as a young animal.
- Therefore there is less sub-adult survival and recruitment and the population starts to level off.
- What we are seeing today is what we expected to see 10 years ago.
- But we didn't expect that we would see a decline in WBP 10 years ago. As you would expect, a decline in a resource would cause some level of competition for the resource that is available and you may see a decline in sub-adult survival.

- The effects of a decline on WBP are the same as you would find in a density regulated population.

The simultaneous activities of both of those are a confounding thing for us. We are trying to better understand in detail the changes in vital rates in grizzly bears as the WBP population declines. We have made some progress on this. We have 3 recommendations that we can make.

1) Immediately develop a new rule, try to better explain the relationship between grizzly bears and WBP, and propose a new rule and as expected be litigated by the same people and go back to the court system and go through the court.

2) Develop a detailed scientific synthesis of the relationship between declines in WBP and the relationships of other foods to the vital rates of the Yellowstone grizzly bear population. Try to understand in great detail how these vital rate changes have occurred over time, when we saw this break point of leveling in the population and how this related to changes in the WBP population. Better understand the WBP productivity data that is out there. And at the same time look at the distribution of grizzly bears, the distribution of grizzly bear mortalities and conflicts, and the vital rates changes. This synthesis would probably take 20-24 months to produce. At the end of this synthesis we would be able to propose a new rule and delist the grizzly bear.

3) Give up on delisting because we give up on the court system and manage the grizzly bear as a listed species and try to maximize our flexibility. We would lose the cooperative interagency efforts we have today. There is an increasing level of impatience in certain communities and legislative entities. If we lost the interagency cooperation for recovery the end result for grizzly bears would be a negative.

We thought about the various approaches and what we recommend to you is to pursue option #2. We would like YES to consider these 3 options and we would like you to vote on which one you think we should pursue.

Discussion

Tom Ryder – Wyoming's perspective, options #1 and #3 are not an option. We are very supportive of Option #2. Scott Talbot would like a quicker timeframe for a turnaround than 20-24 months. Would you be able to have something for the fall meeting or the spring 2013 meeting?

Mark Haroldson – I don't know. We would be optimistic to get it done in 12-18 months.

Tom Ryder – We would be able to provide personnel if we could speed this up.

Steve Schmidt – Idaho would like to do whatever we can do to shorten the timeframe for Option #2. We would also offer up additional personnel if that would help.
Chris Servheen – We would like to assist in getting this done quicker as well. We don't think we can have this done by spring 2013.
Tom Ryder – Don't want to, in haste to get this done, subject the work to poor quality.

Mary Erickson – I would like to make a motion that the YES group supports Option #2 as the appropriate course.
Joe Alexander – Second
Tom Ryder – If you would accept an addendum to this motion, Option #2, with the caveat that if it is possible to do it a little quicker than 20 months that we try to do that.
Mary Erickson – Certainly.

Chris Servheen – A big part of the synthesis is ALL the WBP data and the understanding of the dynamics of WBP. This is fundamental to getting this done.

Pat Flowers – Chris, have you taken this issue to the IGBC?
Chris Servheen – Yes. They supported Option #2.
Pat Flowers – Hard not to be cynical at this point. We will be sued again and I think there is enough scientific vulnerability with this issue that we could very easily loose again on some other grounds. My cynical side says is there some other path we can follow that doesn't lead us down the same road?
Chris Servheen – No other means. The logical approach is Option #2.

Chair – My take is that the court upheld the CS is a very good thing. All we can do is our due diligence and work towards to a sustainable decision. Do we have any other discussion before we go to a vote?

Motion Passed
Pat Flowers only one opposed

<u>GYE FOREST SERVICE CAMPGROUND ASSESSMENT</u> – Dan Tyers (USFS)
Construct a method to assess all Forest Service campgrounds throughout the ecosystem and to test this method. This is in part a response to the grizzly bear caused human fatality in the Soda Butte Campground in 2010.

How do you invite the public to your developed recreational sites and do it in grizzly bear country? What have we learned from others? This is the first time we have stepped back and looked at this from an ecosystem level. What bubbles up in this relationship is:

- Habitat quality where the campground is located is preeminent in this relationship
- Bear population
- Attractant Storage – the ability for the public to store attracts within the given developed recreational site.
- Information and Education
- Agency Presence

We took the occupancy model and survival model. The occupancy model is based on the ecosystem being broken up into pixels that are 3km squared and data is available for a 21 year period. We took the campground and then assessed for the adjacent pixels and looked at the occupancy for the last 21 years for each pixel and then averaged it. The use of the survival model is based on a series of covariates that describes the human dimensions on the landscape. The analysis unit is a 1x1km that is associated with the activity radius of a female grizzly bear. The covariates are: road density, homes, developed sites. It is a simple arithmetic function for the 170 campgrounds in our assessment – occupancy x survival to give us a product for conflict potential.

Those numbers are normalized for a 0-1 and you end up with a floating coefficient that has value related to the other numbers you derived. These numbers have values in relationship to numbers from other campgrounds. Then you can make a hierarchy, or a ranking, across the ecosystem. We made an effort to inventory the infrastructure in all the campgrounds. We went into each campground and mapped the road base, campsite, box, outhouse, bulletin board, gate, and everything present.

- Agency presence – do you have a dedicated spot for a campground host. There is no standardization for patrols.
- Food Storage boxes – do they meet IGBC standards?
- Information and Education presentation to the public. Have gathered all this information and will try to standardize the messages.
- As the grizzly bear population expands we will be able see which campgrounds are lacking more infrastructure then others.
- Effort to validate 1998 Baselines – roads, developed sites, and grazing allotments.

There were 170 campgrounds in this process (Area is east of I-15 and south of I-90). Forty-four are in the PCA and we missed 7 in our first effort. One hundred twenty six are out of the PCA and we missed 52 in our first effort.

In executive session with Forest Supervisors this morning we agreed that we will get the shortfall from last summer and present a full package.

Chris Servheen - What will you do with the results?
Dan Tyers - Will give managers a chance to look at distribution of infrastructure across the ecosystem, make adjustments. Will identify where there are shortfalls, show where structures don't meet IGBC standards, it will help standardize the I and E efforts, it will council them that they have done all that can be done.

Brent Larson – Will certainly set prioritization for us.
Mary Erickson – What this does for us is give us a map that we can look at. Where are the campsites that are in the highest conflict zones – this is not going to be new information. We are not going into this with the objective of eliminating risk to the public. There is a need to look at the risk and mitigate it, but we can't make it completely safe.
Dan Tyers – there is only so much we can do. We can't eliminate all risk.

<u>PUBLIC COMMENT</u>
Terry Shram (sp?) (Walton Ranch)

- Grizzly Bears ruined our lives – we voluntarily closed our allotment because you can't stand to lose 100 head of cows each year. I sense your frustration and I think you should vote for option #3 – to manage bears. I don't see them ever getting delisted, it has been 20 years. I would like to see Wyoming pull out of it and let the environmental groups pay for it, why should Wyoming have to pay for it? I don't see any light at the end of the tunnel.

Sam Coutts

- I have been in the guest ranch business since the early 1970s around here. I am amazed that we look at all these graphs and you have 20% variable on how many bears we have. We don't have any idea how many bears we have. You need to know how many bears you have. We need to know how many bears we have all the way around.

Louisa Wilcox (National Resources Defense Council)

- When is the public involvement going to be? Will the scientific information that is being used as a background be shared somehow for public comment prior to being put into the next delisting rule?
- **Chris Servheen** – Yes, it will go out to public review/comment before it is finalized.

ADJOURN

April 19, 2012
WELCOME Mary Gibson Scott – YES Chair

- Audience Introductions

INFORMATION AND EDUCATION UPDATE (Gregg Losinski – IDF&G)
The YES I & E subcommittee was charged with some action items at the last YES meeting (fall 2011) to come up with immediate actions that we could implement with your approval. You will see that we didn't wait for your approval on some of these things because they were things that were critical enough and we had been directed to work on them. We talked about this following a Wildlife Management Institute (WMI) meeting in January 2012. Action items that we worked on:
1) New Signage Concept
   - Not getting response that we want from our signs. Trying to figure out what is wrong, what is working, etc… Kerry Gunther will talk about this in more detail later.
2) New Technology
   - QR Codes
   - Apps for Smart Phones
   - Social Media (YouTube and Facebook for example)
3) Media Kits
   - We tend to scramble, we need to have the tools to address the situation (good and bad)
   - States are all working on, or have, Wildlife Human Attack Response Teams
4) Talk about the best available science
   - How do we get this message out to the public?
5) Get the message out to different populations/user groups

WILDLIFE MANAGEMENT INSTITUTE WORKSHOP SYNOPSIS (Gregg Losinski – IDF&G)
The Yellowstone Ecosystem was the best attended session of any of the ecosystems.

Primary audiences identified

- NPS – National Park visitors
- USFS – National Forest visitors
- FWS/USGS – General Public
- FWP/IDF&G/WG&F – Local residents, hunters, general public
- NGOs – Members, donors, general public

Messages that each agency thought was the most important to what they did in relation to humans and bears.

- NPS/USFS – Bear safety; attractant management; bear identification
- FWS – Population status; recovery progress; bear safety
- USGS – Research results
- FWP/IDG&G/WG&F – Bear safety; attractant management; conflict reduction; hunter safety
- NGOs – Ecological value of bears; living with bears; advocacy for more habitat

As part of the Workshop, Chris Smith had each of the participants rank what they thought were barriers to recovery and barriers to delisting.

Barrier to Recovery	Agency Rank	NGO Rank
Bear-human conflicts from inadequate handling of attractants	1	1
Conflicts between big game hunters and grizzly bears	2	5
Opposition to grizzly population increases based on fear of attacks on people, livestock or property	3	2
Bear-human conflicts from livestock husbandry practices	4	3
Bear-human conflicts from unsafe human behavior around bears such as lack of awareness, approaching too closely, feeding bears, etc.	5	2

Barriers to Delisting

- What the Agencies feel the public thinks.

Barriers to Delisting	Agency Rank	NGO Rank

Opposition to delisting based on the belief there are not enough bears or bear habitat.	3.17	3.17
Opposition to delisting based on lack of trust in states to manage a recovered population.	3.25	2.67

Scale: 1 = Not important, 2 = Somewhat important, 3 = Very important, 4 = Critically important

Strengths that agencies think they have in their Information and Education (I & E) Programs

- Strong support from supervisors/administrators
- Experienced, local staff – conflict managers
- Good coordination among agencies
- Enforceable rules and food storage orders – not as black and white because of the different agencies, parameters, locations.
- Strong partnership with some NGO's
    - NGOs hit hard by the economy. Some don't have the resources they used to have.

Most Effective I & E Program Areas

- Reducing accidental killing of grizzlies by black bear hunters
- Managing attractants
- Reducing grizzly-big game hunter conflicts
- Reducing unsafe behavior around bears
- Reducing grizzly mortality associated with human infrastructure

Weaknesses with I & E Programs

- Large transient audience
- Local residents dispersed/hard to reach
- Inconsistency in rules, signs, messages
- Lack of money and staff
- Ineffective use of social media

Main Issues Identified at Workshop

- How can we increase public awareness of the expanding number and distribution of grizzly bears to reduce conflicts, especially with day-users?
- How can we reduce bear-human conflicts on private lands in both gateway communities and rural areas through better management of attractants and public safety?

- How can we reduce conflicts between hunters and grizzly bears?
- How to increase “habitat” for bears in human hearts and minds?

Recommended Focus Areas

- Reducing conflicts associated with unsecured attractants on private lands and in gateway communities.
- Increasing public awareness of grizzly bear distribution and appropriate human behavior, including use of bear spray, among day users in National Parks and National Forests.
- Reducing grizzly bear mortalities due to conflicts with big game hunters by increasing use of bear spray.
- Creating more positive attitudes about grizzly bears and their recovered status.

Questions
Maureen Davey – Does MT have social media on their website
Pat Flowers – Yes. Facebook and Twitter.

Maureen Davey – How about Wyoming?
Tom Ryder – Yes, we are using YouTube more and we use Facebook.

IGBC Critical Incident Guidelines

- Started as a protocol and then ended up being a guideline that went through IGBC.
- A mechanism, so that if something happens in relation to a serious bear-human encounter, we all know about it so that we are not caught off guard.
- We have a final version of this and I will pass it out soon.
- Will allow us to keep internally informed

Image Inventory

- Support within the different agencies to get the right media tools (video footage, photographs) so that we are up to date and getting the most current information/message out to the public.
- We need to give the media the information so they can build a story – if they go look for it on their own it may not be the right stuff.

Questions
Joe Alexander – Has any work been done to get consistency on-line for bear information?

Gregg Losinksi – Not really. The best we have done, and will continue to work on, is to make the IGBC website that central link point.

Chair - NPS websites are dictated by the Washington office (WASO) and we are limited on the amount of space. Facebook, Twitter, and YouTube have been approved by WASO.

Joe Alexander – We are not fully utilizing the electronic arena.

Gregg Losinski – In the past a lot of the bear related materials were supplied by the Center For Wildlife Information (CFWI). Chuck worked with a lot of folks in this room to come up with uniform messages. Grizzly Bear Outreach Program (GBOP) has been doing a lot lately and they have the staffing more so than CFWI to try and work with us to get the message out.

Dave Hallac – In Yellowstone we are thinking less about the message and more about the messaging. We now realize we need support from the outside such as marketing and advertising experts. Have you considered looking at this stuff?
Gregg Losinski – All good stuff, but beyond the resources we currently have.
Steve Cain – Grand Teton started working with a marketing professor at MSU this year to do exactly what you are talking about - looking at messaging in GRTE and YELL and possibly the forests.

Jose Castro – Issues specific to forests are we are a lot more dispersed and the public are entering the forests from many different ways. Large components of our visitors never go by a ranger station and so they are going to get a lot of their information from the bulletin boards at trailheads. We have a lot of outfitters and I think this is another key area – if we could get those outfitters to have an educational kit, whether we require it or just highly suggest it, I think this can be a bonus for the forest service.
Chair – We do this too with the all concessionaire meeting in the May where all permittees in the park are going to get the message re-emphasized. They reach so many more people than we do.

Dan Tyers – Referencing data that I presented at the last meeting where less than 1% of the thousands of public contacts we recorded said that they received meaningful information from our trailhead bulletin boards – it wasn't opposition from getting information from a bulletin board but rather the condition of the bulletin board and the quality of the information that was presented. Doesn't mean bulletin boards don't work, I think it is how we are managing them.

YELLOWSTONE – NORTHERN CONTINENTAL DIVIDE/BITTERROOT ECOSYSTEMS LINKAGE (Chris Servheen – USFWS)

Brief overview of our efforts in trying to relink all the large blocks of public land in the Northern Rockies for wildlife species in general and grizzly bears in particular. This is of value because historically all these areas were connected and connected populations are healthier both genetically and demographically.

This project is funded by the Great Northern Landscape Conservation Cooperative and the Federal Highway Administration. The IGBC signed a memorandum of agreement on the idea of trying to link all the grizzly bear populations to improve their health and their robustness. This MOU was signed about 13 years ago.

Main Objectives

A. Improving the opportunity for wildlife movement within and between the large blocks of public and provincial lands in the Northern Rockies in the US and the trans-boundary Rockies of the US and Canada.
B. Identify fine-scale movement opportunity areas between the large blocks of public lands. Then improving the permeability of highways at these locations by building wildlife specific highway crossing structures and associated wildlife fencing to guide wildlife to these structures.
    - Allow multiple species to cross highway safely and has great benefits to the public because it keeps animals off the highway.
C. Incorporation of landscape scale, programmatic management into Forest planning and BLM planning to maintain wildlife movement opportunities across public lands in the Northern Rockies.
D. Building public support and understanding among the residents of mountain valley on the Rockies about the benefits of healthy, interconnected populations of wildlife and thereby reducing human/wildlife conflicts and human-caused wildlife mortality.
    - Market the idea to the public that it is valuable to have animals being able to move across the landscape.
    - When we allow animals to move across the landscape and we connect all these populations we have healthier populations of species that don't have to be listed as threatened or endangered species under the Endangered Species Act.
    - Great benefits to species of concern like grizzly bears and wolverines, but great benefits to other species like elk and moose and other game species and their ability to move across the landscape and reach winter ranges and maintain connectivity.

Key metrics for evaluation of these goals are the following:

- Implementation of land use planning at the county level that includes consideration of the needs of wildlife in order to move across the landscape.
    - Fundamental issue that makes or breaks the ability for wildlife to move across the landscape and to use winter range.
- Incorporation of comprehensive landscape-scale public land use planning that includes movement and linkage needs for healthy wildlife populations at the federal level particularly in the forest planning process and BLM planning process.
- Identification of fine-scale movement opportunity areas in each of the mountain valleys in the focus area which is from the Purcell Mountains in British Columbia all the way to Yellowstone.
    - Trapper's Point is a great example
- Placement of highway crossing structures for wildlife and associated wildlife fencing at movement opportunity areas.
- Improved functional-level demographic and genetic connectivity among target mammal populations as documented by GPS tracking, DNA collection, and automatic camera methods.
    - Two levels of connectivity are understood
        - Genetic connectivity and that is the movement of males – they move across the landscape and carry genetic material into new areas and this improves the genetic diversity
        - Demographic connectivity is when females across a landscape and set up ranges and have young in a new area where you increase the populations through reproduction.
- Completion of easements and/or acquisitions in identified movement opportunity areas in the next 10 years.
    - Identify the best place for these easements so the best investments can be made.

We just published a Wildlife Monograph which talks about the genetic relationship between all the grizzly bear populations form the Yukon all the way to Yellowstone. It helps us identify where we need to enhance our connectivity efforts.

We have submitted a paper that documents how we are doing this. To identify these fine-scale linkage areas we use GPS telemetry and movement data and we combine this with habitat modeling to understand the best places on the landscape for the animals to move and this helps us identify the fine-scale linkage areas. This paper was submitted and is now in review.

To facilitate this type of connectivity we have to deal with the Fracture Zones which are the highways

- Highway 3 (Canada)
- Highway 2
- Highway 200
- I-90

Currently we have efforts underway on each of the highways mentioned above. We are using movement patterns of bears - where they are moving and how they are moving across the landscape related to the highway - and combining that with the habitat data to identify the fine-scale linkage areas in these places.

We would like to move this effort all the way south. The objective is to apply the fine-scale linkage work that we have going on in the north in a stepwise fashion all the way south from I-90 to Highway 12, Highway 93, Monida Pass/I-15, Highway 20 and then into the Yellowstone. We can't make the animals move, but we are trying to provide the opportunity for these animals to move so that they can expand and move their range as necessary and eventually reconnected healthy populations of animals throughout the Northern Rockies would get us out of the state of threatened populations into the state of populations that can be managed and healthy, more resilient populations in the long term.

Our vision is to see this level of connectivity in all areas of the Northern Rockies – from the Canadian side down across the border through the Cabinet-Yaak area, down into the Bitterroot Ecosystem and down into Yellowstone. We can tell with almost 100% certainty the genetic origin of any bear because of the genetic data we have for all these populations.

Often times we hear from the public that if there are bears in these places that there are going to be problems and it's going to be dangerous. It is important to realize that 99% of the grizzly bears don't get into trouble with people. We hear about the bears that get into trouble. But the majority of grizzly bears operate on the landscape very well and they keep out of trouble and as long as we provide food security and good public land stewardship most people can do whatever they do now in all these areas with minimum levels of conflict with grizzly bears.

Questions

Jose Castro – What about the dynamics/relationship between black bears and grizzly bears?

Chris Servheen – They can coexist just fine. They have evolved over thousands of years in similar habitats.
Jose Castro – Seems like this is a great opportunity for I and E work before bears occupy these areas.

Chuck Mark – What kind of relationship have you had with local government (Counties for example)?
Chris Servheen – Counties have been receptive. As a planner you can focus your efforts. Commissioners have been pretty receptive, especially when you can narrow down the area of concern.

Chair – Unintended consequences of feeding has to be part of "Living with Wildlife" message as a whole.
Chris Servheen – Feeding is a real issue, a real challenge.

Maureen Davey – Have you ever been invited to a planning association meeting in Montana?
Chris Servheen – No, but I have tried. If you could help me I would appreciate it.
Maureen Davey – I will try to address this.

Pat Flowers – CAPS program can overlay bear habitat concerns and other wildlife concerns with county planners.
Chris Servheen - Working with the CAPS people we are going to take these fine-scale areas and integrate them into their planning tools when they are identified and developed.

Steve Schmidt – In addition to limitations you listed to achieve your goal, limitations of connectivity to YES is the listed bear. Politicians in Idaho have had it. When we think of how to fix these problems we have to recognize that we have a listed species. One of the biggest stumbling blocks for this is that this population of bear is still listed.
Chris Servheen – A very good point Steve. As we talk to the public about this they are a lot more amenable to this when it is a state managed species. Indeed, delisted and recovered populations are much more likely to be connected than listed populations. Things that prevent delisting are going to inhibit our ability to maintain this linkage work in the long term.

Chair – Is there anything as a sub-committee that we can do proactively to help?
Tom Ryder – The most important thing we can do as a sub-committee is to continue to push the science for delisting and try to make it happen as quickly as possible.

YES ENDORSEMENT OF USFWS CONSERVATION RECOMMENDATIONS ON ARS SHEEP EXPERIMENT STATION (Tim Bozorth - BLM)

The US Sheep Experiment Station in Dubois, ID has been preparing an EIS on its activities in MT and ID and in Nov of 2011 the USFWS issued their Biological Opinion (BO) on this EIS.

- The USFWS determined that the actions proposed by the sheep station would not affect the survival of grizzly bears and the USFWS issued an incidental take of 3 bears over 10 years on the sheep station actions.
- There were terms and conditions that were provided (included in handout) for monitoring and recording and in addition the Service provided some conservation recommendations and that is what I wanted to discuss today.
- What the conservation recommendation said was that sec 7-A-1 of the act directs federal agencies to utilize their authorities to further the purposes of the act by carrying out conservation programs for the benefit of T and E species.
- Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat to help implement recovery programs or to develop new information on listed species.
- The Service recommends that the sheep station seek replacement lands outside of known grizzly bear use areas for the sheep station summer range and the Forests Myers Creek allotment.
- This would reduce the likelihood of adverse effects on grizzly bears at their current distribution to a discountable level.
- These are voluntary recommendations that the Service has made to the sheep station.
- I would like the YES to consider endorsing those USFWS voluntary conservation recommendations.

The Forest Service has permanently closed allotments with willing permittees totaling more than 600,000 acres both within and outside the PCA to assist recovery of grizzly bears. This map shows GPS location points from collared grizzly bears from 2000 – 2009 as well as movements in and around these allotments extensively. Having the sheep station held to somewhat similar standards as a federal agency to the private individuals who voluntarily retired allotments throughout the GYE, as well as the 8 allotments adjacent to the summer range and Myers Creek allotments seems appropriate. I am asking that the YES send a letter supporting the Services voluntary conservation recommendations contained in their Biological Opinion on the sheep station EIS.

Discussion

Chair – So the question is should YES consider supporting FWS voluntary conservation recommendations that would include a recommendation that at some point in time in the future the station might move out of that habitat?

Brent Larson– I would support this as it is consistent with the Forest Service plan amendments where we are encouraging the closure of sheep allotments within and adjacent to the PCA. As the Forest Supervisor for the Caribou-Targhee (C-T) this is fully consistent. The FWS is the regulatory agency in regards to the consultation process and the conservation measure is fully appropriate and something I support.

Mary Erickson – Can support this as it is in line with Forest Plans. But on a practical level – what does this do?

Tim Bozorth – It will remove sheep from the upper summer pasture which are in the areas that grizzly bears are moving through and trying to expand into to the west of Yellowstone.

Mary Erickson – What does YES endorsing this really mean?

Tim Bozorth – It is consistent with what we have been trying to do for a number of years in the ecosystem and it reinforces the FWS recommendation.

Pat Flowers – We weighed in on a similar issue with WYDOT. The feedback we got was that this was very helpful opinion that they recognized all these agencies supported. I think this is just lending more support for FWS opinions.

Chair – Consistent with overall objectives of the delisting of a healthy population of grizzly bears.

Brent Larson – Tim I would hope that you would look for opportunities on BLM on that side of the mountain to move those sheep away from that area as I will do on the south end. I would encourage Tim and other folks to find alternative pasture for these sheep.

Steve Schmidt – Valuable to endorse the Service's recommendations, but this is just a recommendation and I think our input would be more valuable if we offered more specific solutions. Take the recommendations a step farther and offer some suggestions on how they might achieve the recommendations.

Dave Hallac – I agree with Steve and just wondering if we could have a conversation with them before sending them a letter. To better understand the situation.

Steve Schmidt – I suspect that Tim has had conversations with them and I know IDF&G has had more than 1 conversation with the Sheep Station. For the Myers Creek allotment they told Steve that they need that allotment to move the sheep to their summer range. We suggested that they truck the sheep as an alternative but they declined to do that.

Brent Larson - They have altered what they do with the Myers Creek allotment.

Maureen Davey – I did some research and I called Dr. Lewis. Dr. Lewis is very passionate that there have not been any conflicts with the bears. We have already eliminated 33,000 acres on the Beaverhead-Deerlodge and 33,000 acres on the Caribou-Targhee, and 35,000 acres on the Shoshone. We have seen a significant decrease in livestock conflicts. Will this open up the door for further closure of allotments? Because cattle and sheep are very useful in fuels reduction and with our weed management. Sheep help manage some of the noxious weeds in Stillwater County, MT. I would not be in favor of this recommendation.

Chair – On the no impact to grizzly bears, this is on the population level, not on the individual level correct? Have we had some conflicts at the sheep station?

Ty Matthews – Yes. I have had several conversations with them. In the past they have had some conflicts with sheep but they have never led to a grizzly bear mortality on the sheep station. They have a bunch of "best management practices" that clearly state that the sheep herders will not kill a bear even if it is in the sheep. They will only use firearms for self-defense of sheep herders. No deaths of grizzly bears on the sheep station to date. That doesn't mean that bears that get conditioned to sheep don't go in other sheep allotments.

Chair – So they have lost sheep?

Ty Matthews – Yes, they lost sheep. Last one was in 2010, then a couple in 2008.

Chair – So I would call that a conflict. Are you seeing bears that are conditioned to sheep?

Ty Matthews – I don't know how you would classify that. Bears that eat sheep generally eat sheep again.

Brent Larson – As an agency within the GYE, the C-T, the Shoshone, and the Bridger-Teton (B-T) all have provisions within their forest plans that say that in grizzly bear country following the recovery plan we will eliminate sheep grazing with a willing permittee. This has been a goal that the livestock industry is well aware of. I see this as nothing more than this. The conservation recommendations say they need to find and seek alternative pasture if available. It is not saying they have to leave and close up shop and this is why I can support this.

Jose Castro – As a group, have we done this process before?

Chair – Have we gone on record as a subcommittee?

Brent Larson – Yes, on the Rosie's Ridge project. This is the only one that I can think of.

Mary Erickson – When Steve Schmidt was chair he drafted a letter in response to their NEPA process and I asked the same exact question that Jose did – do we have a history of comment? And I remember it was Gregg Losinski that said we have a charter that is different from other bodies and that we don't have to be in consensus, that we do take positions, which are not necessarily consensus positions, but majority vote. My recollection from the last draft letter was that there was a vote and that it was close but at that point it was a NO that we would not send it.

Chair – The last time the letter was not encouraging.

Steve Schmidt – We pointed out what the Conservation Strategy said.

Mary Erickson – I don't see this as that fundamentally different than the last letter and I know people might disagree. We were very split on that letter. I am fine with endorsing the conservation recommendations from the FWS. But I don't see this as having much practical value if the agencies don't try and come up with alternatives for where the sheep can be. So maybe it feels good to do this but unless there is really some constructive way to help find alternative allotments I don't see the point.

Tim Bozorth –Ty is the FWS interested in the opinion of this group on this issue?

Ty Matthews – Yes. The FWS wants to see what the consensus is of this group before I finish the briefing paper. One of Dr. Lewis's major concerns is he likes the high mountain pastures that they have and he said it was critical to perform the mission of

the sheep station. So if we do adopt a letter I suggest we find alternative pastures that are suitable to them and then present this to them. They are not going to want to take some lower level BLM pasture.

Joe Alexander – There is really no decision point – it's not like they are renewing a 20 year permit. It may be better to get a group together to provide options and evaluate and have them engage in that conversation. What exactly are they doing on that site, and how many years of data do they have and what are the ramifications of losing that site?

Tim Bozorth – They are in the middle of the EIS, draft has been sent out for comment, final has not been issued nor has the ROD been signed.

Chair – When do they expect to go to final? Will we miss the opportunity to comment if we wait until the next YES meeting?

Mary Erickson – What is it that we are trying to achieve? I don't believe there are other viable alternatives. The terms and conditions of the conservation recommendations align with our Forest Plans, goals of the YES, and simply say that we support these recommendations and offer some commitment to explore other options as they become available.

Dave Myers –However, in this context I would support the FWS recommendations as they are consistent with the Conservation Strategy and Forest Service plans. These are federally owned sheep. I could support in the way it has been proposed.

Steve Schmidt – Would it be valuable to ask Dr. Lewis to describe to us what he would need as alternative pasture?

Dave Myers – Sure. If he needs certain elevational ranges it might be good to know this.

Chair – So what I am hearing is support in the context of aligning with goals of YES to the extent we can support the recommendations and offer to work with the sheep station to explore their options and also ask what the requirement are for alternative pastures. So do you all want to consider a motion?

Maureen Davey – I have a motion. I would like to move that we do not take any action on this agenda item today.

Jose Castro – I second this.

Discussion regarding first motion
Steve Schmidt – They have been in the NEPA process for some time.

Ty Matthews – NEPA process is in response to a lawsuit.

Joe Alexander – I couldn't support this motion because we need to act today.

Motion #1 did not carry.

Chair - Is there an alternative motion?

Tim Bozorth – I would move that we send a letter that encourages and identifies the consistency of the conservation recommendations with the land use plans and the Forest plan amendments that have been made throughout the GYE and how we have been working in that regard for the past 22 years and that we would also request from Dr. Lewis an identification of needs, and a willingness of the adjacent federal land managers to look for opportunities as this is a voluntary action on his part, a willingness to move those sheep to other areas of with less-likely conflict with grizzly bears.

Chair – Do we have a second?

Steve Schmidt – I'll second that.

Discussion regarding 2nd motion
Mary Erickson – Would someone draft this and send it?

Tim Bozorth – We could draft a letter and send out for comments for Madame Chair.

Tom Ryder – Wyoming will formally abstain from this vote.

Chair – We would circulate a draft to members of the YES.

Pat Flowers – What we didn't say, is that we would work with them to find substitute allotments outside of the PCA and this is key because this is so fundamental to what we have been working towards for so many years.

Maureen Davey – I hope this action doesn't lead to the closure of the experimental station because these are very important.

Pat Flowers – Good point Maureen. What would be helpful is if Maureen can look at the draft with this in mind and make comments that make the letter less inflammatory.

Motion #2 carried.
For the record Maureen Davey was opposed

NEW ECOSYSTEM WIDE BEAR WARNING/SAFETY SIGN (Kerry Gunther – Yellowstone National Park)

Summer 2011

- Two visitors killed by bears
- Neither had bear spray
- One ran during encounter
- One was hiking alone

Results from a survey done by Dan Tyers showed that less than 5% of backcountry users read trailhead sign boards. We decided to do some of our own surveys in the park and discovered that only 16% of day hikers and 60 – 70% of backpackers carried bear spray. (Backpackers have to get a backcountry permit which means they have to go to a Ranger Station where they get personal verbal contact that talks about bear safety information and they also have to watch a DVD on safety in the backcountry that covers bears and bear spray.) Both fatalities were day hikers - how can we do a better job at getting the message across to day hikers, especially about bear spray?

We came up with a quick stop-gap sign to display for the remainder of the 2011 season. It became apparent that we needed to come up with a standardized, consolidated list of bear safety information so that no matter where a visitor goes hiking in the Greater Yellowstone Ecosystem they get the same basic bear safety message. Applied for a grant through the IGBC and secured funding to develop and print a new standardized sign that could be used by all agencies in the ecosystem. Objective was to make a concise, complete, attention grabbing sign. Group that participated in this:
Dan Tyers - USFS
Mark Haroldson –USGS IGBST
Mark Bruscino and Brian DeBolt – WYG&F
Kevin Fry – MTFW&P
Bryan Aber and Gregg Losinski – IDF&G
Steve Cain and Kate Wilmot – Grand Teton National Park
Kerry Gunther, Nick Herring, and Pat Navaille – Yellowstone National Park

Final sign was a compromise by everyone. The sign will be placed approximately 50-100 yards up the trail. It is fairly concise – if hikers remember the first 5 bullets then that will go a long way to reducing a negative encounter. Some of the Forests have some situations where this sign probably won't work – mountain bikers, dog walkers, trail runners, they have some different issues. The Forest Service liked the layout and design of this sign and have a design of a very similar sign with slightly different messages geared towards their public. It may not be possible to have just one sign that all agencies can use because of the different user groups and associated issues.

RECENT CONSIDERATIONS OF THE CONSERVATION STRATEGY IN YELLOWSTONE NATIONAL PARK DEVELOPMENT PLANS (Kerry Gunther – Yellowstone National Park)

Yellowstone National Park Implementation of Conservation Strategy

- Old Faithful Comprehensive Management Plan
- Lake Village, Bridge Bay, Fishing Bridge Comprehensive Management Plan
- Both Plans Strongly Criticized by NGO's Claiming YNP was Not Following the Conservation Strategy

Conservation Strategy Habitat Standards

- Maintain 1998 Habitat Baseline
- No New Developed Sites
- Maintain Secure Habitat
- Maintain or Reduce Open Road Density

Old Faithful Comprehensive Management Plan

Issue of controversy as related to grizzly bears was the Cabin Repurposing

- 1999 - Construction of new Snow Lodge to replace old Snow Lodge required tearing down of employee housing
- Visitor use rental cabins temporarily converted to employee housing
    - Goal all along was to build new dorms. Dorms would be situated out of visitor use areas in an already established administrative area.
- 2012 Plan – Construct employee dorm (for 144 employees currently living in visitor use cabins) and convert cabins back to visitor use.

Dave Hallac – Point out that the plan to construct the dorms was something that was planned for and the public consulted with in the 1980's – this was not a new proposal.

As far as meeting the Conservation Strategy Habitat Guidelines

- Under 1998 Conservation Strategy Baseline - Cabins were in visitor use
- New dormitory will be built within existing development foot print
- No loss of secure habitat
- No increase in open road density

I would also like to point out that in our efforts to reduce human impacts to the resources at Old Faithful, including grizzly bears; we closed a 323 site public campground at Old Faithful in the late 1960's. We have done a lot to reduce the human impacts in that area.

Another way we used the Conservation Strategy in the Old Faithful Comprehensive Plan is during the scoping process we got a lot of comments that there wasn't enough lower budget facilities for the public to rent. The concessionaire jumped on this and wanted to put in more low priced rental rooms for the public. They wanted to convert the existing dorm into a Hostel to provide more low cost lodging to visitors and build a new dormitory to replace dorm which was converted to a hostel.

- Considered but rejected due to Conservation Strategy Guidelines that would not allow increasing overnight use in that area.

<u>Lake Village, Fishing Bridge, and Bridge Bay Comprehensive Management Plan</u>
Most controversial issue was what we were going to do with the Fishing Bridge RV Park. The RV Park was built in the early 1960's and the water, sewer, and electricity were inadequate for today's standards. Plan was to:

- Improve power, water, and sewer
- Enlarge individual sites to allow use of pop-outs and today's bigger RVs
- In order to do this we in filled inwards instead of going out, which would have impacted secure grizzly bear habitat.
    - We couldn't fit all original sites so we reduced the total number of sites from 360 down to 327 sites
    - Impact 3.5 acres of habitat inside existing RV Park
    - Allows us to accommodate a public need and help from a bear management perspective.
        - Get rid of cover within a developed area that bears would use to sneak around. Hopefully this will keep bears out of trouble.

Years ago, to protect grizzly bears, we closed a bunch of visitor use rental cabins in the Fishing Bridge area. The Wyoming State Historic Preservation Office asked us to keep 5 of these cabins as historic example of early park accommodations. We did this and have been using them as employee housing. They are basically rotting into the ground.

Fishing Bridge in the 1940s, 50s, 60s, 70s, and into the early 80s was a big problem for grizzly bears and we had a lot of conflicts. Historically, this area accounted for:

- 26% of management captures park-wide
- 55% of grizzly inflicted human injuries in park developments park-wide
- 28% of management removals park-wide

This area represented a significant proportion of the conflicts and management actions with grizzly bears so we began to clean the area up.

- 1970: Converted garbage cans to bear-proof design
- 1972: Closed Pelican Creek Campground
- 1973: Closed Fishing Bridge to fishing (to protect cutthroat trout a high quality bear food)
- 1975: Closed 256 Guest Cabins (5 of which are still standing), Visitor Cafeteria, and Employee Dorm at Fishing Bridge
- 1983: Closed Squaw Lake Campground
- 1988: Closed 310 Site Fishing Bridge Campground

We significantly reduced overnight accommodations in the area to try to protect grizzly bears because we were having so many conflicts there. When we look at the data on dead bears, from 1966 through 1983 (18 years) we had 31 dead grizzly bears as a result of Fishing Bridge being there. From 1992 through 2011 (20 years) we have had 1 dead grizzly bear. We feel like we have done a great job at reducing the number of conflicts.

As far as the Fishing Bridge RV Park, there is no increase in overnight capacity, no loss of secure habitat, and no increase in the road density of the area. We thought we were doing pretty well for the grizzly bear, but some other groups obviously felt differently.

Chris Servheen – What environmental group was misinformed on this issue?
Kerry Gunther – GYC (Greater Yellowstone Coalition).

Mary Erickson – If we put plans out for comment it is legitimate for groups to comment. When GYC gave comment what was their specific concern?
Kerry Gunther - That we were paving over the park and not following the Conservation Strategy (CS), and not following the EIS that was done in the area in 1988.
Mark Haroldson – Just on procedure, they sued to stop delisting on the basis of the CS so now they are using it on the other side of the argument.

Kerry Gunther – Technically we don't have to follow the CS because the grizzly bears are listed. We think the CS is good and are trying to follow it in all of our Comprehensive Plans because we think it is good for bears in Yellowstone Park.

Chris Servheen – So they litigated us on the basis that the CS wasn't good, and yet they are complaining that you are not following the CS?
Kerry Gunther - True.

Dan Tyers – In our mind, YELL has appropriately used the tools available and interacted with us appropriately.
Kerry Gunther – I was part of the team that wrote the CS and at the time it seemed so clear to us but now as we go back and look at projects it is kind-of like the Constitution – there are places where it's not clear exactly what we meant. So all these things we ran through the group first to make sure that everyone else felt that it was following the CS.

PUBLIC COMMENT

Terry Shram (sp?) (Walton Ranch)

- Would like to comment on sheep allotment. It seems like the grizzly bear committee used grizzly bear as a surrogate to close and to stop a lot of other public activity. Just listened to the guy talk about how many campgrounds they have closed, how many roads they have closed, how many allotments have closed, it just seems like this is their agenda. Whether it real or perceived. You kill enough of a guy's sheep or get enough herders mauled. We willingly gave up our cattle allotment because of the inaction of this committee and the WYG&F to mitigate any of the problems. I am about as cynical as you can get after 30 years of this stuff. I still think you should manage for a population that will be listed forever and push them back into the core, not expand their range. Mr. Servheen, you have failed on this completely because you have failed to win over the hearts and minds of the people that live and recreate in the Yellowstone area. This has gone on way too long.

Louisa Wilcox (Natural Resources Defense Council)

- Slightly different take on the decision made for the Sheep Station. I want to thank this committee for taking the steps that you decided to take today. It is definitely clear that grizzly bears are getting further and further west in the Centennial Mountains. I have seen the incredible amount of work by the National Forests around the park to work with ranchers on a voluntary basis for 30 years to try and get domestic sheep outside the core of the PCA and they have done a fantastic job of that. And here is one last allotment and I think we should expect

the Federal Government to comply with the terms of the Conservation Strategy so I just want to thank you for taking that step.

Next YES meeting will be in Bozeman on November 7 and 8, 2012.

ADJOURN