

# UTAH WILDLIFE BOARD WORK SESSION

December 1-2, 2010, DNR Auditorium  
1594 West North Temple, Salt Lake City, Utah

## AGENDA

Wednesday, December 01, 2010

### 1) Approval of Agenda

Rick Woodard Chairman

**ACTION**

Items of Discussion – NOTE: The Wildlife Board will not be taking action on any of the following items. This meeting is discussion only. The meeting is open to the public however no public comment will be accepted.

What is being done to increase the deer population?

- Introduction – Jim Karpowitz
- Habitat/Watershed – Tyler Thompson – 30 min.
- Predator control – Kevin Bunnell – 30 min.
- Disease – Leslie McFarlane – 15 min.
- Poaching – Law Enforcement – 15 min.
- Highway Mortality – Ashley Green – 15 min.

Monitoring and Managing Deer Populations

- Estimating deer populations – Justin Shannon – 30 min.
- Research – Anis Aoude – 30 min.

Review of Thursday Agenda Items – Alan Clark – 30 min.

**UTAH WILDLIFE BOARD WORK SESSION**  
December 1-2, 2010, DNR Auditorium  
1594 West North Temple, Salt Lake City, Utah

**Board Members Present**

Rick Woodard – Chair  
Ernie Perkins – Vice Chair  
Jim Karpowitz – Exec Sec  
Jake Albrecht  
Bill Fenimore  
Del Brady  
Tom Hatch  
Keele Johnson

**Public Present**

Miles Moretti  
Elmer Nix  
Terry Rogers  
J Hall  
Ken Strong  
Tom Wharton (Tribune)  
Ken Clegg  
Don Peay  
Byron Bateman

**Division of Wildlife Resources**

Cindee Jensen  
Judi Tutorow  
Staci Coons  
Alan Clark  
Marty Bushman  
Rick Larsen  
Anis Aoude  
Kevin Bunnell  
Kevin Christopherson  
John Fairchild  
Bill Bates  
Ron Hodson  
Teresa Bonzo  
Tyler Thompson  
Anita Candelaria  
Robert Byrnes  
Justin Dolling  
Eric Anderson

1) Approval of Agenda

Chairman Woodard introduced the Wildlife Board members and welcomed the audience. Our meeting is being streamed over the internet today. We have new facilities today and it is new to all of us, so if there is an awkward moment, please bear with us. He thanked the Director for the work session today. It is to help us make a good, educated decision tomorrow. Questions are only open to Board members and public comment and questions will be taken tomorrow at the regular Wildlife Board meeting. He then went over the agenda and turned the time over to Director Karpowitz.

**What is being done to increase the deer population?**

**Introduction**

Director Karpowitz said he appreciates the public being here today. He hopes the public that is listening on the internet can hear us. This is the first time we have used the new system and if it happens to go down during the day, please be patient and our folks will work frantically to get it back up. If all else fails, the meeting is being recorded and you can listen to it at a later date. This is the first day of a two-day meeting and this is the

most important of the two days, because we are going to talk about what we are doing and what we can do to increase mule deer in the state.

Since the deer hunt, he has received well over 200 emails from concerned sportsmen. One of the common denominators are they are concerned about total deer numbers and those factors that might be negatively effecting our deer herds. It is good that the public is aware and understands there are things that need to be done to increase our deer herds.

The purpose of today's meeting is to have an informal discussion with the Board on things that are in our current Mule Deer Management Plan that are designed to increase the deer population. There have been some huge efforts in the last five years and there are some significant things underway. We want to discuss what ought to be done, and areas where more effort is needed.

Director Karpowitz said he has had a lot of comments from sportsmen asking why the Division does not have a mule deer management plan. We do have a plan. It is a good plan and was approved in December 2008. It is a tier down from the North American Mule Deer Conservation plan, which was put together by the mule deer working group, comprised of the mule deer biologists from all of the western states. They consolidated a lot of information and developed this plan. There is a blue brochure available here today that he would like everybody in the public to have about mule deer and all the problems confronting them across their range in North America. If you go to Google and do a search on the decline of mule deer in the west, you'll find all western states are having that problem. Utah has been more aggressive in trying to address this problem than any of the other states. Another thing he has heard about from the public is why don't we manage deer units individually? Every unit is looked at individually and has a management plan tailored specifically to that unit with objectives and strategies. We collect information from every unit in the state and the unit plans will be updated periodically and tailored to the individual unit.

With that, we want to talk about each of these issues today. The decline of mule deer in the west is not a new problem. There was a symposium in 1976 on the decline of mule deer in the west. Wildlife biologists were greatly concerned at that time with this problem. For a lot of us, our entire careers have been devoted to trying to stop this decline in mule deer and it has been a difficult battle. In the last few years we have accelerated our efforts, putting tens of millions of dollars into mule deer management. We have probably spent more money on mule deer in Utah than any other species. We have had some things working against us, including unusual weather conditions and significant winter loss.

What we want to focus on today is our Statewide Mule Deer Management Plan and the several goals and objectives in it. Only a small part of it deals with how we are going to hunt bucks, which will be discussed in depth tomorrow. Most of plan addresses how to increase deer populations. If the deer were doing better, the hunting issues would not be as big a deal as they are. The deer management plan is on the Division's website. It is a very good plan. It went through the RAC and Board process two years ago and it was

approved. He is confident if we follow all the strategies in the plan, we will have a healthier and better deer population in the state, but it is going to take some time. It is focusing our efforts.

Director Karpowitz said the Division will now give their presentations. We want the Board to feel free to interrupt and interact with the presenters, keep this informal and ask questions. They are looking for ways to better accomplish our goals and objectives in this plan.

Mr. Albrecht asked if the unit plans are available on the web. Who writes those plans?

Director Karpowitz said the way the plans are put together is outlined in state code. In 1992 a law was passed by the Utah State legislature that said every deer herd in the state would have a management plan and it outlined who needed to participate in the development of that plan, including ranchers, landowners, federal land management agencies, sportsmen, and agricultural interests. Each plan had to have a herd size objective and we need to manage to that objective. He does not know if the unit plans are on the web. If not, we can get you a copy and we need to get them back up on the internet. They are due for a revision again. We have put that off to see what the Board was going to do this year. Those plans will come back through the RAC and Board process.

Mr. Aoude said they were there but the link was lost.

Director Karpowitz said they are due for a revision again. We have put that off to see what the Board was going to do this year. Those plans will come back through the RAC and Board process.

#### **Habitat/Watershed – Tyler Thompson**

Mr. Thompson said part of his responsibilities is to manage the Division's involvement in the Watershed Restoration Initiative. Everything we do relates back to the management plan. Currently there are two habitat objectives: Habitat Objective 1: Maintain mule deer habitat throughout the state by protecting and enhancing existing crucial habitats and mitigating for losses due to natural and human impacts. Habitat objective 2 is to improve the quality and quantity of vegetation for mule deer on a minimum of 500 thousand acres of crucial range. He then went over what and where mule deer eat. (See Powerpoint Presentation) He also discussed habitat threats, loss and degradation of habitat, the human population impact, pinion-juniper woodland expansion, drought, catastrophic wildfire, invasive species and conifer expansion into aspen.

Mr. Fenimore asked if the federal land agencies cooperate with the Division on some of the conifer expansion into aspen. Are the plans cooperative?

Mr. Thompson said yes for the most part they get great cooperation from the Forest Service. They are very involved in the plan and many of the projects, especially those in

the aspen areas. Most of the aspen areas are on Forest Service property. For the most part we have very good cooperation with the Forest Service, but the issue with the federal land management is the process. The process is always a little bit longer. Aspen is especially difficult, because of the use of fire. Fire is the most difficult treatment technique to get off the ground.

Mr. Perkins asked on browse, bush and sagebrush, what is the average growing time for sagebrush to turn into usable forage for deer.

Mr. Thompson said sagebrush can be available right off, but the problem is for the brush to be high enough to stand above a good average snow. To get to this point, probably 15-20 years.

Mr. Albrecht asked if the Division approaches federal land managers or do they come to you?

Mr. Thompson said it happens both ways. As we get into the presentation we will talk about the process of the Watershed Initiative and how it involves all of these different agencies. There are a lot of people in the Forest Service who care about wildlife.

Mr. Johnson discussed a couple situations dealing with livestock. On federal lands that are deer winter ranges, the use of grassland herbicides that killed sagebrush and small trees. This was on Cedar Mesa, which is critical winter range for mule deer. He also watched another livestock owner kill off sagebrush with his cattle and showed him some places where this happened. Are the federal agencies managing more for the wildlife or livestock grazing?

Mr. Thompson said it depends on the office. They are supposed to manage for multiple uses. With this initiative, we get involved in those projects and try to move them in a better direction. Sometimes folks just do not realize the options that are available.

Mr. Johnson said livestock people deliberately killed sagebrush by putting a huge number of cattle on an area and leaving them there. A number of years ago, herbicide was used on the south end and west face of the La Sals to kill sagebrush, which is also winter range.

Mr. Thompson said we do not approve of those types of treatments. He then went on to give back on the UWRI. (See Powerpoint Presentation) He showed a map with focus areas for UWRI, based on sage grouse and mule deer critical ranges. The foundation of the map has always included mule deer. He then explained mule deer habitat renovation techniques and the various projects that have been accomplished.

Mr. Perkins said 8-10 years ago, bullhog was considered very expensive. Is that still true? Is it paying off?

Mr. Thompson said it is still very expensive, but we use it on federal lands because of the chaining restrictions. Chaining is much less expensive and we can do almost double the area.

Mr. Johnson asked if the restriction of federal lands is because of archeology.

Mr. Thompson said no, we have offered to do full arch surveys. We have our own archeologist and consistently do large surveys on all our projects. It is born more out of a fear of being sued. They are afraid the projects will get stopped and delayed to the point where it is not worth the risk. He then showed some aerial photos on the results of treatment. Mule deer move in almost immediately after this type of treatment. Mr. Thompson went on to discuss water development and fire rehabilitation. He showed maps of regions and mule deer projects 2005-2010 (See Powerpoint) and went through them region by region. He also went over UWRI monitoring of big game, passerine birds, small mammal trapping and threatened and endangered species response. Vegetation monitoring was also discussed.

Mr. Perkins asked if the vegetation crew was an added responsibility for the range trend crew, or is it separate.

Mr. Thompson said the vegetation crew is actually a subset of that larger effort. We have talked a lot about the acres we have treated, but it takes a long time for seeded species to grow to where they are available above the snow. He invited them to visit the website and this concluded the presentation.

Mr. Albrecht asked where the money comes from that is being used on these projects. Has it been reduced in the last few years?

Mr. Thompson said it has been in a decline. Of the 63 million dollars, about one million comes from conservation tags. We bring the conservation organization representatives together with our biologists and talk about projects. They bid on projects that they would like to participate in. We received, for the last five years, 2 to 2 ½ million from the legislature for the watershed initiative. That has gone down about ½ million in the last few years. The Habitat Council which is money that comes from the actual sale of the tags and licenses produces funding for mule deer projects as well, about ½ million annually. The rest of that money comes from a tremendous partnership with BLM. This has been the foundation of this initiative, and they traditionally put 2.5 million dollars into this a year. This last year we had 1.3 million in stimulus dollars. The rest of the 63 million comes from other partnerships, Forest Service, private landowners, who put in their own time and efforts, and the list is extremely long. It has gone down a little the past few years but we are happy with the funding. We do not leave a lot of the projects off the list due to funding. We run around 200 projects a year, and on an average, only withhold funding for around 20-30 at the most.

Mr. Johnson asked how many dedicated hunters they are using on projects. With what is happening in Congress, how much are we using our manpower?

Mr. Thompson said probably not as much as we should. When he was in Southern region, they would use the dedicated hunters all the time. Now with the size of the projects we are working on, we use them some, but it is limited because of the size and timeframe of some of these projects. There are projects that we could use them on and we should use them more.

Mr. Johnson said there are some projects they could be given, and then specify a time frame. He explained how this might be done. Has this been looked at?

Mr. Thompson said that is something they are actually doing.

Chairman Woodard asked what the acreage is, on an average, of the projects that are done each year.

Mr. Thompson said on average when we talk about touched acres, on an average fire year, probably 75,000. On years where we have a lot of fires, we treat over 100,000. On years like the Milford Flat year, we hit nearly 200,000.

Director Karpowitz said, to put this in perspective, there has been nothing like this initiative in North America. The partnership, the amount of acres treated, the money that is being spent on mule deer habitat is not comparable with any other state. If you added up all the habitat work in other states, it does not equal what we are doing in Utah. It is going to take a while for this to pay off, but 10-20 years from now it is going to be great. We have to stay the course on this and it is going to take time. We can turn our deer herd around. It is the right thing to do and we have got to stay focused. There are many Directors around the states that are envious of what we are accomplishing. It is a credit to our people and the sportsmen. The legislature was influenced by the sportsmen on the seeding project to get things going.

### **Predator Control – Kevin Bunnell**

Mr. Bunnell said he will talk about predator management, relative to mule deer, specifically dealing with one of the strategies in our Mule Deer Management Plan, population objective Strategy C which is “to manage predators on all units that are chronically below objective and habitat is not limited, and do it according to the current Predator Management Policy. He said he would review the predator management policy, talk about when predator management is effective, go through some predator ecology in terms of the impacts of the three main predators we have in the state, black bears, cougars and coyotes, and then wrap it up on how these issues relate to deer recovery in the state of Utah. (See Powerpoint Presentation) He covered the criteria they consider when putting a unit on a predator management plan.

Mr. Albrecht said there have been a couple of times that Monroe and Manti have been below objectives on buck: doe ratios, why didn't the Division step in? Tom Hatch of the Wildlife Board made a motion to look at predation. Why did the Board have to catch it?

Mr. Bunnell said on the Monroe specifically, it was under predator management focused on coyotes, because that is where we believe it will have more of an impact on that unit. Mr. Hatch's motion was made during the Cougar meeting. We will talk about the Monroe today in relation to the cougar research that has been done. Maybe there are some misconceptions here. Predator management plans sometimes are focused on cougars, sometimes on coyotes and sometimes both.

Mr. Albrecht said his question is, why did the Wildlife Board have to step in and implement that when it was something the Division should have caught at that time and come forward?

Mr. Bunnell said the Board asked us to broaden the plan to include cougars. We had it in place for coyotes already, and it was not something we missed. It was already under a predator management plan and the Board asked us to widen it to include cougars also.

Mr. Perkins said the Division's response to the Board's initial query was that cougars were not considered to be a significant factor and the Board decided they wanted them included.

Mr. Bunnell said that happened this past July, where the number of tags was changed from limited entry strategy to a split strategy, increasing the number of tags on the Monroe Unit. That is what his recollection is. Mr. Bunnell went on to cover some definitions in the plan, explaining compensatory and additive mortality and how they play into when predator management will be effective. He also went over when predator management will work.

Mr. Albrecht said Mr. Aoude indicated our deer population cannot get any higher because we do not have enough habitat to support them. So if that is the case, what Mr. Bunnell is saying is we do not have any predation problems, is that correct?

Mr. Bunnell said you can take a broad statement and we are heading up against some habitat limitations, but maybe on a broad scale there are some specific areas where we do have a chance to make a difference through predator control. He hopes he can bring that to light as he goes through this presentation.

Chairman Woodard said in a lot of emails they receive, ranchers and landowners said they didn't feel the habitat was an issue.

Mr. Bunnell said we have a long-term data set through our range crew that goes back 50 years. That is quantified data. We have been going back to the same place every five years for 50 years. It is hard to refute that data and what it tells is that our habitat conditions have been declining. That probably holds more weight than someone who just makes a comment, because we have data that supports it.



Mr. Johnson said habitat has been declining and the habitat projects we have been doing are critical. Also, deer numbers are way below what the habitat is. We have 5% of the deer that we used to have. That is when you go and talk to the ranchers and farmers that live there. They said we have no deer and so there is no habitat problem.

Mr. Bunnell said when we have good weather conditions that are favorable, we see good fawn production, survival goes up and all things change because the habitat changed. If habitat was not limiting, those things would be the same regardless of what the climate conditions were.

Mr. Johnson said to give an example, he is going back to when people got three deer tags a piece, early 70's, and late 60's. Twelve bucks could be killed by noon on Shay Mountain. Recently he talked to people who hunted there. They went out five days before the season and put out trail cams by the springs. There were eight people and in 10 days of hunting, they saw 10 does. What is going on? That is not a habitat issue.

Mr. Bunnell said he is not familiar with that area, but no one is arguing that there are less deer than in the past. In some areas there are some predator problems and hopefully we can talk about when and where we can be effective at taking some of them.

Mr. Fenimore said the current mule deer plan objective is to have 350,000 deer by 2013. The post hunt in 2005 was at 296,000 deer approximately. Does the current habitat have the ability to support the objective we are trying to get to by 2013?

Director Karpowitz said what Mr. Thompson is working on is increasing the capacity of the habitat. If we accomplish the habitat goals, we can have the 350,000 deer that we need. What Mr. Bunnell is talking about is it varies by unit. What you need to look at is where the habitat is limiting, predator control probably will not do much to help. Where habitat is not limiting, we ought to be doing some significant predator control. It is just one of the factors to be considered. We cannot kill every coyote in the state, we have to focus our efforts. The information that Mr. Bunnell is presenting is telling you how to focus the efforts so there will be an impact on mule deer. One thing you have to look at is to make sure you have the capacity for deer. You don't want to kill predators, just to save deer, so they can starve. This is a factor you have to look at.

Mr. Albrecht said earlier Mr. Thompson showed a slide on the come back of the grasses and forbs, but our deer herd in that area continues to struggle. What is there in the fall, is there in the spring, so there's got to be something else.

Director Karpowitz said that is Mr. Bunnell's point, and that is an area where you would use predator control.

Mr. Albrecht said it is not being done.

Director Karpowitz said it cannot be done everywhere.

Mr. Bunnell encouraged the Board to continue to ask the questions. The open dialog is what we all gain from. He then went on to discuss when predator management might work. He talked about black bears as predators. They are omnivores and extremely opportunistic. He went over black bear predation on mule deer. (See Powerpoint Presentation)

Mr. Albrecht said the studies quoted were done in 1983 and 1984, how much has the bear population grown through the years?

Director Karpowitz said a lot on Book Cliffs and there have always been a lot of bears on the La Sals.

Mr. Bunnell said on the two studies done in 2004 and 2005, west central Colorado, they found 4% fawn mortalities were attributed to bears. We do not have real recent data from Utah, but those are areas that have similar bear densities to our highest bear density areas in the state of Utah.

Mr. Johnson said on these studies, what are they finding are predator problems on mortalities.

Mr. Bunnell said he will go through each individual predator and talk about these studies. In conclusion, black bear predation can have a significant impact on elk fawn survival, but the impact of black bears on mule deer fawn survival seems to be relatively low.

He then went on to talk about cougars. (See Powerpoint Presentation) He went over cougar research in Utah on the Oquirrh / Monroe units, cougar predation on deer in Utah using the La Sals, Book Cliffs, Oak Creek and Statewide Mule Deer Survival studies as references, and predator management efforts focused on cougars. He showed a graph on statewide cougar harvest from 1989-2010. In conclusion, cougar predation can impact adult survival in mule deer populations, but currently adult survival does not appear to be a limiting factor to deer herds in Utah with 12% adult doe mortality.

Mr. Bunnell then talked about coyotes as predators. Coyotes are unprotected and not managed by the Division. He covered coyote predation on deer in Utah and discussed the same units that he did on cougars relative to fawn and adult mortality.

Mr. Fenimore said the fawn recruitment is lower where coyotes have access to them. Is there any correlation between how many fawns a coyote might take?

Mr. Bunnell said that is a good leading question into the next topic on the timing and location of coyote control and how it determines effectiveness. The point of coyote control is to try and eliminate reproduction. The time that removal will have an impact is when they are trying to provide food for a den of pups. Between February and April, the goal is to break up coyote pairs and eliminate reproduction. Removal in June is prior to and during deer fawning. Coyotes killed before February and after June have little impact. Units where deer herds are less than 75% of objective are under PMP policy.

Currently 30 out of 49 predator management units are under predator management plans for coyotes.

Director Karpowitz said what this points out is the need for selective, targeted aerial removal of coyotes. Hunting and trapping of coyotes quite often occurs outside the time and area where we need it. If we really want to help mule deer, what we need is more resources so coyotes can be removed at that right time, in the right areas, and the right coyotes. Wildlife Services are very good at this, but they need more resources. This slide in the presentation is the key to just killing coyotes and killing coyotes so it will benefit mule deer.

Mr. Fenimore said given the timing and limiting factors, can we appeal to hunters and educate them in this respect, then encourage them to hunt them at these times. We might give bounty for pelts, or other types of things during these time frames.

Director Karpowitz said yesterday he was at the Agriculture and Wildlife Damage Prevention board meeting. They discussed this issue a lot. Wildlife Services will tell you that the suggestion made by Mr. Fenimore is a two edged sword. What happens is the hunters educate the coyotes and make it harder for Wildlife Services to do their job. He does not want to discourage anyone from going out and killing coyotes, but it can work against you if you're not careful. That is what Wildlife Services explained to him. What they need is more funding. They are getting a helicopter of their own, which will cut their costs in half, and they can fly twice as much.

Mr. Bunnell said our coordination with Wildlife Services has gotten a lot tighter. We try to make it as effective as we can as they meet specifically on each of our units that are under predator management. It is not just the unit under predator management, but where are the specific locations within that unit where we want them to focus their effort on coyotes.

Mr. Brady asked when discussing the alpha male, at one year, isn't every male an alpha male?

Mr. Bunnell said no, coyotes are territorial, just like other canines. Usually you'll have an alpha male and some years the beta female. In most cases you have one pair in a territory and if you can eliminate the male or female at the right time, you'll eliminate reproduction for that year in that territory. Females only come into heat once a year.

Mr. Johnson asked how you know when you have the alpha male and female.

Mr. Bunnell said that is when the expertise from Wildlife Services comes in. When you do break up a pair, you can stop reproduction. When they see a pair of tracks running together, or locating the dens, it can help identify them. It is not a perfect science. There are some transients being killed as well.

Director Karpowitz asked if elevation has a lot to do with that. Paired up adults that impact mule deer usually occur at higher elevations than most people are hunting coyotes.

Mr. Bunnell said that is true. That's why we need to focus in on certain areas. Every dead coyote is not equal. He then went over the Coyotes Control Efforts table in the powerpoint.

Mr. Fenimore said it appears that there are more coyotes killed by hunters, than by Wildlife Services.

Mr. Bunnell said there are.

Mr. Fenimore said looking at the harvest, he would encourage sportsmen to be out there at the right time of year and at the right elevation.

Mr. Bunnell said, in conclusion, coyotes can substantially impact mule deer fawn survival. Fawn survival appears to be a limiting factor to population growth in Utah with 45% fawn mortality.

In summary, we have an aggressive predator management program in Utah (nearly \$500,000 annually for predator control). We are addressing the predator and habitat aspects relative to deer recovery in Utah. If predators are a limiting factor to deer recovery in Utah evidence suggests that coyotes are the most likely culprit.

Mr. Johnson asked what about bobcats and their impact on deer.

Mr. Bunnell said they really don't know, but our bobcat population is really low.

Director Karpowitz said when he did his Master's degree on bobcats with 20 radio collared bobcats, it was done right when the deer crashed. The first year of the study the bobcats were eating primarily rabbits and rodents, rarely anything else. Then the rabbit population crashed and then the next year bobcats killed quite a few fawns late in winter when the deer were in a weakened condition. There was very little summer mortality.

Mr. Johnson said the bobcats the trappers got last year were very fat and healthy. The trappers said limiting bobcats to three is ridiculous and they do think the bobcats are having an affect on deer.

Mr. Bunnell said the Trappers' Association that represents several hundred trappers in the state, feel just the opposite. They supported our reduction.

Mr. Brady asked if they can get a copy of the power points.

Director Karpowitz said yes and they are on the internet for the listening public. This is as good of presentation that he has ever seen on predators. It points out the real issue

with the target being coyotes at the right time, right place and right way. We are investing more than any other state. Most state wildlife agencies do no predator control. We have put almost three million dollars in the last five years. We have some ideas on how to increase that funding. Predator control is very warranted with the condition of the deer herds. Mike Winnell expressed a real plea for more money yesterday at the meeting. A sincere woolgrower said, in yesterday's meeting, that predators are putting him out of business. If they are having those effects on sheep, they are having effects on deer.

Mr. Johnson said many trappers have quit trapping. This has a lot to do with trap check times and harassment from DWR. Do we need to examine the length of time in trap sets? He went on to discuss the time issue on trap sets.

Chairman Woodard said he will address that tomorrow and we will either put it off to our next furbearer or predator meeting on bear. It normally comes around in July of next year on normal rotation.

Director Karpowitz said 2-3 years ago we changed the trap check from 48 to 96 hours for kill sets. We also implemented team trapping. We have made some significant changes. He would not be in favor of increasing trap check time for live sets.

Mr. Bunnell said they are trying to make it easier for trappers to trap, within the realm of being responsible.

Mr. Perkins asked what our present coverage is of what the regions would like covered in terms of the fawning areas, verses the money we have and ADC's capability

Mr. Bunnell said currently 30 of 49 units, which is about 2/3's.

Mr. Perkins said he's trying to figure what the need is verses what we are presently covering.

Mr. Bunnell said we could be more effective with more helicopter time and it is expensive. In terms of how many acres we could do with a certain amount of money, we could put that together, given a little time.

Director Karpowitz said it is safe to say that Wildlife Services could do a lot more if they had more funds.

Mr. Bunnell said they are doing a lot during the spring, but could increase effort during June. It is harder work, because there is not snow on the ground and it is not done from the air.

Mr. Albrecht asked the Director how many dollars we brought in on mule deer tags and where does that money go?

Director Karpowitz said about 3 ½ million. They also make money from the base license and application fees, which goes into management programs for game animals. We do not spend any license dollars on non-hunted species. They are funded with other sources. We reinvest that money right back into the resource. From federal aid, there is several million more dollars. The money is spent on law enforcement, habitat and all of our management programs.

Mr. Albrecht asked if we are supporting any other sections with that money such as fisheries.

Director Karpowitz said in the total restricted dollars right now, we have been telling anglers a license increase is coming, because there is some license dollars going into those programs. It has been the reverse in the past also. Over time you need to balance those and programs need to pay for themselves. Right now big game application fees are one of our main sources of revenue. A lot of hunters are anglers too.

Chairman Woodard said we have had great presentations so far and the Division has done a super job. He then turned the time over to Ms. McFarlane.

#### **Disease – Leslie McFarlane**

Ms. McFarlane said she has been over the wildlife disease program for over a year. She is over designing our surveillance and management programs for disease. Specifically she has been asked to address the Statewide Management plan for Mule Deer : Strategy D of the population objectives, which are the investigation and management disease outbreaks that threaten mule deer populations. She is going to talk specifically about chronic wasting disease (CWD), which is the largest potential threat to our deer population in the state. They are looking to adopt a specific management plan for CWD, but it is currently in draft form.

Ms. McFarlane then went over diseases in wildlife.

Mr. Fenimore asked if the La Sals is a hot spot for CWD and is it not likely that it will disappear from that location.

Ms McFarlane said that is correct and it is more than likely, we will not get rid of it.

Mr. Johnson said he has heard different theories on CWD. One is that it has always been there. When MAD Cow disease came along we checked and it had always existed.

Ms McFarlane said that is not true. She will show some of the surveillance maps of Utah. If it certainly were everywhere, we would find it everywhere and we don't find that here in Utah. We have found three areas where it is. She then went over disease management and CWD. (See Powerpoint Presentation)

Mr. Fenimore asked if the cougar that ate the CWD deer would get it.

Ms McFarlane said Colorado has done an extensive study. They have three mountain lion cubs that came to them about ten years ago in their research facility. They have received nothing but CWD positive materials and they are still alive. They do not believe it can transmit. It appears to affect only cervids.

She then went on to explain how CWD is transmitted and clinical signs of the disease. On a nation wide level CWD is found in free ranging cervids in 13 states and two provinces in Canada. She showed a map illustrating counties that have had positive animals found in them.

Mr. Fenimore asked if there is more CWD on elk ranches.

Ms McFarlane said the reason that is the perception is they just find it easier, because they're all together and closely monitored. In free ranging wildlife, it is harder to locate them, but it is not necessarily more prevalent on elk ranches. She then went over the history of CWD in Utah and how it is being monitored to the present through surveillance.

Mr. Fenimore asked how much we are spending annually on the testing.

Ms. McFarlane said they received a federal grant to assist with CWD testing and that grant has ranged from \$234,000 to 260,000 a year.

Mr. Fenimore asked if there is any action we can take on this issue.

Ms McFarlane said right now, we are just monitoring it. There is a full line of management options, which she will go into a little bit on the next slide. She went on to present some things we know about CWD, including prevalence in breeding age males (4-5 yrs of age) is 2-4 times higher than in females or young age males, relationships between density and prevalence (transmission on winter range – spread through migration), decreased life expectancy by 2 years and long-term population effects leading to decline.

Mr. Perkins asked what are a high density and a high infection rate.

Ms. McFarlane said the Colorado data indicates that when they have seen prevalence rates in female mule deer that get up in the range of about 5%, they have started seeing effects on their population. Colorado and Wyoming have the highest prevalence rate by far across the United States. In some areas in Wyoming it is into the numbers of 32% and in Colorado about 23%.

Chairman Woodard asked how you can tell the buck in the picture is CWD positive.

Ms. McFarlane explained the symptoms prevalent in the buck. He stayed in someone's yard and kept his head down on the ground, never holding it up. They could approach

him and almost walk up to him and pet him. If you could see his sides, you would see his hip bones are protruding.

She then went over CWD management action, which is a somewhat limited toolbox right now. She discussed culling, prohibiting emergency feeding in positive tested areas and prohibiting carcasses from coming into Utah. Something they have not tried is to hold infected populations to lower population densities to keep CWD prevalence from increasing. She showed a map reflecting Western Region CWD surveillance, which included Utah, Colorado, Wyoming and Nebraska.

Ms. McFarlane then discussed why disease management is important for deer populations referencing Colorado research studies. Population management, herd health, economic importance, recreation opportunity and treatment were discussed relative to this issue. This concluded the presentation.

Mr. Albrecht asked if any of the units in Colorado have mandatory testing.

Ms McFarlane said in southern Colorado, no, but up north, they do have mandatory testing in some of their areas.

Mr. Johnson asked what type of research has been done on the spread of the disease.

Ms McFarlane said part of her Master's project, through the Division here, was to look at reproductive behavior on the La Sal Mountains. We put about 38 GPS collars on mule deer for three years. We found that males do move more than females and coming in contact with more infectious agents and substances, because of their movement. One of the ideas of the study was you have one infected female out there, and during the breeding season you have ten males that come in to test to see if she is receptive, each animal that comes up to test her is exposed. That is part of the thought behind why breeding age males get it more than the others, but it is hard to prove.

Director Karpowitz asked if she is aware of any research that would give any hope that progress is being made in any of the prion diseases.

Ms McFarlane said there is a company out of Canada that is working on a vaccine that is working in mice. They are hopeful that it will work in deer, but it is still early on in the research.

Director Karpowitz said some ask why we are doing anything about this if there's no cure. We have seen, time and time again, if we keep working on it, hopefully the science base will catch up. It is important that we have a knowledge base for when that occurs.

Ms. McFarlane said the prion that causes the disease is found in soils, particularly clay types. It can remain there for a long period of time.



Mr. Perkins asked if there are other diseases in deer that occur at levels that affect population.

Ms. McFarlane said the next largest disease in Utah would be epizootic hemorrhagic disease, which is a virus. It is transmitted by biting flies during the summer months. We have documented it in Utah before. In other states where they have these outbreaks, take Michigan for example, this past year, lost 500 deer at one time to this disease. We monitor and watch for that as well. We haven't seen anything on that since 2003 in any of the mortalities we have investigated.

Mr. Perkins said so there are really no other significant diseases that are affecting deer.

Ms. McFarlane said not on a population level. Everything else we see affects individuals.

Director Karpowitz said on a couple of fawn mortality studies, his and Phil Swanks, earlier in Utah, it is not uncommon to see some disease issues in fawns in late summer. It can cause significant die offs in fawns. In past years, archers have reported dead fawns across the summer range in mid to late August. They have speculated on a disease, but there are no exact answers.

Ms. McFarlane said they did have an issue in Southern region two years ago where they found some dead fawns and were unable to determine the cause. A lot of times with fawns, particularly during the first green up, they will scours, similar to cattle when they get different feed.

### **Poaching – Law Enforcement – Tony Wood**

Mr. Wood said he is here today to talk about their law enforcement efforts and what our conservation officers are seeing in the field, particularly in regard to mule deer. The Statewide Deer Management Plan specifically directs the Division to “support law enforcement efforts to educate the public concerning poaching and reduce illegal taking of deer.” He then went over their role in wildlife management. (See Powerpoint Presentation) He then discussed recent poaching cases that have taken place in Utah involving significant over limits.

After the West Desert (Vernon Unit) case, Mr. Fenimore said we do not regulate taxidermy. Back in Pennsylvania many poachers were turned in by taxidermists who report them when multiple deer are brought in.

Mr. Wood continued discussing the various poaching cases. Law enforcement looks to identify trends of illegal activity and the development of strategies to address these problems. He discussed the details relative to these subjects. He also went over additional efforts of habitat protection and the fact that officers continue to assist other sections in the completion of their mission by assisting with non-enforcement duties. Wildlife management practices on trophy units could not be successful without the protection that we provide. We deter potential violators and ensure equal opportunity to

the state's wildlife. We serve as partners with ethical sportsmen and work to ensure adequate habitat to support vulnerable deer herds. This concluded the presentation.

Director Karpowitz said our law enforcement section has undergone a lot of changes over the last five years. We have a much younger crew of great hard working officers. We have 75 Officers now, which is the same as in 1978, despite having a much more diverse and valuable resource out there. He is very proud of these young officers and they need the public's help. This is a big drain on our resource and the poachers are stealing your wildlife. Without the public's help, we couldn't do what we do. He has never received a complaint in five years of an officer harassing anyone. He has received many compliments of our officers and how they have assisted the public and been responsive in helping them. He is proud of these officers who have developed a philosophy that we get the real bad guys and not worry so much about the little mistakes. They are doing very good work.

Chairman Woodard said a main request from the public is for more conservation officers.

Director Karpowitz said we do need more officers. July 1, 2011, officer's benefits go down considerably and we want to be at full strength on that day. They cover a huge area and encounter some dangerous situations. He is concerned about the escalating anger that is out there that puts our officers in jeopardy.

Mr. Johnson said there are not enough officers. The answer to that is to use the deputy sheriffs to assist. Their presence would be so valuable, especially on the opening of the seasons. Officer Shirley in San Juan cannot cover the area he has.

Mr. Wood said that is something they have looked at, development of a reserved officer program. They have had them come from other agencies. They could bring them in and train them accordingly. We approached the legislature last year and it didn't go very far. It would help tremendously. Utilizing a retired officer would also be helpful and use them as a reserve officer on a voluntary basis.

Mr. Perkins asked for the number of poaching or over limit cases over the last year.

Mr. Wood said in the past 12 months, there were 187 illegally killed deer documented. Since he started out as a game warden, he was told that on illegal take in particular areas, what you find on the ground equates to about 13% of what is being taken illegally.

Mr. Fenimore asked if the courts are supportive of cases that are brought to them in terms of fines and verdicts.

Mr. Wood said it is on a case-by-case basis. Some judges do not prioritize wildlife violations very high up, due to other crimes that are committed.

Mr. Fenimore asked if the poaching can be categorized into specific tendencies.

Mr. Wood said he can give some antidotal incidents from when he was a field officer. Of cases closed, they had a couple different types. They were young kids out looking for something to do on the weekend or they were individuals hunting on a closely associated general unit, trying to take a head off of a limited entry unit. It is difficult to give statistics on this issue.

Mr. Fenimore said when he moved here in 1986, a hunter told him he'd bought a tag for himself and his wife. Mr. Fenimore said his wife didn't hunt, but the hunter explained to him about party hunting and that it was okay. Fortunately, he had a friend in the Northern region and when he went to buy his wife's tag, he explained that actually was not acceptable. Does this sort of thing still take place?

Mr. Wood said we do have party hunting that takes place. There is still that attitude out there and that it is socially acceptable. Until it no longer becomes okay, this will go on.

Mr. Wood said from a law enforcement position, when unethical hunting is presented as acceptable, hunters need to step up and makes it clear that it is not acceptable. Until our officers have this type of public support, we will have a hard time changing things. This concluded the presentation.

### **Highway Mortality – Ashley Green**

Mr. Green said this is a topic that has been getting a lot of attention recently. There have been several newspaper articles and it has been on the news. Today he will share some of the great things the Division is currently doing to help us with highway mortality issues. He said this topic addresses population objective, Strategy J from the Statewide Mule Deer Management plan. It says that the Division will work with UDOT, universities, local conservation groups, and landowners to minimize highway mortality. He then went on to discuss how this is being done. (See Powerpoint Presentation)

Mr. Fenimore asked if they take GPS readings if there is no mile post near.

Mr. Green said yes. They look toward using GPS information in the future.

Mr. Green continued the presentation, identifying locations of high deer-vehicle collisions, carcass removal data, migration routes and specific information on US 6 and US 40.

Mr. Fenimore asked if you verify a hotspot and UDOT doesn't have a five year project coming up in that area, are you still able to get on their radar screen for those particular areas.

Mr. Green said yes. It is obviously much more difficult and our best opportunity is when there are projects scheduled. Then we can do the proper planning to identify those needs. He will show a structure that has been built for that exact reason on Interstate 70. He went on with the presentation on corridor studies, infrastructure, research, and wildlife

migration. He showed several pictures of recent efforts on various highways around the state. In summary, current Division efforts to address highway mortality will result in improved mule deer populations. This concluded the presentation.

Mr. Fenimore said this is a tremendous report. The effort that the Division and UDOT are putting into this is great. With the data that is being picked up on highway mortalities, using it to inform the insurance companies might be helpful. There is a need for other partners with 30% of mortality that is vehicle related. Insurance companies could become partners to help and lobby for more funds. If we could show insurance companies what the ROI would be, it would probably pay off.

Director Karpowitz said he is sure they would be anxious to cut their losses.

Mr. Albrecht asked what Mr. Green's title is.

Mr. Green said he is a wildlife coordinator over our Division Lands and CUP, and the wildlife crossing programs.

Mr. Albrecht asked if there is a full time person over highway mortality.

Mr. Green said we do not have one dedicated position, but many different positions where some part of their annual workload is focused on this issue.

Mr. Albrecht said Mr. Green hit well on UDOT projects, but in some of the smaller areas, like Piute, Wayne and Sevier counties, there are many road projects done by the county. A lot of them have to do with fencing where we lose a lot of deer. Do the people in the regions have enough manpower to take care of the issues, or does the state need a full time person.

Director Karpowitz said it would be nice a person dedicated to just highway mortality. It would be nice to have more help, especially since we are getting such great cooperation, but those on it are doing a good job. It is a matter of prioritizing our work in the habitat section.

Mr. Albrecht said there was an article in Richfield Reaper where the county lists the amount of money for next year's projects. The Division could go to their follow up meeting to make sure they are aware.

Mr. Perkins said the cost on escape ramps is relatively low compared to everything else. Are we at a point with the UDOT where we could be using Habitat Council or conservation permit money to replace outdated escape ramps and gates. Could we use dedicated hunters in constructing these?

Mr. Green said Bruce Bonebreak has used dedicated hunters on 3-4 projects in Southern region. There is a need to update them. How we can pay for that, he is not sure. We can explore this with the Habitat Council.

Mr. Perkins said he is thinking about places like Sardine Canyon where it is outdated.

Mr. Albrecht said relative to small counties and county roads, he knows UDOT takes care of the signage, but some down there do not have enough money. Could the Division help out?

Mr. Green said we have limited funds and restrictions, but we could look at helping out. We could help access what the need is and help the county find funds.

Mr. Johnson said we need to send a letter to UDOT thanking them for the work they have done.

Mr. Green said that would be a good idea.

Mr. Johnson said there is a difference in where they are crossing and whether it is a migration route. He discussed from I-70 to the San Rafael. He thinks they may be able to fence the whole thing and not affect anything. He is not sure if there are migration routes there or not.

Director Karpowitz said when they fenced between Price and Helper, just one side of the road those deer did not need to go to the other side. So initially they got away with just fencing one side.

Mr. Johnson said that could be a much less expensive fix. Another place he had a question if just this side of the Red Narrows on Highway 6 and Billy's Mountain construction. There are about two miles there. Another place is Sheep Creek.

Mr. Green said there are 2-3 areas they are looking at presently. State Road 10 down into Castledale, they have done that there. South of Cedar City there are some existing structures they are looking to use. They must be careful not to cut off traditional migration routes.

Mr. Johnson said on I-70 if the fencing was possible, they might be able to stop the spread of CWD.

Mr. Green said that stretch there are two areas that UDOT is addressing. It is well on the radar.

Mr. Perkins said a guide was just completed on structures, crossings, ramps, etc.

Mr. Green said in the last few months they have produced internal wildlife crossing guidelines and we going to use these as our standard. This includes all the considerations a biologist needs to have to work with these kinds of issues.

Mr. Perkins asked about giving it to the county road departments.

Mr. Green said it is internal only right now.

Chairman Woodard said they have said that highway mortality is equal to our sports take. With current information, they say it might be higher. What is your best guess on this?

Mr. Green said that is the magic question. There is a high road kill rate in urban areas that used to be winter range. He has seen estimates of upwards of 25,000 deer. He thinks that it is most likely in the 10's of thousands. It is significant. He does not know exactly what the number is, but as we continue to collect carcasses we can probably nail it down a little finer in the future.

Mr. Fenimore said time will tell.

Mr. Green said with the mitigation we're seeing, a lot of it will go down in those areas.

Mr. Johnson said between Monticello and Blanding up until the first snowstorm they are moving back and forth. I slow down during this time of year. Are the animals migrating? Is that something they have looked at when the animals are migrating, they might change the speed limits?

Mr. Green said that is the easy answer. There are a lot of opinions on signage and if it is permanent or seasonal. That is not a real popular topic. People don't want to slow down. We need to explore this idea.

### **Estimating Deer Populations – Justin Shannon**

Mr. Shannon is the wildlife manager out of Southeast region. He will discuss three strategies in the statewide deer management plan. One is estimating fawn production and herd composition. The second revolves around estimating survival rates for adult does and fawns and the last is looking at population models in relation to where we are at and the direction we are headed. The reason he is presenting this today is the importance of these strategies on the individual units they are responsible for. He then went on to discuss the specifics on this information. (See Powerpoint Presentation) He discussed how data are collected and what information goes into a population model.

Mr. Shannon showed a data sheet that is required from wildlife managers. He feels the Division needs to explain these sheets and the process better, because oftentimes he goes to a RAC meeting where he presents this information and it is challenged by someone from the public. We then end up having a disagreement, on something that has been sampled. The public sees it on their individual experience, but he is talking about the unit as a whole. Sometimes there is a disconnect. After 500 deer are classified, it all comes out in the wash. That's why we want a high sample size.

Mr. Fenimore asked if on the La Sals map, two of the polygons were not used.

Mr. Shannon said yes. It depends, if you have a high elevation area you can't get to because of snow. But those are the areas you try to get back to.

Mr. Fenimore asked if they need to get 400 doe count to validate the statistics.

Mr. Shannon said yes, the more the better.

Mr. Johnson said on the La Sals and 400 does, on that county there were 304 does and 141 fawns, do they include the fawns?

Mr. Shannon said yes. The target is 400 does. There are years that we're short. He went on to talk about fawn survival, data collections and modeling. He said he would like to now take them through the biological life of a deer and the life of the biologist trying to gather what that deer is doing throughout the year.

Mr. Albrecht said in Southeastern RAC minutes, there was a question from the public of what are deer herds looking like? The comment was, we don't know because we haven't been able to get to them. In this time frame, is anybody checking on these deer to see if they are in trouble?

Mr. Shannon said we check on the deer during the winter and see how they're doing. We have a policy on that, along with the feeding. He doesn't know exactly what Mr. Albrecht is referencing; it must have been a case where a road was closed or something due to snow. Our deer management is an ongoing, year round process.

For each individual unit in his region they get harvest reports. Sometimes it is even broken down smaller than a unit. If he is interested in the San Juan, for instance, how many deer did we kill last year? This information is readily available.

Mr. Fenimore asked if on the La Sals, Abajo, and San Juan, are all covered by Guy Wallace.

Mr. Shannon said yes. He then went on to discuss what data is used for hunt recommendations, data collection, and use of models to evaluate herd size. He went through a hypothetical situation to show how the model works.

Mr. Albrecht asked if that is the scenario and that is the case, why we didn't pick up the winter loss until almost summer.

Mr. Shannon said, for example, the San Juan, based on collar data, we have not lost one yet. We have the highest fawn survival rate based on these collars. So in the spring, I look at that data and we know we had loss in the spring, but it takes time to figure it out. We didn't see a lot of yearlings in harvest this year and other details. We get little bits of information at a time. In the spring, I felt it was premature to say this population was tipped when the collar data told us otherwise.

Mr. Albrecht said so with collared deer you need more time. How many years have you been doing this model?

Mr. Aoude said we have been modeling populations since 1994/95. We did pick up the mortality and it will be in this year's population estimate. You are mistaking the fact that the winter mortality doesn't go into the population until we model it this year.

Mr. Albrecht said he understands that, but if he is looking as a hunter on what unit to hunt, the right information is not out there. You don't give the right information until the hunt is over.

Mr. Aoude said that is how it has always been and we set our permits long before we know what spring and summer brings. We have to set permits a year in advance so it will always be that way.

Mr. Fenimore said with the lag time and with so many data sets over the years, you can extrapolate as to what the confidence level is, opposed to knowing exactly.

Mr. Aoude said we are hunting bucks, so on the population level it is not going to have an effect. Still, a hunter is not going to be able to get up to date data.

Mr. Fenimore said he is trying to imagine the life of the biologist. Does he have adequate time to do the survey work and everything else?

Director Karpowitz said he also has to fly all his bighorn sheep, deal with depredation and everything else that comes up.

Mr. Shannon said we do have depredation technicians that help and conservation officers have helped out in the past, but it is best for the biologist to do all his observation because it is important for it to be consistent.

Mr. Fenimore said it is very impressive to see all the work that must be done and it is important that the public knows.

Director Karpowitz said there are all kinds of demands in the short period of time between November and December. As soon as you're done with that, you're back in the helicopter to fly the elk. Our guys work very hard at this. Our public process puts huge demands on our personnel. We have adjusted the schedule to try to give them breathing room.

Mr. Fenimore asked if dedicated hunters could be trained to do counts.

Director Karpowitz said it is important to be consistent with who is doing the counts. When you bring in other observers, the data could get biased. You want to take the



variability out of it. It is a huge demand on our people. We are the smallest Wildlife Agency in the western United States.

Mr. Fenimore asked if there are other ways or tools that could be provided to biologists through dedicated hunters, who would do some other work, to support them. We need to look for other opportunities.

Director Karpowitz said when they get in a jam, biologists have technicians, other regional personnel to draw on, but they need to be people who do this a lot. You have to have well-practiced and skilled people counting the deer. It is not as easy as folks think it is. You make a good point. We have huge demands on our people, but it would take a considerable amount of training to get it right.

Mr. Fenimore said he doesn't mean to disagree, but Mr. Perkins has been out counting sharp tails. I have been out monitoring leks and I feel there are other ways we can look to be helpful.

Director Karpowitz gave an example of when he was doing his deer counts and the need for experienced classifiers.

Mr. Albrecht said there are federal land managers who do counts, does the Division compare notes with them?

Mr. Shannon said he has never looked at their data and compared it to his.

Mr. Albrecht asked if they allow it.

Mr. Aoude said some regions do look at their data, but we don't use it because of the consistency issue. They have seen the data, but they do not use it to make their decisions.

Director Karpowitz said when he was the big game coordinator, he looked at the data from the Forest Service personnel, took it into account when doing classifications, but it was quite consistently, very different.

Mr. Albrecht said he hears of people doing classification in the federal land management and they stay consistent and follow trends, but their numbers are different.

Director Karpowitz said the trend is still there, because they are doing the same thing year after year. We should see if their trend matches ours, the trends should match, even though the numbers are different.

Mr. Johnson asked on the La Sals, what do you think the sight ability is on the area and also sight ability on the whole population?

Mr. Shannon said there is so much variability in that, he doesn't know how to answer. It is not like we take our fall classification and say, "okay, the biologist classified 600 deer,

so the population is probably this. It is apples and oranges. There are ratios, effort, and so many other variables.

Mr. Johnson said the wintering areas were estimated on the La Sals, but I hope there's a lot more deer there than that.

Mr. Shannon said that is why I go back to the harvest reports.

Mr. Albrecht said in Colorado they actually fly when they do their deer counts. Is that for sight ability?

Mr. Shannon said there are some states that fly to get at the ratios we are talking about. It is not a complete census. There have been states who have tried doing stratified samples and extrapolating it. The confidence intervals on those are not very good.

Mr. Aoude said Colorado has tried stratifying some blocks and there is a big confidence interval around that. Heather Bernales' Masters' thesis was on doing that same thing on the Cache. The number was within what we were modeling. The reason Colorado went through that exercise is their sportsmen did not have confidence in their modeling. What they showed through the surveys is their models are coming up with the same numbers that you would if you flew it. But, when you fly it, it is plus or minus almost the same number that the population is.

Mr. Albrecht said if that was the case, the models asked how many antelope on Parker this year.

Mr. Aoude said he does not have the numbers.

Director Karpowitz said that was not a model, it was an actual count.

Mr. Albrecht asked when it was done.

Mr. Aoude said December, before the capture.

Mr. Perkins said on deer, in the last series of RAC meetings there were frequent questions about the herd population and a figure of 302,000 was given. That figure would have been derived in the March/April time frame in preparation for the antlerless recommendation. That information would have been collected in the January/February by biologists. Meanwhile we are setting permit numbers in April/May timeframe and using population figures. We are collecting data in order to be able to set permit numbers and hunt recommendations, then we use those numbers for another year.

Mr. Shannon said the data used for hunt recommendations explains this issue.

Mr. Perkins said we only come up with the population figure once a year. Winter mortality is taking place in the spring.

Mr. Aoude said that is right, but you have the numbers from the previous year. You have to cut it off at some point. The next year it takes into consideration the winter mortality of that year, the production of that year and after the harvest, we say this is what the population is.

Director Karpowitz said mortality can even happen as late as May, when a green up doesn't occur.

Mr. Perkins said if we follow this process the same year after year, we will never have a current accurate take on the deer herd.

Mr. Fenimore said but you have all those years of data set that builds the trend.

Mr. Shannon said that we should explain the process to the public more completely, so as to lay out the time frame and be on the same page.

Mr. Johnson said the farmers this year commented on how this winter kept going. It affected the elk quite dramatically. The crops lay dormant and he doesn't know what has happened. There are effects with late springs.

Mr. Shannon said recommendations are a year round process. Every piece of data we collect revolves around what we will recommend in the future. Biologists do put 100's of hours into collecting the data. Models are nothing more than calculators to keep the information straight. Models allow us to estimate populations quickly and are driven by data collected from the field. Models get better with time. They are exceptional at detecting trends in pop status. In summary, methods for data collection are sound and replicable. Models are driven by data collected from the field. All hunt recommendations must reflect action towards management plans. Biologists are working hard to meet strategies in the management plan for mule deer. Personally, as a manager, people have said, your model number is wrong. Regardless of where the number is, it doesn't change what we are all working for. We all want more mule deer, healthy habitats and deer to hunt. This concluded the presentation.

Director Karpowitz said he was asked what would happen if we did not have to have a target objective on deer herds. He answered him that it would be good and we could look at habitat objectives, fawn: doe ratios and that information more closely, but the current law says we have to have a herd size objective. If we could get that law changed, we could develop other things and just use this model as one tool. We may approach the legislature about changing that law. It went into effect when deer herds could explode and get away from us. We have an opportunity to get that law changed and become less reliant on models. It would also allow our biologists more time in the fields.

Mr. Aoude said there is a misconception out there that all biologists are doing is sitting behind their computers. That is not true. This whole modeling process takes a day or

two of their time. The rest of the time is spent collecting the data that does into the model.

Director Karpowitz said he doesn't think that, but before 1992, biologists spent a lot more time in the field. One of the reasons is we spent a lot of time with population modeling. He would like to see our biologists have the time to spend more in the field. It is more fine tuned now, but there is still not really good public acceptance for it, so if there is a way to manage deer without the models, we should see if we can do it.

Mr. Aoude said the whole process of modeling a population is a half-day to a day process. The rest of the time we are out gathering data.

Director Karpowitz said prior to 1992, we spent two months on each unit. Biologists don't have that time any more. He would like to see them have the time to spend on the winter ranges.

Mr. Albrecht said on counts and modeling, does it go to the regional office, then to Salt Lake. Do you have any say in the recommendation?

Mr. Aoude said everything is done on a regional basis. Salt Lake looks at the recommendations, then reviews them with the Director's office. They may have some comments or make some suggestions, but it is a regional recommendation. He checks to make sure the recommendations are in line with the plan, and if they are not, he discusses it with the region.

Mr. Shannon said it is really healthy to run the recommendations by the Salt Lake people and get some new eyes on it. The regions do make the recommendations.

### **Research – Anis Aoude**

Mr. Aoude said he will be presenting what we are doing currently to find out why mule deer herds are not growing as fast as we would like them to in Utah. He went over the Mule Deer Research in Utah section in the mule deer plan. (See Powerpoint Presentation) He also covered what's limiting deer population growth.

Mr. Fenimore said in regarding habitat limitations, is there an analysis done on the nutritional value of the habitat that is available for forage. He talked about moose and selenium. Is there a nutritional component we might be missing in habitat?

Mr. Aoude said moose are different. Mule deer have lived here for a long time. These are valid questions. Another question is competition of elk with deer, fawn mortality, highway mortality. He then went on to discuss fawn mortality, the effectiveness of coyote control and how this information can help increase deer populations.

He then went on to discuss the effect of the habitat on deer herds, and if elk are competing with deer.

Mr. Fenimore said he recently read an article by Todd Black about elk and potential conflict with mule deer. Perhaps we don't increase or decrease the elk herd. Additional cow tags have been given when elk are wintering on deer winter ranges in some areas. There is a call from some sportsmen in the state for more elk, while we are struggling with the deer herds. There is a knowledge gap that we need to think through before we make the decisions. He has been told that economically mule deer are worth more to the state than elk in terms of dollars spent by hunting and all the other recreational activities. He doesn't know how that works out.

Mr. Aoude said he does not know the economic value, but if you look at it permit wise, presently we have about 45,000 general season elk permits plus spike, any bull and archery. We've got roughly 97,000 mule deer permits. It is fairly similar. Ultimately, it will be a social call as to importance of deer or elk. It is not a biological issue. There is only so much forage out there and only so many animals can be fed.

Mr. Perkins said since there isn't any definitive data on the competition, we better slow down on increasing the elk herds.

Mr. Aoude said it is in our deer plan to not increase elk herds where it will damage mule deer. In general, you can't say that elk are bad for mule deer. We will look at them unit by unit and use the best science to decide that. Our elk plan has a goal of 80,000. Let's not get ahead of ourselves on the elk situation.

Mr. Perkins said he realizes that the elk competing with deer study might be expensive and difficult, but should we just ignore it?

Mr. Aoude said it is a cost benefit analysis on everything we do. Is the cost going to be worth the benefit we get out of it?

Mr. Fenimore said it is a cost benefit analysis. With the cost benefit of elk verses deer and the social aspect of it, he doesn't know if there is a study that could be done. Maybe there is some other research that is being done.

Mr. Aoude said there are a lot of studies out there looking at this, but none of them have come up with anything conclusive.

Mr. Perkins said he is not worried so much about doing a study locally, but he is concerned that there are a lot of adverse impacts on deer, relative to elk. He wants to pay close attention to that over the next few years.

Mr. Aoude said the way we are approaching things, by working on habitat and making the pie bigger is the most helpful. If what we want is both, we should just improve the habitat. Doing a study might be helpful.

Mr. Johnson referenced a book that said there is not conclusive evidence on elk effecting deer. It talks about their dietary needs and says there is very little overlap. He thinks if people are looking for any reason to say this, opinion gets going around and then becomes truth. It just isn't necessarily that way.

Mr. Aoude said if there is no data to back up the idea, we should not go there. There might be some indirect behavioral things that may be happening out there, but they are very hard to tease out in research projects.

Mr. Aoude then went on to discuss the annual survival rate of adult does and fawns, information that will help increase the deer population, highway mortality and the USU highway mortality study. We hope to continue this study as long as we can because it provides us the best possible survival data. He showed a map relative to mule deer survival monitoring in Utah 2009-10 postseason capture locations. He continued the discussion on annual survival, details of the study and how this information might help us increase deer populations.

Mr. Fenimore asked if they could partner with insurance companies who get claims when deer are hit.

Mr. Aoude said they have that data and it is even a lower estimate than our pick up data. They believe the best data, to base this on, is from the contractor because carcasses are being collected twice a week. The majority of animals are probably being hit by semis and they do not even stop. He continued the presentation showing pie charts, graphs and a map. In summary, the DWR is proactively conducting research needed to find out what is limiting mule deer populations. This concluded the presentation.

#### **Review of Thursday Agenda Items – Alan Clark**

Mr. Clark said he would like to discuss the recommendation process. There is guidance set out to managers, management plans etc. They have a meeting to go through that, then the process of recommendations come in. They do not come unchanged to the Board. There is a review process that takes place. Salt Lake looks at them to make sure they are consistent with the guidance that is given. If the recommendation isn't moving us toward objective, the Division will ask why. Once that is done, between coordinator and manager, before the recommendation goes out, they meet with Mr. Clark. What he looks for is inconsistencies. He will ask which of the recommendations are outside of the guidance. He asks questions about this. If the questions aren't answered, he calls the regional manager and discusses the recommendation. He might suggest they go back and review the information. Very seldom is the recommendation over ruled and the data is never changed. Once recommendations are done, they have the Brown Bag meeting. The coordinator presents what will be presented at the Board meeting and those in the Salt Lake Office ask questions. The data never changes, but the assumptions and questions asked are changed sometimes. They do review them.

Mr. Albrecht said the data is never changed. Do they ever sent it back to a regional office and ask them to go back in the field?

Mr. Clark said yes. That has been done. He gave some examples when this was done. They then discuss what the options are.

Mr. Albrecht asked about classification data. Do they ask them to look at that again?

Mr. Clark said no. That data is what it is. They have gone back and asked what the conditions were with flights.

Mr. Perkins asked if there are cases where they ask them to go back and redo a count, like Antelope Island sheep.

Mr. Clark said yes.

Mr. Perkins said it is warranted to go back and do another count if the data does not look right.

Mr. Clark said they did that on the Parker Mountain herd. They do try to be cautious on that. Sometimes things happen that are outside of our experience.

Mr. Perkins asked if there are cases where Salt Lake asks a region to go back and do something, if the second set of data is very different from the original.

Mr. Clark said he cannot answer that. We do that very seldom and there usually isn't enough time.

He went on to talk about agenda items number 5 and 6 on tomorrow's Board meeting agenda. Most of the other agenda items are easy. If the Board votes for Option 2, they need to decide how they are going to deal with 2011. Permit numbers are done later, but season dates for 2011 will have to be set tomorrow. If you pick Option 1 or 3, you have set where you are going in 2011. If you pick Option 2, you haven't said anything about 2011.

Mr. Aoude said if Unit-by-Unit is recommended for 2012, that we would have status quo for 2011. He did put those units that were below objective on a shortened season.

Mr. Perkins said all season dates for 2011, under Option 2 were presented to the RACs.

Mr. Fenimore said he got calls concerned that dedicated hunter would be done away with if they go with Option 2.

Mr. Aoude said he presented it the same way in every RAC. I did touch on that at every RAC.

Mr. Clark said if Option 2 is selected, then the Division will come back with a modified dedicated hunter program prior to 2012.

Mr. Johnson said what disturbed the Board is it looked like a decision had been made on dedicated hunters and bow hunters, basically that the program was going to be changed dramatically. On the Division's web page, it says it looks like we'll move to a one year program and bow hunters will be stuck within a certain area in one of the units. He doesn't think that was a good thing to put on the web page. There are other options that have not been discussed.

Mr. Clark said it is clear that we will have to make some changes and they were afraid people would sign up for the dedicated hunter program assuming they would get their choice of unit and three years.

Mr. Johnson said the comment was very specific and prejudiced against Option 2.

Director Karpowitz said we went away from the Board meeting, having asked them what archery would look like under that option. What we got back was it would be divided up by unit. We discussed the dedicated hunter issue in September also. What we told the Board was it would be hard to maintain a three-year program without several of the best units, every year, going to all dedicated hunters and lifetime license holders. We thought we should let the public know that would most likely need to change. The Board can do whatever they want with either program. We do not pretend to tell the Board what to do. They can do whatever they want to, but we have to meet at a starting point and that was where we thought we ended up after the September meeting.

Mr. Johnson said what was bothering us seemed to be worst-case scenario. I don't think that is what it is going to be.

Mr. Fenimore asked if the Deer management plan that we approved needs to be rewritten.

Director Karpowitz said no matter what, you are going to have to revise that plan.

Mr. Clark said you will be voting to amend the Deer management plan. They have worked hard to figure a way to address what happens when an animal leaves a unit where they have been planted. This has come up because of bison and sheep. The Wildlife Section has put together amendments for two rules, one for the Big Game rule and one for the Depredation rule that will allow us to call hunts for those species, as opposed to us having to kill them. We didn't have an easy mechanism available to manage that. These are agenda items 9 and 10.

The other item is the convention permit allocation issue where military people don't have to be present at the convention to get tags.

Chairman Woodard said Mr. Sheehan gave us a copy of the Conservation Convention Permit Audit today. The Board members might want to look at that tonight.



Mr. Clark said the only convention permits the Board needs to look at are one-year permits.

Mr. Fenimore asked on agenda item 14, if someone is able to draw a permit without being there and they are not there for their hunt, will we have lots of requests for extensions.

Mr. Clark said they can get a refund. The variance committee can also extend it. It won't even come to the Board.

Chairman Woodard thanked the Division and all the presenters. This is one of the best in depth educational meetings we have had for the Board and we appreciate it. They did a great job.

The meeting was then adjourned.

Approved