



U.S. Department of the Interior
Bureau of Land Management

NATIONAL WILD
HORSE & BURRO
ADVISORY BOARD

Courtyard Marriot
Salt Lake City Downtown
345 West 100 South
Salt Lake City, UT 84101

October 10-11, 2018

Volume 1

Day 1 Meeting Minutes

U. S. Department of the Interior
Bureau of Land Management

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Wednesday, October 10, 2018

Welcome

Mr. Fred T. Woehl, Jr., Chair, Wild Horse and Burro Advisory Board

Mr. Woehl called the meeting to order at 8:00 a.m. and asked any Veterans to first stand and then asked all to stand and join in the Pledge of Allegiance.

Mr. Woehl turned the time over to Dan Adams.

Rules of the Room

Dan Adams, Facilitator, The Langdon Group

Mr. Adams, serving as the meeting's facilitator, introduced himself and reviewed the rules of the room. Mr. Adams mentioned that it is our hope and intent that by everyone listening and following these rules, we'll have a good meeting. Mr. Adams also reviewed the emergency exit procedure in the case of an emergency and the location of restrooms. The rules of the room were as follows:

1. Seating is available for attendees. Anyone needing or wishing to stand will stand in the designated area behind the seats. All attendees are to stay in the seating or standing area at all times, unless addressing the Board during the public comment period.
2. Speakers and other attendees will not approach the dais at any time without prior consent from the Chair of the meeting.
3. Media will check in at the door and will be guided to the space designated for cameras.
4. No attendees will be allowed to place microphones, cameras or other equipment in the space set aside for the Board meeting.
5. All attendees will show mutual respect for each other and for speakers and Board members. This includes refraining from using cell phones or talking while the meeting is in session.
6. If anyone disrupts the meeting they will be asked to leave or be escorted out.
7. Those wishing to address the Board will sign in at the door. Speakers will address their comments to the Board, while seated at the designated speaker table. Generally, speakers have about 3 minutes each and are asked to finish in the designated time to allow for the maximum number of individuals to express their viewpoints.
8. Attendees wishing to provide handouts to the Board will leave handouts with the BLM representative at the door. Handouts will not be brought to the speaker's table and no one will be allowed to approach the Board with handouts.
9. Within the meeting room, attendees may not display signs, placards, or other items that are likely to obscure the view of participants or disrupt the meeting.
10. The Board will not respond to comments made during the public participation period. This should not be interpreted to mean the members of the board agree or disagree with anything said.
11. The Chair reserves the right to comment on any factual inaccuracies that may be shared during the public comment period.
12. The BLM commits to maintaining these rules for the benefit of all involved and appreciates everyone's cooperation with these rules.

Introductions

Mr. Woehl asked the board members to introduce themselves (see Table 1).

NATIONAL WILD HORSE & BURRO ADVISORY BOARD MEMBERS	
Board Member	Representing
Mr. Fred T. Woehl, Jr.	Public Interest (Equine Behavior)
Ms. Ginger Kathrens	Humane Advocacy
Mr. Ben Masters	Wildlife Management
Mr. Steven Yardley	Livestock Grazing
Dr. Tom Lenz	Veterinary Medicine
Ms. Celeste Carlisle	Wild Horse & Burro Advocacy
Dr. Barry Perryman	Public Interest (NRM/Special Knowledge)
Mr. James French	Natural Resource Management
Dr. Sue M. McDonnell	Wild Horse & Burro Research

Table 1 - National Wild Horse and Burro Advisory Board Members

Mr. Woehl introduced Ms. Kristin Bail and turned the time over to her.

Opening Remarks

Kristin Bail, Dedicated Official for the Bild Horse & Burro Advisory Board, Director of Resources and Planning, BLM



Ms. Kristin Bail

Ms. Bail thanked everyone for being there and knows that many of you traveled a long ways to be there. She is impressed by the passion and dedication of everyone involved in the program and the people that care about the horses and range land. Ms. Bail thanked everyone for attending and thanked those attending on the livestream. She also thanked the great group of folks that travel and do an amazing amount of setup to bring the live stream to us, thank you for your work on that. She thanked the Advisory Board members for their services, their contribution to dealing with tough, complex and important issues. She mentioned that Dr. Sue McDonnell, one of the board members, had a previous commitment and would be unable to attend in person, but would be participating by phone. Ms. Bail thanked Dr. McDonnell for taking the time to continue to participate. Ms. Bail

joined Mr. Woehl in welcoming the new members of the board. It takes a large team to put these meetings together. Ms. Bail thanked the Washington D.C. office, Wild Horse & Burro staff, and Ms. Dorothea Boothe, the Public Affairs Specialist for the National Wild Horse and Burro Program in Washington D.C. Ms. Bail also introduced Mr. Bruce Rittenhouse, the Acting Division Chief, Wild Horse and Burro Program, BLM.

Ms. Bail continued, this will start two days of dialogue on a variety of issues. The healthy, constructive dialogue is for the board members. We have the privilege of having a variety of important presentations. That is to inform all of us as we move forward in the program to help the board provide recommendations to the Bureau of Land Management. We continue to look for the Board's and our presenter's insights as we work toward having a healthy, productive, and thriving ecological balance for our horse herds.

An Advisory Board is a special privilege because the Federal Advisory Committee Act gives boards the right to provide group advice to an agency, something that can only happen within a chartered advisory board. The board is here to offer advice and recommendations for the secretaries of both interior and secretary of agriculture.

Of note, formal board recommendations are done by a vote, but that vote does not require 100% consensus. We do encourage that the board members work to achieve consensus, but these are tough issues. It is tough because we all have strong, valid approaches to what should be done, and we don't always reach agreement. We want to continue to have that diverse, important, challenging dialogue, and move together to reach consensus where we can. We also want to honor the fact that there are diverse opinions. We continue to look for ways where we have interactions and cross pollination, and more importantly, also have a close tie to what is going on in the field. For example, the Resource Advisory Councils (RACs) are close to what is happening on the ground in their areas and how to inform what is going on in local conditions. Ms. Bail looks forward to the dialogue and hopes that we can build on our successes, continue to roll up our

sleeves and deal with our challenges, and work toward the thriving ecological balance we all seek. We want to continue to work toward thriving relationships on behalf of the land and very importantly on behalf of the wild horses and burros. Thank you.

Ms. Bail was then asked to introduce the first presenter, Brian Steed. Ms. Bail introduced Mr. Steed as a son of Utah who knows western issues. He cares about western issues and has been very engaged.

Approach to Manage Wild Horses and Burros

Brian Steed, Deputy Director for Policy and Programs, BLM



Mr. Brian Steed is the BLM's Deputy Director for Policy and Programs. Mr. Steed said that it has been a real pleasure working with the people in the BLM. This is an important issue. It is an issue that inspires a lot of passion. It is important that we have a dialogue. Speaking to the Board, Mr. Steed said that you have been given a difficult job. This is an issue that inspires many strong emotions and those emotions are often communicated to you all. I appreciate your passion. The protection of wild horses and burros is at a critical juncture. No action is not an option. Allowing the present course is contrary to the BLM's mission. We have seen negative consequences for the environment. We believe that healthy horses and rangelands equals healthy communities. That's what we are striving for on the range. Off-range, we are working hard to find placement into good homes for horses after some of them have been removed from the range:

- On-range Vision – healthy horses & rangelands equals healthy communities
- Off-range Vision – removals from the range equals placement into good homes

Those two visions work together and can't be separated. I would also be remiss in saying this is not only the BLM vision but the Secretary of the Interior who asked me to address this in a direct manner. There are many horses on the range; currently we sit at multiple times of what was deemed to be the appropriate management levels. As a result, we are seeing impacts on the range, also impacts on the bottom line of the BLM where we spend an additional portion of the yearly appropriations budget on horses gathered off the range.

Mr. Steed continued and pointed out that these visions align well with BLM's overall mission of multiple use and sustained yields both for future and present generations. That means it's critically important to achieve the vision for the offline population as well as on range to do that. We hope to find a permanent home for all of the horses removed from the range.

The following are some consequences of overpopulation:

- Overpopulation causes degradation of animals on the range and impacts to local communities. Congress in 2017 noted the failure to address these problems will result in irreparable damage to the landscape and created the Consolidated Appropriations Act of 2017: "The failure to address these problems will result in irreparable damage to the landscape and the welfare of the animals protected by the Wild Free-Roaming Horses and Burros Act."
- Overpopulation causes degradation of habitat and competition with wildlife. There are many examples of wild horses and burros, as water sources become scarce, keeping other wildlife at bay from water sources. Horses are trying to reach as much water as they can, and this will also have severe impact to the springs over time.
- Overpopulation causes decline in the health of wild horses and burros. As the competition for resources increases, we have noticed a decline in the health of horses and burros. It's important, I think, that we pay attention to the consequences of our choices as we are going forward.
- Overpopulation causes destruction of private property and creates a public safety issue. As there is increased competition for resources, horses will travel. Horses and burros have sought reprieve on private property. This has led to issues of public safety. Again, healthy range lands equal healthy communities.

Mr. Steed continued: we are faced with a number of difficult choices as an agency, and indeed are turning to the advisory board for good ideas on what is a pressing problem every single year. Mr. Steed mentioned that there are two things that he views as threats to the BLM: wildfire and wild horses. We are in a trend line to where horses are consuming a large portion of our budget. We are not entirely sure how to get in front of that in the timeframe that we have.

The BLM has a budget of \$81 million per year for this program, over half of that is spent on housing horses off-range. We have limited tools in the tool box. One of the tools we have used as aggressively as we can of late is gathers. Gathers remains an important part of the management portfolio. This year has been particularly rough, where we have animals in declining health, and animals that are clearly on a pathway to where they won't survive in certain areas.

The Secretary of the Interior has instructed us to look for additional means of population growth suppression. We submitted a report to congress that details several options on pathways forward. One of the options that was presented there included extensive use of population growth suppression, methodologies, both including temporary vaccine based as well as spay and neuter techniques. We are pursuing both as expeditiously as we can given the constraints that we face. Mr. Steed thinks both certainly have merit. The value of both mean that the more population growth suppression we employ on the range, the less need we have for gathers and long term holding of the animals, which is a costly endeavor. We look to doing more of that in the future, and we continue to do that as aggressively as we can. We are also engaged in an active research program to improve fertility control methods through vaccine-based as well as spay and neuter techniques.

Mr. Steed addressed off-range horse management as well. We had about 46,000 horses in holding at the beginning of this year. Each of those horses will cost, depending on what we do with them over short-term or long-term holding, it could cost about a billion dollars to care for the horses over their lifetimes. This year we have an additional 11,000 horses off of the range. We have not seen the exact numbers yet on how many horses, but it's almost certainly north of 50,000 horses off-range. That means the price tag of holding the horses long term is increasing. We are looking for aggressive means to move the horses into good homes, looking to pursue adoptions and sales. One of the things upcoming is adoption incentives; potentially a \$1,000 dollar incentive, distributed \$500 at the time of adoption, and \$500 at titling of the horse. We are seeing the animals and how they are doing so we are able to make sure we abide by the mandates of the Act in terms of adoption. This is a novel idea. We'll be rolling out the adoption incentive this fall. We hope to increase the number of sales to good homes as well. We have been partnering with a variety of partners to increase the number of sales and make sure they are going to homes that treat them well.

Lastly, Mr. Steed expressed that we can't do this by ourselves. We are looking for partnerships with anyone willing to partner with us to make sure that we can maintain a viable horse and burro population and to maintain healthy horses on the range. We have been in discussions with many advocacy groups as well as a variety of other groups. The BLM has a fixed appropriation on this, and so while we are as creative as we can be, we also need as much help from our partner organizations as possible.

The BLM is moving ahead on new innovative tools and strategies to address on-range population and increasing placement of animals into good homes. Mr. Steed is absolutely optimistic that as we go forward and educate as many people as possible on this issue, there are real long-term solutions. We probably have to make hard decisions, but Mr. Steed is optimistic that we can make the decisions and have a viable and long-lasting program beneficial to the range as well as the horses. He then welcomed questions.

Mr. Woehl pointed out that the incentive program was a Board recommendation from 2015 and the Board is please to see that coming back.

Mr. Ben Masters mentioned that it means a lot to have someone from this level of the BLM come to a board meeting and shows that they are dedicated to tackling this issue. He hopes that the same dedication exists within congress. We've wanted to have this meeting in Washington for that reason, to engage. Mr. Masters asked, is this topic being discussed in Washington D.C.? Do people want to find a sustainable solution? Are they willing to put money into making that happen? What is the talk on Capitol Hill regarding this topic?

Mr. Steed responded that he works for the administration and it is hard to gauge all of the talk. He has been asked about it many times by colleagues and this shows that there is a real interest. Mr. Steed believes there is interest on Capitol Hill and that there is increased awareness that the way things have been done in the past is probably unsustainable. It is either going to take more money or more tools.

Mr. Steven Yardley asked about the two major concerns, wildfire and wild horses. Both have implications on the

rangeland. There is a lot of publicity about wildfire, is there a lot of urgency or publicity regarding wild horses and burros?

Mr. Steed said that the response is mixed. He has had a lot of opportunity to discuss it. There is an increased understanding about what is going on and we are working on it. This is a slow-burn (in keeping with the analogy) and there is not a lot of consensus on what to do about the problem whereas there seems to be consensus on what to do about wildfire.

Mr. Yardley pointed out that sometimes the fire that burns the slowest, burns the most.

Dr. Barry Perryman pointed out that our challenges aren't going to be fixed without active involvement of congress. Dr. Perryman stated that he is not sure that congress has the political appetite to take this up. It may be because they are uninformed. There may be other things that take priority of their time, for example. Some states don't have the problem that Nevada has. The fact of the matter is that we have many of our herd management areas (HMAs) that overlap with threatened/endangered (T/E) species habitat. We are in the middle of an ecological train wreck and congress needs to know. Dr. Perryman asked, do you think, in your opinion, it would be helpful to have a meeting with the Advisory Board in Washington D.C.?

Mr. Steed responded that the more attention we bring to this, the better outcomes we will see. Furthermore, Mr. Steed pointed out that this may be a question of tradeoffs, from an economic perspective. Every dollar I spend on keeping a horse in long-term holding is a dollar the federal government doesn't spend someplace else or doesn't go into the deficit. That's a conversation worthy of having. Mr. Steed continued that tradeoffs on the range, for every additional horse on the range, there are tradeoffs regarding vegetation, wildlife, and habitat. The more information about this topic the better.

Mr. Jim French thanked Mr. Steed for coming and pointed out that the Board may be tasked with a job that has no solution or there is no appetite for a solution. Mr. French stated that one of the places we are dropping the ball is that after the fire is out, we are faced with a reclamation disaster. For example, after the Martin fire, the fire took the grass out of the ecosystem. The budget support for the reclamation that needs to occur there in the next 18 months isn't there. We have about 18 months in much of the Great Basin before we lose the habitats to invasive species. Mr. French asked, what is the perspective relative to the reclamation budget? We have an ecological disaster that is going to create much bigger problems down the road that we haven't seen.

Mr. Steed acknowledged and stated that they are aware that reclamation is an enormous priority. We have to balance the resources and the priorities. We report to Congress, they are our boss.

Mr. Yardley followed-up the questions from Mr. French and Dr. Perryman with a question regarding a paradigm shift. He pointed out that although Congress is your boss, if there were an issue with wildfire, it is the responsibility of the agency to report the issues to Congress. Could there be a paradigm shift to inform Congress of the dire economic needs to deal with wild horses?

Mr. Steed pointed out that BLM cannot lobby Congress, but that yes, they can inform. He spends a lot of time talking about the issues with members of Congress and the resource needs that exist.

Bureau of Land Management, Utah ***Ed Roberson, State Director, BLM Utah***



Mr. Roberson explained that BLM Utah manages nearly 23 million acres of public lands representing about 42 percent of the state and 32 million subsurface acres. The economic output (FY2017) is measured amongst seven industries and accounts for 25,000 jobs. There were 7.9 million visitors to BLM Utah's public lands in FY2017 and supported 5,203 jobs and contributed \$577.7 million in economic activity to the state of Utah. Our priorities are Energy Independence, Shared Conservative Stewardship, Safe Borders, Job Creation, and Serving America. Mr. Roberson also reviewed Utah's Watershed Restoration Initiative that was established in 2006 as a partner-driven effort to conserve, restore, and manage ecosystems. To date, 1,902 projects have been completed on 1,560,073 acres with an investment over

\$207 million throughout Utah. In FY2017, BLM contributed \$10.5 million in funding.

Mr. Roberson pointed out that the partnerships is part of an all hands, all lands approach. We are providing continuity on the ground and working as good neighbors with others to pool together our resources to focus on the highest priority activities and projects and to reduce administrative implementation. We are improving our restoration activities, and over the time period of the last 13 years, we have treated 1.4 million-acres, 400-miles of stream restored to proper conservation, and healthy watersheds. Because of these efforts, Mr. Roberson said that you can see islands of juniper converted back to range land and shrub land to host the sage-grouse as well as 300 other species as well as providing healthier lands for wild horses, wildlife and livestock. These are all opportunities for the public and visitors to see an intact landscape. Mr. Roberson then turned it back to the Board for any questions.

Ms. Ginger Kathrens mentioned that we had a great tour yesterday with Gus Warr and Lisa Reid (BLM) at the Onaqui Mountain HMA and that they showed us the signage and information provided at kiosks in the HMA. Do you have plans for that for all of the HMAs in Utah? People love to see wild horses and if the signage is there, that would be great.

Mr. Roberson referred to Mr. Gus Warr, the Utah Wild Horse and Burro Lead with the BLM, to answer that question in his presentation

Mr. Yardley asked that with all of the activities and economic outputs from lands under the direction of the BLM, where do you see the excessive numbers of wild horses and burros and ecological damages occurring in the long list of problems and priorities?

Mr. Roberson again referred to Mr. Gus Warr and Mr. Mike Styler, the Executive Director of the Utah Department of Natural Resources, to answer that question.

Bureau of Land Management, Utah Wild Horse & Burro Program

V. Gus Warr, Wild Horse & Burro Program Lead, BLM Utah

Mr. Gus Warr introduced himself and then expressed that he had a great trip yesterday and he hopes that the Board enjoyed it as much as he did. He expressed thanks to the members of the Board and their willingness to be on the board. Mr. Warr spent the last 28 years with the BLM in the wild horse and burro program.

Mr. Warr explained that Utah has an amazing horse and burro team. We are a small state. We have two full time horse and burro experts (specialists) in the state of Utah. We have three others across the state that work in the horse and burro program but also have other duties (dual hat). There are three facility workers. And we have one, wonderful, full-time public affairs officer, Lisa, who you met yesterday. Mr. Warr explained that what makes our management team successful is people like Ed Roberson, at the head, clear down to our field manager and district managers. They support us as a team and are able to get things done. Mr. Warr is proud of that coordination and work.

In Utah, Mr. Warr explained that we have two off-range facilities. The Delta facility is a 300 animal facility and is inside the city limits. And we have the Axtell facility, a burro contract and horse contract facility. There is a contract for 1,000 horses and 1,200 burros. There is also an off-range pasture in central Utah near Fountain Green.

Mr. Warr explained that there are 19 herd management areas (HMAs) in the state within 29 herd areas (HAs). 17 of the HMAs are for wild horses and two are for wild burros. For information, between 1998 and 2006 we did extensive gathers and identified 98 individuals positive for equine infectious anemia off of public lands that had to be euthanized. This is very unique, something other HMAs don't deal with.

There are estimates of 2,000 plus horses on tribal land that go back and forth to the BLM. Through land use planning, we have been able to focus on where we can manage the horses effectively. For example, you can see the original herd area of the Onaquis is large, and unfortunately, a lot of it has no water source. There is also the issue of the military land that is adjacent to the herd area. After consideration, we identified 200,000-acres is what we can manage on the Onaquis. Each zone within Utah has their own management challenges and opportunities.

Mr. Warr continued showing maps of the state with the HMAs and referred to the southeast part of the state, including the Muddy Creek and Sinbad areas that are managed by BLM. Robert's Roost is an area that was a HMA, but there is not effective water there (we couldn't keep a population of 25 to 30 animals there because of a lack of water). In 2008 the land use plan went through the public process and determined that we can't effectively manage animals there. There are still horses there. There are other populations that are self-regulating that are not in HMAs. We are active in how to better manage the 5,100 animals in the state of Utah, down from 2017 (we were up to 5,800 roughly). We estimate there are approximately 4800 horses and 344 burros today (plus or minus 15%). Mr. Warr explained that BLM has been active in removing animals in 2017 and 2018. The appropriate management level (AML) for Utah is just under 2,000. Even though we have been actively removing, trying to do the best we can, we are two and a half times where we should be.

Mr. Warr pointed out that Utah is not as bad as some states. The BLM is working hard at being, and has been, effective in some areas, but we have a long way to go. We have had four very dry months in Utah. Mr. Warr showed the U.S Drought Monitor dated September 18, 2018 and explained that the whole west is in a drought condition. That dictates in a big way what BLM does and pushes us in one direction or another when it comes to long-term management. We deal with the water issue every year on many of the HMAs. In 2016, there were so many horses without water, we had no choice but to bring water to them or they would be compromised, and we would have to do an emergency removal.

Mr. Warr pointed out that most of the issue is the water. The BLM tries to improve the water sources so we don't have to haul water. There are cases where the BLM has had to euthanize horses that can't walk because of lack of water. Mr. Warr said that he will not go into an area to see a horse in that condition and not relieve that suffering.

Mr. Warr expressed that the long-term solution is keeping the numbers in check. As for signage, to Ms. Kathren's question, the signs are critical in future management to educate the public. We talk a lot about the herd in the Onaquis, where people love the horses to death. But, they start petting them, feeding them and making pets out of them, that's the concern BLM has. The kiosks, Mr. Warr, said he would love to see them across the state.

Mr. Warr talked about partnerships. He mentioned the partnership with the Mustang Heritage Foundation, a competition between mustangs and domestic horses and have convinced many domestic horse owners into adopting mustangs because they are blown away by what they can do. Mr. Warr pointed out many other possibilities for public awareness in the state that the BLM uses, including displaying wild horses at the local zoo, a 4-H program and similar youth programs we do, all of which are great partnerships.

In summary, Mr. Warr explained that Utah is two and a half times AML. There are several HMAs that are four or five times over what they should be. The extended drought periods and water limitations create even more problems. Mr. Warr suggested that perhaps we need to look at the AMLs. For example, if we don't have enough water to sustain the populations, do we develop more water or do we reduce AML? There are public safety and private property issues to deal with as well. Mr. Warr turned it over to the Board for questions.

Mr. Woehl asked Mr. Warr to explain the difference between an HMA and an HA.

Mr. Warr explained that a herd area (HA) is the original 1971 designation. After the Act was passed in 1971, there was a period between '73, '74, and '75 where each district had to identify where wild horses were found. Sometimes that was done on the ground, by helicopter, or fixed-wing airplane. The BLM made a circle on a map and said that's where they were found. After that, the BLM had to identify within the HA, where can we effectively manage the horses. A herd management area (HMA) has to fall within a herd area. HMAs are a subset of the HA.

Mr. Woehl asked Mr. Warr to explain social media posts about a gather that occurred in Utah where some of the comments were not very flattering.

Mr. Warr thanked the chairman for bringing this up. He explained that there was a gather called the Muddy Creek gather where they removed 150 horses. There was a situation with passionate people that love horses. Mr. Warr explained that he loves that about this program, that people are passionate and love the animals. He went on to explain that he had been accused on social media of making fun of the emotional people at the gather but that he had not been up where the people were, rather he had simply asked the law enforcement team to be there to make sure everything went well. The gather

went really well.

Mr. Masters asked if BLM Utah has synopsis or have any data of the number of horses that are outside HAs.

Mr. Warr explained that out of the 4,800 animals in Utah, there are 300 to 400 animals outside of the HA boundary. There are a subset of 800 to 1,000 animals that are within HAs but not in HMAs. They still fall under the Act.

Mr. Masters stated that he is not familiar with any data that support the claims of mountain lion predation.

Mr. Warr would refer to Dr. Peterson, that he may be able to answer that question for the Board and that he will be at the meeting tomorrow.

Mr. Yardley referred to his question to Mr. Roberson, that there are a lot of activities, economic activities on public land in the state of Utah. As far as on the list of priorities and problems we are faced with, Mr. Yardley asked, where are the ecological problems occurring?

Mr. Warr explained that it is not uncommon to get questions from the BLM director regarding the wild horse and burro problem we are facing. It is a priority in the state of the Utah, because it impacts the livestock community, interest groups and many more, this is a priority program.

Dr. Tom Lenz asked if all the horses, as they are removed, are tested for anemia, and to explain if the BLM goes back to any horses remaining to test them.

Mr. Warr explained that when the BLM gathers horses, the BLM contracts with the State Veterinarian to test them onsite and the BLM won't ship them to a facility until they have been tested. In cases where they test positive, the BLM institutes a quarantine onsite where the animal is in quarantine for several months on public lands. This is rare, but we have to hold the animals and test them.

Mr. French asked that if the 1,100 or so that were gathered this year were gathered based on emergency conditions or were they scheduled?

Mr. Warr responded that a couple of them were emergencies, however most were scheduled. There was one private land gather where there were wild horses on private land. In one emergency gather, there was a lack of water, not on the entire HMA. And the rest were planned.

Mr. French asked if there is a lead for the 4-H programs mentioned and that this would be a good opportunity for Nevada.

Mr. Warr explained that Idaho kicked it off and there are now multiple states doing the same program. The program is working well and that BLM could help connect the 4-H leaders to help each other.

Dr. Perryman referred to the drought monitor and asked, how are you using the drought monitor in your decision-making process?

Mr. Warr responded that he encourages the field specialist, when they are doing an analysis on doing a gather or not, to use the information in the drought monitor as part of the analysis. He explained that BLM has encouraged its staff to look at not only utilization or trends, but use the drought data. This data is predictable and provides a clear picture of where we are right now. There is also a rain gauge we use in the field.

Dr. Perryman pointed out that the drought monitor is based on surface water availability. There are some years you can have all kinds of feed on the ground but there's no water, basically. There have been issues where some of the BLM offices have been relying exclusively on the drought monitor and it can be off base what is happening on the ground.

Mr. Warr agreed that it is one piece of data in the analysis. They have to look at the local data, the local trend, monitoring data, utilization, all of the factors.

Ms. Celeste Carlisle pointed out that the Onaqui HMA is often referred to (or looked to) as a successful fertility program. Ms. Carlisle mentioned that this herd has approachable horses and a team supportive of doing this, including the state lead. That's really important. Other field offices have looked to Utah for advice and practicality and the do's and the don'ts. Ms. Carlisle asked then, what are your limitations for 60 at this point instead of 100, are there reasons you are not just saying 80% of the mares or whatever?

Mr. Warr responded that one of the biggest challenges is that there is a mob, the large group of horses. Those are approachable, however there are sub-populations on the Onaqui Mountains that are not as approachable. The BLM recently held a training this summer where there were half a dozen individuals taking the training. The identification of the individual animal is key. Making sure you have the database and making sure you can identify each individual mare so you know which animal you are darting. We don't want to haphazardly dart any mare. We want to be precise in what we do. There are limitations on the horses in the Onaquis. Another example, Mr. Warr stated, is Muddy Creek. There are a subset of the Muddy Creek that are approachable, however there are a lot of those in Muddy Creek you can't get within a mile. Mr. Warr explained that their approach is to take what they can get; any suppression will support the program in the long run.

Ms. Kathrens pointed out that in some cases, like in McCullough Peaks HMA, the transition from a herd not being approachable to being approachable happened over only two or three years, once the public begin to engage the herd.

Mr. Warr concluded that the BLM direction is to look at each HMA and determine what is the applicability of darting. At every level, we need to do what we can and use all of the tools we have.

10:00 a.m.: 15-minute break

Mr. Woehl introduced the BLM Acting Division Chief, Wild Horse and Burro Program, Mr. Bruce Rittenhouse and turned the time over to him.

Bureau of Land Management, National Wild Horse & Burro Program
Bruce Rittenhouse, Acting Division Chief, Wild Horse & Burro Program

Mr. Rittenhouse first acknowledged the Board and thanked them for being here. He also thanked the BLM wild horse and burro staff that are dedicated to this program. Mr. Rittenhouse pointed out that the people in this program care very much about the animals and that it is their main motivation for being in the program. He pointed out that the division chief position may be one of the most challenging positions in the bureau and that he is honored to be in this position.

Mr. Rittenhouse pointed out that the Wild and Free-Roaming Horses and Burros Act of 1971 was meant to protect wild horses and burros as a component of public lands managed in a manner designed to achieve a thriving ecological balance. We've heard those words several times already, "thriving ecological balance," which falls in line with the mission to sustain diversity and productivity for the use and enjoyment of current and future generations. Unhealthy horses is not a thriving ecological balance. Mr. Rittenhouse pointed out that HMAs are not the exclusive use of land, rather the land consists of multiple uses, including other wildlife habitat, rangeland, and many other opportunities. Another component is determining minimum feasible level. That term, along with "thriving ecological balance", have never been defined.

Mr. Rittenhouse continued, as of March 2018, there are about 82,000 animals. From the facilities holding report, 48,000 animals. This past year we adopted or sold 4,647 animals, an increase of 600 from last year. We are 7,000 short of meeting the goal of putting animals into homes that have been removed off of the range. As a nation, we are three times over the appropriate management level (AML) on the range.

Mr. Rittenhouse stated that we are at a crossroads. He emphasized that no action at this moment is not an option. There are consequences of inaction. He shared an example of the Antelope Valley HMA where they are over seven times AML, and over six years have seen dramatic losses of soil near water sources, primarily from horses.

Mr. Rittenhouse pointed out that there has been a decline in private care adoptions and sales of wild mustangs and there

are several factors. We are better at moving animals into long-term care simply to reduce current costs. Estimates vary year by year, but roughly, we use the numbers of cost, \$5 a day per animal in a corral and \$2 per day in a long-term pasture. However, there is an escalation of costs. One day to feed 36,500 horses in our pastures is \$73,000. One year is \$26 million. For the lifetime of the animals, assuming 15 to 20 years, approximately \$500 million. If we add the corrals, you add another \$500 million, for a total of \$1 billion. Mr. Rittenhouse stated that we are at a fork in the road, and then asked, what fork are we going to take?

Mr. Rittenhouse stated that the Advisory Board has a key role in what fork to take. The information has been presented, we know that nearly every HMA is overpopulated. We are starting to see a lot more degradation of the public lands in the HMAs, with soil loss, vegetation changes, and that emergency gathers are increasing. Mr. Rittenhouse reiterated a response to Dr. Perryman regarding the drought monitor, stating that there are processes in place to consider drought conditions when requesting emergency gathers due to resource conditions. We are dealing with emergency gather requests because of resource conditions, but also because of cases where the animals are damaging private property. There are multiple tools, including expanding temporary fertility control and exploring permanent fertility control. There are cases, as has been mentioned, where darting is not feasible. The BLM is always looking for ways to increase adoptions and sales by expanding the markets and reaching new audiences for adoptions. One way to do this is to strengthen and expand partnerships, we know we can't do this alone, and the BLM needs people's help and assistance. BLM has great partners at the national and local level and are trying to work on expanding the use of volunteers. There are partnerships with other agencies, for example, the BLM has adopted 400 animals to the U.S. Border Patrol. There is interest from other law enforcement agencies, state and local. Mr. Rittenhouse opened it up for questions.

Mr. French pointed out that, based on the numbers for long-term and short-term holdings, and the budget presented, that we will exceed the program budget within six years. He pointed out that it's unsustainable and unsustainable in a short period of time. He then asked, is congress fully aware of where this is headed right now?

Mr. Rittenhouse referred to Mr. Steed's presentation and earlier response. Mr. Rittenhouse thinks there are some that are aware, but believes they really become aware when their constituents write them letters. He pointed out that the public needs to really be engaged and that we can help really look at a long-term vision rather than just snapshots in time. It does begin with curbing population growth first. In response, Mr. Rittenhouse continued that to get congress engaged is to really have the public engage them and to have networks of advocacy groups that provide information to Congress is helpful.

Mr. French followed up with a question regarding the management side of Mr. Rittenhouse's presentation, and asked, by concentrating horses in a location based on artificially providing water, are we even thinking about what the ramifications are to those other obligate species that have been impacted by the shortage of water as well? Are we exacerbating the problem by artificially watering the horses that remain in that location and enabling the behavior that they become dependent on it? Are there impacts to the ecosystem by doing so?

Mr. Rittenhouse agreed and stated that it removes the free-roaming aspect of their livelihood. The BLM has debated about whether to haul water or not haul water and considers how and when management practices would potentially exacerbate the impact to the ecosystem.

Mr. Woehl asked whether there is any part of the 1971 law that says you have to haul water?

Mr. Rittenhouse stated that he is not aware of any part of the law that requires the BLM to haul water. The BLM considers how their actions impact ecosystems, in the example of degradation around artificially water provided by the BLM.

Ms. Kathrens asked how the 27,000 number (for AML) of wild horses and burros that could live in the west was arrived at?

Mr. Rittenhouse explained that AML is based on range capability, water, the habitat of horses in conjunction with permanent grazing and wildlife use. There was reference in the Academy of Sciences report that perhaps AML was not determined in a scientific way. In summary, if we have horses in HMAs that we have to haul water to every year, that would not meet a minimum feasible level of management standard and removes the free-roaming aspect of the animals.

AML was determined based on range condition, forage, site potential, the availability of water and cover, as well as permanent uses.

Ms. Kathrens referred to the BLM's presentation on healthy range land and genetic variability contend that a healthy herd is variable. She acknowledged that it is a balancing act, but stated that she thinks the 27,000 number seems incredibly low. We should consider whether AML was determined scientifically and that perhaps there needs to be a reevaluation of AML.

Mr. Rittenhouse stated that AML was determined using the best information available at the time. AML will always be adjustable based on the data and information.

Mr. French offered some insight into the determination of AML: AML was established by a group of people sitting around the table with a set of maps and overlays and considered everything from watershed management to big-game management to species management to permitted livestock as well as other users on the ground. The process was deliberative. We considered genetic viability. The process was a deliberative process, it wasn't a flipping of the coin. It was understood at the time that AML could be adjusted, both up or down, based on data at the time. Mr. French was not involved with setting a nationwide number, rather he worked on the management areas for which he had some responsibility.

Ms. Kathrens pointed out that it seems the intent was to involve the best people on the ground in the area where they work, have knowledge, and have responsibility.

Mr. Yardley referred to Mr. Rittenhouse's comments about a major event happening if something isn't done. He asked, what a major event would look like if we continue the status quo from both an ecological standpoint, from the range the animals run on and for the animals themselves?

Mr. Rittenhouse stated that we are seeing a decline in health in some areas and that as the problem gets worse so does the decline in health. As for the range, Mr. Rittenhouse agrees that we'll see further degradation of lands like invasive species encroachment or spreading, resource degradation, vegetation changes, soil loss, soil changes, displacement of animals and other wildlife

Mr. Yardley asked, which of those happens first? The ecological crash or the population crash?

Mr. Rittenhouse responded that he thinks we are seeing an ecological crash in several areas and that we have crossed the threshold in many areas making it hard and difficult to reverse. With wildfire, we can manage the reclamation, in some cases, fairly easily, through reseeding and moving livestock off the land. But, with the horses, we remove horses, we dart, we do things and even if we got to AML, there is no chance for restoration or reclamation, the horses are still there.

Ms. Carlisle pointed out that we hear a lot of doom and gloom projections. She asked, if we maintain the status quo, does the BLM have good predictions what can occur with layered management approaches? She pointed out that the problem is the population growth rate and asked, what management areas address population growth and has the BLM modeled, using economies of scale, these outcomes?

Mr. Rittenhouse responded that we get to AML based on certain actions. Mr. Alan Shepherd will talk about that more this afternoon and will present options that have been presented, from full implementation of the act to current management practices. Mr. Rittenhouse deferred to Mr. Shepherd later this afternoon.

Dr. Perryman pointed out that we have been talking about management paradigm changes over most of his career. He pointed out that some HMAs are in good shape where things are doing well, and perhaps those just need a management tweak every now and then to maintain things. However, there are other HMAs where we have already lost ecological potential, we have lost three feet of soil, and the AMLs associated with those sites have now been automatically decreased, the carrying capacity is no longer what it was. Dr. Perryman explained that there is going to have to be critical assessments of the AMLs, up and down, based on the data. There are cases where we have limiting seasonal habitat for sage grass that overlaps the preferred habitat for horses and burros. Dr. Perryman explained that more horses and better

brood habitat are mutually exclusive. He then asked, does your gather authority include threats to other wildlife habitat? Has the BLM had discussion on that?

Mr. Rittenhouse responded that yes, and in identifying priorities for gathers. In the past year, BLM has considered habitats for other species as one of those priorities. \$4 million of sage-grouse funds in FY2018 was used for gathers that have been planned (these are not emergency gathers) and BLM hopes to do that again this year, combining resources. BLM has encouraged states to identify projects on the ground that are for restoration and enhancement of sage-grouse habitat and work together where our needs overlap.

Dr. Perryman asked whether it is in the BLM's emergency gather authority to go out and remove horses from the priority habitats?

Mr. Rittenhouse stated that emergency orders have mostly to do with the health of the horses and burros and that perhaps the policy needs to be reviewed. Sage-grouse is just one example, there are desert tortoise, and many others. Other revisions include revising the adoption manual to include the incentive program, for example.

Ms. Carlisle asked how BLM prioritizes areas selected for gathers? Is it based on AML only, or sage-grouse habitat, or both, or others?

Mr. Rittenhouse deferred to Mr. Shepherd and mentioned that in cases where an HMA also has sage-grouse habitat, this would likely be a priority gather. The BLM does consider other protections in place when considering gathers.

Mr. Woehl directed the group to break for 5 minutes and

Utah Department of Natural Resources *Michael Styler, Executive Director, Utah DNR*



Mr. Michael Styler, the Executive Director of the Utah Department of Natural Resources, introduced himself. The Utah DNR has a dynamic department of 1,500 employees responsible for natural resources, geologic surveys, state parks and more. Mr. Styler is a fourth-generation owner of mustangs. The Utah legislature is concerned about the impacts from the wild horse and burro population, especially in the last year, we suffered the driest year in our history. We have been working for many years to offset the effects of invasive species and drought. We have great partners with the BLM to work on our watershed restoration work.

Mr. Styler walked through how DNR has partnered with the Natural Resources Conservation Service (NRCS) of USDA, the Fish and Wildlife Service, the Forest Service, and private landowners to lessen the impact of wild horses, including the removal of brush and then reseeding. This is a great solution for sage-grouse habitat in the state. There are areas, for example, that are used for livestock, horses and elk, as well. DNR partners for funding and was able to use nearly \$9 million to do some of the projects he was showing on his slides. DNR looks at the carrying capacity of the land and considers the cattle, sheep, elk, deer and horses it can support. We can manage livestock, but there is no way to manage the number of horses.

Mr. Styler went on to discuss how things are changing. DNR held a Wild Horse and Burro Summit last year that mirrored some of the information and presentations you are hearing at these meetings. Ultimately, the science was very clear about what is happening with wild horses and burros. The Utah Legislature, for example, gave DNR more budget after that summit. Mr. Styler continued, explaining that there are opportunities to partner and work together. A good example of this was a soft gather that DNR was willing to pay for on private property. The horses were baited into a corral and they shut the gate behind them, without the use of helicopters and with no stress to the horses. There were 93 or 94 horses gathered in that case. DNR does not care whether it is on private land or public land, we want to reduce the problem, we have a wonderful relationship with BLM, and we are working together to identify other ways to reduce the problem.

Mr. Styler talked about the drought in Utah, that the impact of last winter's and summer's drought means there is no grass on the ground. Now, since October 1, we have had rain, and the ponds might be full, but there is no grass. This has DNR

especially concerned. DNR has wildlife resources to deal with. There have been more fires this year. DNR reseeds after the fires, and on a positive note, met with the Utah State Governor's staff, gave them the proposed budget of \$6.2 million, and they didn't bat an eye. The Governor's office understands that our reclamation effort (reseeding after a fire) is simply something we have to do and is an important part of what the department of natural resources does.

Mr. Styler pointed out that we have to have a balance because we believe in multiple use. That is the foundation of the DNR, multiple use. If, together, we are providing for the users of the land, we will have a healthy landscape. If we have healthy landscape, the water will be taken up by a root system and will recharge the aquifers in the spring. Mr. Styler went on to state that in responding to the drought, Utah has increased the elk tag numbers by 700 to reduce elk populations, increased the bison permit numbers to 220, and increased the pronghorn tags above 50. Cattlemen in Utah have voluntarily removed livestock because there is no feed. There is a need for a similar effort with wild horses and burros and management is key. Mr. Styler feels that BLM is trying to do their part, but that their hands are tied. He doesn't know if the political will in the country exists to do what needs to be done, but that DNR is committed along with its partners and the BLM to do whatever it takes to have healthy watersheds and maintain the balance that needs to be there so wildlife and livestock can live together in a healthy ecosystem. He asked the Board for questions.

Mr. Woehl stated that the the majority of the Board agrees with Mr. Styler that we need to have a cooperative effort made with all stakeholders, and for all of the best use of the range.

Mr. Yardley thanks Mr. Styler for partnering to have a positive impact on the land by replacing viable feed and wildlife. This is a step in the right direction in fire prevention, getting these areas to have a higher carrying capacity.

Mr. Styler pointed out that the grazing improvement program, where they help ranchers develop new water sources, help with fencing, help to have more scientifically managed grazing and more intensive short-term grazing, is a win-win for all involved. Both parties present projects and the projects with the most benefit are selected and completed together. A good example of this is a recent project with fire resistant cover that DNR planted. It has stopped fires and is a win-win for sage-grouse habitat and the rangeland in that area.

Mr. Woehl asked about bush hogging that the DNR does, and Mr. Styler showed a video of a front-end loader with a grinder to remove/reduce junipers that are then reseeded with the cover and grasses from that area.

Ms. Kathrens referred to the Wild Horse and Burro Summit and asked if there was going to be another one.

Mr. Styler stated that probably not, simply because there really isn't any new information to present. However, if the Board feels that there is a need, and there is new information that we should have brought to the table, DNR would be happy to consider having another summit.

Adjourned until 1:15 p.m.

BLM Responses to the Wild Horse & Burro Advisory Board Recommendations 2016 - 2017

Bruce Rittenhouse, BLM Acting Division Chief, Wild Horse & Burro Program

Recommendations from the September 2016 Meeting in Elko, Nevada

Recommendation #1: BLM should follow stipulations of Wild Horse and Burro Act by offering all suitable animals in long and short-term holding deemed unadoptable for sale without limitation or humane euthanasia. Those animals deemed unsuitable for sale should then be destroyed in the most humane manner possible.—Approved

BLM Response: Congress includes in the annual appropriations bill that *“Appropriations herein made shall not be available for the destruction of healthy, unadopted, wild horses and burros in the care of the Bureau or its contractors or for the sale of wild horses and burros that results in their destruction for processing into commercial products.”* With or without the prohibition, one of BLM's top priorities will continue to be the placement of animals into private care through adoptions and sales, and transfer animals to other federal, state, and local agencies.

Recommendation #2: BLM should prioritize designated sage-grouse habitat for removal of excess animals. BLM should use degree of range degradation as a criterion for prioritization for removal of excess animals i.e., consideration should be given to those rangelands that can be restored and maintained in a healthy status.—Approved

BLM Response: Gather priorities are based on the following criteria: compliance with court orders, public safety and protection of private property, priority habitats for threatened/endangered and sensitive species (including greater sage-grouse), initiation of research, and to achieve appropriate management levels in HMAs. In FY 2018, the BLM will have removed over 10,000 animals of which approximately 5,000 are in HMA's that overlap priority sage-grouse habitat. The BLM directed \$4.15 million of sage-grouse habitat improvement funds specifically to remove excess horses in areas where they were impacting priority sage-grouse habitat.

Recommendation #3: BLM should develop partnerships with economic agencies and or departments to conduct an analysis of socioeconomic and environmental effects on communities with reduced AUMs on HMAs due to range degradation resulting from overpopulation of wild horses and/or burros. Further analysis should be conducted regarding the effects of the potential removal of all domestic livestock from all HMAs.—Approved

BLM Response: The BLM is not prepared to fund this without outside help. The BLM recognizes that other uses of public lands such as recreation (including public viewing of wild horses and burros), energy development, permitted livestock grazing and the presence of wild horse and burro herds all contribute to the economic viability of western communities and the national economy. The BLM also recognizes that a decline in the health and productivity of rangelands negatively affects the resources that the economies of many rural western communities depend upon.

Recommendation #4: BLM should encourage BLM Resource Advisory Councils (RACs) to develop and submit for consideration their ideas for herd management and range rehabilitation strategies tailored to their specific areas and HMAs based on local knowledge and expertise.—Approved

BLM Response: Several RACs have a keen interest in wild horse and burro management. The BLM Wild Horse and Burro Program will prepare and transmit a letter to the RACs representing areas where wild horses and burros are present and ask for their insight into herd and rangeland management strategies, including suggestions for partnership opportunities with local, State and national organizations.

Recommendation #5: BLM should advertise and conduct more frequent adoption events at off-range corrals to enable more horses & burros to reach sale eligible status.—Approved

BLM Response: In calendar year 2018, the BLM will hold a total of 96 adoption events (www.blm.gov/whb) to be held in numerous states. Of these events, 39 will be held at BLM off-range corrals. For example, the BLM's Pauls Valley (OK) off-range facility holds monthly adoption events on the second Tuesday of the month. The BLM has also begun to implement internet adoptions through the on-line corral system. Through this system the public has a wider range of animals to select from for adoption. Adoption events at other facilities and events across the country allows more people an opportunity to adopt animals without having to travel to BLM facilities which are primarily located in the west.

Recommendation #6: BLM should facilitate invitation to all Board members to attend spay trials when they might occur, if allowed by protocols governing the trial.—Approved

BLM Response: Spay research is currently being proposed for a gather in Oregon at the Warm Springs HMA in fall 2018. BLM intends to contract for veterinary services to spay approximately 100 mares using the ovariectomy via colpotomy technique. It is the BLM's intention to be transparent and allow public viewing of the surgeries, while at the same time to be prudent and consider the nature of the research and protecting the veterinarians and the health of the animals. There are no special provisions in the Warm Springs HMA Environmental Assessment that would give preferential access to board members for viewing, but board members are certainly allowed and encouraged to join the public viewing.

Recommendation #7 (Repeat from last meeting): BLM should continue to work toward full implementation of previously accepted recommendations of the Board and prioritize according to BLM matrix of meeting AML. Note: This is the first recommendation from the Board's April 13-14, 2016 meeting.—Approved

BLM Response: The BLM is working towards the implementation of accepted recommendations from previous meetings within the limitations of available resources (staffing and budgetary) and other influencing factors. Priority work includes reducing off-range holding costs, increasing the number of trained animals offered for adoption, increasing animal availability to adopters through new “storefronts” with more emphasis in the east, continuing research to develop more effective contraceptive methods, and managing HMAs to achieve and maintain AML.

Mr. French asked, in the case of prioritizing sage-grouse habitat for gathers, is this a routine operation to determine whether or not there is a trigger, or is there something else the BLM is waiting for from other agencies, for example? Mr. Rittenhouse explained that this refers to planned gathers, which considers priority habitats for greater sage-grouse when determining where. There are also times when sage-grouse funds can be used to help with wild horse and burro gathers.

Mr. French pointed out that the decisions made by BLM have impacts to state and local governments and that it is mandated, often court-ordered, to consider those impacts in their decision-making process. Mr. Rittenhouse agreed and stated that the socioeconomic analysis is part of the process. Mr. French, Dr. Perryman, and Mr. Yardley went on to explain that when the recommendations refer to effects on resources, that many rural western communities depend upon, this is not just the tail end of a statement. There are a lot of western communities that do not have the tax base that others have in eastern states, for example. There is not enough private land that can be taxed. In Nevada, for instance, the only tax base, and something we rely on, is a ranch-based income. Smaller communities in the west are solely dependent on the use of public land, it affects everything, and it is the livelihoods of the people in these communities that is at stake. If the range isn't maintained and taken care of, and the carrying capacity is decreased, these communities are the ones that suffer. It has everything to do with their livelihood and the traditions that they have.

Mr. French brought up having RACs attend the Advisory Board meetings. Mr. Rittenhouse agreed that this is a good idea.

The Board asked about making adoptions more available by increasing where and when they take place. They also asked about online adoptions. Ms. Hollé Waddell, BLM's Wild Horse and Burro Program Off-Range Branch Chief, responded that there is a new system in which you can adopt a horse online. The BLM identifies different pick up locations so someone can register, get approved, submit an application for purchasing or adopting an animal, etc. After some paperwork, verification, and logistics, someone can pick up the animal at a store front, off-range event, or a corral. The online adoptions are improving, the site was improved and is up and running. Ms. Waddell explained that this has increased the number of events that we've had online. There are volunteers that take videos and photos to help create a catalog for the animals. There is a search feature online as well.

Mr. Rittenhouse explained that in response to the recommendation regarding adoptions, BLM is not attempting to get animals to reach sale-eligible status. BLM's goal is to get animals into good homes. Ms. Waddell explained that BLM has developed additional policy regarding animal selection requirements and to demonstrate that the BLM is making the best effort to put the best animals forward for adoption events. Mr. Rittenhouse clarified that this is one way to have successful adoptions and give everyone interested an opportunity to adopt a horse, by putting the best animals forward for adoption. This is just one tool in the toolbox. Ms. Waddell explained that one of the policy changes was that animals would be offered for adoption three times before becoming sale-eligible. If the animal is sale-eligible, it can still be adopted.

The Board asked about restrictions to public viewing of gathers. Mr. Rittenhouse explained that there was a gather that involved Colorado State University (CSU) and it was CSU that had proposed restricting video of a particular gather that it was involved in. Once CSU was no longer involved, BLM revised and provided for public viewing, videography and photography.

Mr. Rittenhouse summarized that from the 2016 recommendations, the BLM is working on the recommendations to increase the number of trained animals offered for adoption, increase animal availability to adopters through more store

fronts with more emphasis on the eastern part of the U.S., research more effective contraceptive measures, and more.

Recommendations from the October 2017 Meeting in Grand Junction, Colorado

Recommendation #1: That the Wild Horse and Burro (WHB) Advisory Board have their next meeting in Washington DC and present their most recent recommendations, including those presented in September 2016, to agency officials. Tentatively to be scheduled early in the calendar year, but before the middle of March 2018. Motion carried 7-0.

BLM Response: The BLM seeks Board input on identifying future meeting locations and dates. The BLM considers the Board's input to ensure that future meeting dates and locations maximize the attendance of WHB Advisory Board members, senior BLM management and staff, stakeholders and public while still being cost effective. The BLM considered having a spring 2018 meeting in Washington DC but selected Salt Lake City Utah for reasons of cost and access to the field. This meeting was cancelled due to not meeting the 30-day meeting notice requirement.

Recommendation #2: Phase out long-term holding over the next 3 years and apply that budget to on-range management and adoptions. Motion carried 6-1

BLM Response: The BLM does not have the capacity to implement this recommendation since it would require the BLM sell or euthanize the approximately 35,000 animals currently in long-term holding over the next three years. Refer to the BLM's response to the Board's Recommendation #1 from the September 2016 Elko advisory board meeting.

Recommendation #3: Create funding mechanisms to maximize adoptions and or sales, especially through successful programs, and to include international adoptions and or sales. Motion carried 6-1.

BLM Response: The BLM continues seeking innovative and creative ways to increase private care placement through adoptions and sales. For example, the BLM has developed an Adoption Incentive Program that provides \$500 to adopters at time of adoption and \$500 to adopters at time of titling to help defray their costs for humane care of the animal.

The BLM received authority from Congress to transfer animals to Federal, state, and local government agencies for use as work animals. The BLM has developed policy (BLM Instruction Memorandum 2018-052) and began communication and outreach efforts. No authority at this time exists to directly transfer wild horses and burros to private, non-government entities nor outside of the country.

An international program is being considered as well to place animals into other countries for the purposes of humanitarian aid or economic development.

Recommendation #4: Increase WHB funding for reversible fertility control by \$3M in FY 2019. Motion carried 6-1.

BLM Response: The BLM is currently partnering with several research institutions to support new research into additional fertility control methods. Some of these methods show promise but have not been tested on horses on the range. BLM continues to use, and hopefully expand reversible fertility control methods (PZP and GonaCon vaccines) if it can be effectively and efficiently administered, to reduce removals and achieve and maintain AML. Reversible fertility control does have limited applicability such that it works best when HMA's are within AML and the animals are easily approached for darting.

Recommendation #5: BLM will immediately (within the next 3 years) follow the WHB Act and remove excess animals from the range to achieve AML. Further, BLM will use the help and assistance of all state and local agencies, organizations and individuals in achieving AML. Motion carried 6-1.

BLM Response: With on-range population levels at approximately 82,000 animals and having finite off-range holding space, removing large numbers of animals, especially over consecutive years, is currently not feasible. Unless, the BLM receives legislative support that increases placing animals into private/public care through

adoptions, sales and transfers or increases future BLM budgets to support acquiring additional holding space, this recommendation cannot be achieved in the recommended time-frame.

In April 2018 the BLM, through the Secretary of the Interior submitted a report to Congress titled “Management Options for a Sustainable Wild Horse and Burro Program.” This report outlined four options to move the program towards achieving and maintaining the appropriate management levels across the program. These management options rely heavily on achieving AML quickly which included developing partnerships with our stakeholders and public.

Recommendation #6: Maintain AML by using fertility control to slow population growth at levels where removals equal the adoption demand. Motion carried 6-1.

BLM Response: After AML is achieved in any one particular HMA or HMA complex, temporary and/or permanent fertility control can be effectively and efficiently administered, to reduce future removals and help maintain AML. With most HMAs or HMA complexes well above their AML, though, it will take many years using only fertility control to reach AML. Permanent and temporary fertility control alone will also not be able to achieve AML at a national level.

Recommendation #7: Adjust AML where appropriate. Motion 7-0.

BLM Response: After AML is achieved in any one particular HMA or HMA complex, BLM will assess the need to adjust the AML and make other multiple use decisions following in-depth analysis of rangeland monitoring and population inventory data collected over three to five years (in accordance with the procedures outlined in the BLM’s 4700-1 Wild Horses and Burros Management Handbook) as part of long-term management and land use planning. The goal of any adjustment of AML for an HMA is to have sufficient water and forage to manage herds at the minimum feasible level to maintain their free roaming behavior.

Ms. Kathrens commented that there are third-party groups working right now that could take on long-term care for a large number of horses, or provide the support that is going to be necessary to figure out what to do with that many horses.

Dr. Perryman also pointed out that we’ve got to explore the idea of shared participation of care for a very large number of animals. This would likely have to be done through tax credits and accelerated tax write-offs to create some kind of economic incentive for taking on this responsibility. BLM could put whatever kind of stipulations they want on the care, but it would transfer the ownership and care responsibility from the federal government to the private sector. This would be an opportunity for some of the vocal horse advocacy groups to play a participatory role in the care and maintenance of the animals.

Mr. Rittenhouse explained that there is no authority at this time to directly transfer wild horse and burros to other private non-government entities, nor outside of the country. Mr. French commented that this policy flies in the face of just exactly what Dr. Perryman was talking about. At one time, Mr. French explained that there were discussions about the possibility of organizing a foundation that could take donations that would then support horses in long-term holdings. Ms. Waddell clarified that the recent Instruction Memorandum (IM) outlines the policies and procedures concerning the sale of wild horses and burros. That is separate from any work to develop a BLM foundation that Mr. French referred to. There is BLM policy being developed to address the solicitation and acceptance of donations. This is separate. So, if there are non-governmental entities that are interested in acquiring animals, they can still do that. There's no law against it. They can adopt or purchase those animals. And in fact, we have a memorandum of understanding right now with an organization that has been very successful, Equine Solutions. They have purchased animals and are doing great training work and looking at doing an open house later this fall. I would encourage organizations, if you're interested in acquiring the animals, then they can do that through adoptions and sales.

Mr. Rittenhouse agreed that there is no better way of empowering people who have that interest to follow through, other than creating a foundation independent of the protocols on the ground right now, and allow for entities that have and are looking, through a tax benefit incentive or through just the goodness of their heart, to donate to a foundation.

Ms. Waddell encourages organizations to coordinate amongst themselves, contact BLM, and move through adoptions and sales.

Mr. French stated that he believes the Board and BLM are scratching the surface of a solution. There are a lot of foundations out there on the ground right now, corporations that would like to donate large amounts of money to support, especially if they get a tax write-off or credits to do so. There are a lot of private sector models on the ground that I think we should try to take a look at.

In reference to adjusting AML, Mr. French recalled that the recommendation had to do with adjusting AML following a catastrophic event, such as a three- to five-year analysis following a major fire event or the end of a drought cycle. Any event that has dramatically impacted the HMA habitat should then trigger a review of AML and adjustment of AML based on conditions on the ground.

Mr. Alan Shepherd was invited to the front to address how AML is determined and measured. Alan Shepherd is the On-Range Branch Chief, Wild Horse and Burro Program in Washington D.C. Mr. Shepherd explained that BLM collects monitoring data over several years on forage utilization, animal distribution, animal use distribution, water availability, impacts to private property and considers all of the factors. As for multiple use, BLM considers livestock use and coordinates with wildlife agencies to review target elk and deer numbers. This resource monitoring data is the key to look at what that production is on an annual basis.

Mr. Shepherd, to address Mr. French's comment about catastrophic events, also explained that AML would not be adjusted immediately based on any one year or event, rather the BLM may adjust the current animal population to benefit restoration and then continue monitoring to determine the success of that action and determine over time an appropriate adjustment to AML. Mr. Shepherd stated that in 85 to 90% of HMAs, we have never achieved AML and are therefore uncertain whether the AML is correct. In 29 years, Mr. Shepherd has never achieved AML from gathers. It is the goal of BLM to first achieve AML and then monitor the effects of that population on the ecosystem and on the horses.

After a short break, Mr. Woehl introduced Ms. Hope Woodward and turned the time over to her.

Forest Service Wild Horse & Burro Program

***Ms. Hope Woodward, Wild Horse and Burro Program Manager
USDA Forest Service, Washington, DC***

Ms. Woodward introduced herself and explained that the Forest Service (USFS) is about a tenth of the size, however, are authorized similarly as the BLM under the Act. The issues the USFS faces, and the opportunities, are similar. There are approximately 8,700 wild horses and 600 wild burros in 19 national forests in 8 western states. Wild horses and burros are managed in 34 active territories of approximately 2.1 million acres (24 of which are jointly managed with the BLM).

Ms. Woodward reviewed the staffing & budget for FY2018 of the Wild Horse and Burro Program for the USFS, the territories with Management Plans, and the territories with on-range fertility control, short-term, off-range facilities, territories that conduct gathers, that have gentling and training contracts, and that have adoptions and sales.

The AML population of all territories for the USFS is set at approximately 2,000 for horses and 296 for burros. The USFS has proposed management planning to review AML in 25 territories. The average over AML is at almost 400% for all USFS territories.

Ms. Woodward talked about the gather that started today (Oct 10, 2018) via helicopter in Devil's Garden in the Modoc National Forest, which is a planned removal of 1,000 horses. The USFS uses every method available and deemed appropriate for the conditions for gathers, including bait trapping, etc. The USFS agrees that more public signage to educate the public and reduce the potential for animals to become habituated and to trespass on private property. There are many other gathers taking place, including at Jicarilla. There are partnerships in place, including with the Jicarilla Mustang Heritage Alliance, and programs that support our efforts to provide internships and similar college programs to provide volunteers and interns an opportunity to assist in the USFS efforts.

Ms. Woodward referred to agreements with other agencies, including the BLM. One such agreement is a refund of BLM services for care of the horses, which expires this calendar year. These types of agreements and partnerships are helpful. The USFS wishes to engage and create more partnerships and having open and honest communications, respectful communications, to keep all parties informed.

Ms. Woodward stated that the removal of horses via helicopter, which began today, falls under the authority of the Act in terms of achieving and maintaining a thriving natural ecological balance. She mentioned that it is important to reach AML for the health of the horses and the ecosystem moving forward. She then opened it up for questions.

Mr. Woehl asked whether the USFS is terminating their cooperative agreement with the BLM for holding facilities or if they plan to continue sending horses to BLM facilities?

Ms. Woodward explained that USFS is not planning to manage long-term holding, and that animals that are removed would continue to go to BLM facilities for adoption and sale under the provisions of the existing MOU and national agreement. Ms. Woodward stated that if the horses don't get adopted, the plan is to have them there for one year and USFS is in the process of finalizing what would happen thereafter.

Mr. Woehl asked if the USFS would offer horses for sale in the same way that BLM does?

Ms. Woodward answered yes and recognizes that sale without limits is controversial. There is a priority, and it is adoption, then sales with limits under the current BLM guidance criteria, and then sales without limitations, addressed by the Act as amended as well as California State law (in the case of Modoc).

Mr. Woehl asked why the USFS can provide sale without limits and BLM cannot.

Ms. Woodward explained that for sale without limits, the Act does not say that agencies cannot offer sale without limits, and USFS has chosen to exercise that authority to do so.

Mr. French asked for clarification on the California State law provision.

Ms. Woodward read from California State Code 598-C and -D: It's unlawful for any person to buy or accept a horse with the intent of killing the horse if that person knows or should have known that any part of that horse will be used for human consumption. And, it's unlawful under that law to offer for sale horse meat for human consumption. Ms. Woodward also pointed out that there is still legal discussion about the application of California State law on federal forms and procedures.

Ms. Woehl asked if the USFS is going to do everything they can to be sure that horses go to good homes.

Ms. Woodward responded yes. The direction from the Washington office, as well as from management of gathers ongoing, is that the first priority is to find good homes for these animals, either through adoption or sale with limitation.

Ms. Kathrens asked about the number of horses planned for removal and if the long-term plan is to get to AML.

Ms. Woodward reiterated that they plan to remove up to 1,000 horses. That action started today and will continue until they have gathered 1,000 horses. In this case, they are about 3,500 over AML. This is part of a four-year plan to get to AML.

Ms. Kathrens asked if those horses have draft blood in them.

Ms. Woodward responded that yes, and they are generally recognized as being horses that are easy to train. They are larger size horses, approaching 15 to 16 hands.

Mr. Yardley pointed out that some adoptions aren't as successful because the wild horses were not big enough. Perhaps there could be some additional outreach to get these bigger horses adopted.

Ms. Woodward agreed and would pass the word along to start discussing possibilities for marketing the adoption of these animals.

Mr. Woehl asked if USFS horses are branded the same way as BLM horses are branded.

Ms. Woodward explained that they use microchipping primarily to track the animals.

Break until 3:20 p.m.

Mr. Woehl introduced Mr. Alan Shepherd.

BLM Management Options for a Sustainable Wild Horse & Burro Program
Alan Shepherd, On-Range Branch Chief, Wild Horse & Burro Program

Mr. Shepherd introduced himself and explained that the BLM was asked to prepare a report to Congress. At the time, there over 82,000 animals, roughly three times the AML. The overpopulation of horses and burros is threatening the western rangelands, degrading ecosystem functions and limiting the forage and water available for domestic and wildlife species. Mr. Shepherd also pointed out that emergency gathers are becoming more common to save impacted animals

Mr. Shepherd pointed out that the BLM cannot gather enough animals and treat enough animals to reduce the herd sizes through fertility control alone. Fertility control is not 100% effective. It is a valuable tool and will be a valuable tool when we're at AML, but at the current rate, it will not solve the problem. Low adoptions and sales have definitely resulted in the volume of horses we've got in holding and BLM is spending 60% of appropriated funds for holding and care. Mr. Shepherd reported that Congress requested a report from the BLM to prepare options for humanely achieving appropriate management level (AML). There was no direction as to how many options or what they should look like. The program put together a team of managers and specialists that worked toward developing that document and the options. The report was finalized in and submitted in March of 2018. There were several management assumptions in the report, including: sales without limitation and euthanasia; acquiring funding from external sources for gathers, adoptions and holding; availability of long-term holding space, including through partnerships; authority to transfer animals to non-profits, other federal agencies and state and local governments; categorical exclusions under NEPA; availability of trained veterinarians; effective fertility control vaccines; and, additional legislative options and changes.

Option 1: Achieve AML in eight years using all the authorities within the act while substantially decreasing off-range holding costs.

- Remove 156,000 animals over a 10-year period
- Treat 38,000 mares w/fertility control over 10-year period
- 40,000 adoptions; 110,000 sales without restriction; 24,000 animals euthanized – over a 10-year period
- Off-range population reduced to 6,000 by year 10
- Costs would exceed current average annual appropriations by about \$200 million over the 10 years
- AML would be achieved within 8 years

Option 2: Achieve AML in 10 years using existing authorities within the Act and substantially increasing program funding.

- Remove 151,200 animals over 10-year period
- Treat 52,400 mares w/fertility control over a 10-year period
- 40,000 adoptions and 2,000 sales with current restrictions over a 10-year period
- Off-range population increased to 110,000 by year 10
- Costs would exceed current average annual budget by about \$1.12 billion over the 10 years
- AML would be achieved within 10 years

Option 3: Achieve AML in Six Years Using Existing Authorities and Create an Adoption Incentive Program

- Remove 129,000 animals over a 10-year period

- Treat 26,000 mares w/fertility control over a 10-year period
- 84,000 adoptions over a 10-year period, increasing adoptions through a financial incentive program; 2,000 sales with current restrictions
- Off-range population increased to 71,000 by year 10
- Costs would exceed current average annual appropriations by about \$1.43 billion over the 10 years
- Appropriate Management Levels would be achieved within 6 years

Option 4: Achieve AML in 12 Years Using Existing Authorities, Creating an Adoption Incentive Program, and Increasing Permanent Sterilization

- Remove 36,600 animals over a 10-year period
- Treat 103,000 mares with fertility control methods (focusing on permanent sterilization) over a 10-year period
- 40,000 adoptions over a 10-year period, developing a financial adoption incentive program; 2,000 sales with current restrictions
- Off-range population decreased to 36,800 by year 10
- Costs would exceed current average annual appropriations by about \$320 million over the 10 years
- Appropriate Management Levels would be achieved within 12 year

Mr. Woehls asked about the costs over 10 years in option 2. Mr. Shepherd explained that the increased budget, of approximately \$1.12 billion would be over the 10 years, and it is the intent to have spending level off and then decrease once we achieve AML. That is the case for all the options presented, costs would stabilize and/or decrease for each option.

Ms. Carlisle asked how feasible is it to spay over 10,000 mares in a year? The BLM has parameters and logistics challenges associated with that kind of effort. The options are difficult to compare and measure because of the lack of data for each. Mr. Shepherd referred back to the assumptions and stated that each option assumes that the effort can be achieved. In the case of sterilization, yes, the BLM assumes that it would have the contract crews to gather the animals, which would require, as Ms. Carlisle mentioned, additional staff and management. The options take that into account and assume that the logistics, additional staff, and additional funds are made available to accomplish each task associated with each option. Each option attempts to accomplish the goal in ten years.

Dr. Perryman asked that if the BLM were to accomplish the goal and get to AML, what is the path moving forward so we're not revisiting the same problem down the road ten years? Mr. Shepherd believes that if the BLM maintains the tools it can use and the funding, then AML is perfectly maintainable. That means using all of the tools. It is our job to get to AML, maintain it, and then see how the ecosystem responds.

Mr. Woehl believes there is a non-lethal way out of this situation. He appreciates the BLM's efforts to clarify the reality of the situation. Dr. Perryman talked about wild horse on tribal lands, tribal lands adjacent to public lands. When we get to AML, there's going to be a vacuum that pulls horses from reservations onto public lands and we may be right back where we are now. He then asked, what is the BLM and Forest Service doing to coordinate with tribes to address this? Mr. Shepherd pointed out that it is BLM's role, in his opinion, to open the lines of communication with tribes, knowing full well that this is shared problem that requires a shared solution. Dr. Perryman suggested that the BLM have an action plan for coordinating with the various tribal governments moving forward. There are more like 125,000 horses, not 82,000.

Dr. Lenz asked if the BLM expects a response from Congress and what expertise do they have to review the report at hand? Mr. Shepherd said that it is unknown on a response and that Congress have staff that are looking at the report and have asked a lot of really good questions. BLM is hoping for an opportunity to sit down with Congress to clarify the report if needed and answer any questions they have.

Mr. Lenz pointed out that for option 4, if there are 80,000 horses out there and half of them are mares and almost all of them are pregnant, and we know we can't spay them the first 120 to 140 days, and we haven't had a research project done to determine how far into pregnancy we can spay them, the number of 10,000 a year may not be feasible. Mr. Shepherd referred back to the assumptions and the goal of 10 years. That is what it is going to take to do it in 10 years, although it may take more time than that, as the Board has pointed out.

The Board discussed whether the problem is beyond repair. Mr. Masters expressed that people wish they had double the budget, wish they had more tools in the tool box, but nothing has really changed in ten years. Mr. Masters asked that, if we continue with the status quo and end up with tens of thousands of horses on 40 million acres, 50 million acres, or 60 million acres, is there anything that we can do to cap it at 31 million acres (the current status) and have our triage and sacrifice it so that it doesn't become 40 or 50 or 60 million acres over the next few decades? Is there anything with fencing or with priorities or discussions about containing it at 30 million acres? Is there any budget for fencing to try to help with that expansion? If money was allocated for fencing, would it be beneficial. Mr. Shepherd answered that BLM spends very little on that type of work and that HMAs and HAs also have to consider grazing allotments, wildlife habitat, and similar where fencing would create problems.

Ms. Carlisle suggested that the options don't provide the data and details to really analyze and understand them, mostly because Congress only gave the BLM 30 days to get the report to them. She is hopeful that Congress understands that in the presentation of these four options that these are very basic starting points, because otherwise, they are not good options. Mr. Shepherd said that BLM made it very clear when they talked to Congress that this is the national AML and did not consider each HMA individually.

Ms. Kathrens suggested that it is time that we look at the whole program in a very different way and said that she thinks it is the HMA concept that is not successful. In some places, we have discussed having a wild horse common area rather than worrying about multiple herds that is managed primarily for wildlife and where there would be no livestock grazing. It seems that a lot of the conflicts come from the multiple use concept. This kind of thinking usually gets rejected immediately because it would require reopening the Wild Horse and Burro Act and looking at management of wild horses in a completely different way. This may still require killing some animals and using PZP and other methods, but it would be good to work through how to manage horses in a different way than in HMAs. As for the tools, Ms. Kathrens asked, what would be the method of killing the animals that you're talking about in the BLM options? Mr. Shepherd responded that it would be any approved method, in consultation with our vet advisor and in the most humane way practical.

Mr. French commented that rewriting the Wild Horse and Burro Act and how it is administered likely require reconsidering and would impact NEPA and is therefore not an easy task. Mr. French asked if there was any plan of action for marketing with regard to the 40,000 adoptions, associated public awareness and public acceptance? How will the BLM go about marketing to that degree? Mr. Shepherd responded that in the main approaches that considered adoptions, the BLM assumed that the adoption level would remain static except for the option with adoption incentives. If we are able to accomplish more adoptions, then we may not have to sell as many, or we may not have to do as many sterilizations. The main point is that if we're successful with placement, that will affect a lot of the components of each option.

Ms. Hope Woodward introduced Dr. Tolani Francisco, a Wild Horse and Burro Coordinator at the U.S. Forest Service in New Mexico, to address some of the questions regarding the U.S. Forest Service and coordination with tribes. Dr. Francisco explained that the USFS is working hard and has relationships with tribal governments in New Mexico, Arizona, Utah, Colorado, and California. There have been horse hunts proposed on tribal lands that received a lot of opposition. There have been discussions with professionals, the food safety inspection service, and others to educate tribes on the history of wild horses to answer questions about why slaughtering wild horses is frowned upon.

Ms. Waddell talked about the adoption incentive program, how it works, and where the amount of \$1,000 came from. The Board discussed several options for the adoption incentive program, such as a sliding scale that would give more money to individuals and organizations that adopt more than one horse, an incentive amount that covered the cost of training a wild horse, and others.

Dr. Perryman pointed out that with the passage of the Wild Horse and Burro Act, under the original authorization, we had the ability and the potential to show the world how to manage horses and burros with a thriving ecological balance and in a multiple use environment. Unfortunately, Dr. Perryman said that this is a national disgrace. He encouraged the board to really think about the public trust, the public interest, and that interest has to include the resource base. Without the resource base, there is no future.

Mr. Woehl introduced the next presenter, Dr. Paul Griffin.

BLM Wild Horse & Burro Program Research Update

Dr. Paul Griffin, Research Coordinator, BLM Wild Horse and Burro Program

Dr. Griffin mentioned the working sessions the previous day and expressed that there are a lot of topics to cover, including population growth suppression, genetics, survey methods, and population modeling and demography. Dr. Griffin went on to discuss what we know regarding population growth suppression. We know that PZP works well in both horses and burros. PZP pellets work for about a year, and they may lead to two or three more years of marginally more improved effects after a PZP booster dose, but it doesn't cause great effects for the first year or two. There may be some variation in batch quality for the pellets. We know that the vaccine doesn't have great effects after the first dose, but after a booster dose, the second overall dose, it can lead to four years of overall, at least 80% contraception. We know that spaying mares via colpotomy leads to permanent and immediate sterilization and reduced growth rates. Of note, Dr. Griffin pointed out that spayed mares continued to be in bands with other horses.

Mr. Yardley asked, regarding the Oregon study, what all has been done and how far out are they? Dr. Griffin responded that it is ongoing and that the research aspect to that project is under litigation, but our schedule would be, as I understand, to begin in late October with radio collaring and then spaying to follow.

Dr. Perryman asked about SpayVac and its effectiveness. Dr. Griffin responded that SpayVac was promising as a vaccine. It's a PZP vaccine, instead of being oil based or in capsules or in pellets, the PZP is surrounded by liposomes, and would lead to a long lasting immune response. In the initial trial, there were a couple of years of good response after one year of SpayVac, however in a follow-up study, on the second dose, the results were not as good. There are several variables we are dealing with and we don't which variable it was that caused the positive result. BLM could be open to looking at further studies of SpayVac if the company demonstrates that it works again. A representative with SpayVac commented, at the request of the Board, that preliminary results from one of the studies that indicated that a comparison of PZP produced in 2016 was had a lower effectiveness than PZP produced in 2018 at the university of Toledo.

Ms. Kathrens pointed out that the National Academy of Sciences (NAS) report recommended certain types of infertility treatments, and they did not recommend an ovariectomy. They said it may be followed by prolonged bleeding or infection, and makes it inadvisable for field application. Ms. Kathrens asked, has something changed that we would amend that decision with the NAS, do you think? Dr. Griffin responded that he didn't think there were recommendations in the report, rather they were listed as the three most promising methods, but the report did not say that other methods were not promising. He went on to say that yes, additional information has been shared since 2013, and it was made public in the first Oregon environmental assessment in 2016, that was the 2015 panel convened to assess a number of different spaying methods, their risks, their costs, other concerns or things that BLM should be aware of when choosing a method. That 2015 report concluded that colpotomy was one of the most promising of the spay methods available for a use by BLM. I also think that it's an important misnomer that I need to point out here is that the proposed work at Warm Springs for horses that would be coming from Warm Springs, as clarified in the EA, would not be conducted in the field. No one at BLM has considered using gelding or spaying in an HMA. These animals would be removed from the HMA, transported to the corral, which you have visited, and the facility there is set up with padded squeeze chutes for appropriate restraint of an animal, of animals, that is suitable for this type of surgery. So, it shouldn't be interpreted as a method that's being considered for use in the field.

Dr. Lenz clarified that the corral is in the field. When they say the surgery can be done in the field, it doesn't mean it's done out where they caught the horses. It's not done in a clinic. A corral is considered in the field. Dr. Griffin pointed out that one reason that the ovariectomy is preferred is because there is a smaller incision for healing.

Dr. Lenz explained the review of surgical procedures. One was ablation of the oviduct population in the uterus, with a laser, you would scar that, so the fertilized egg couldn't pass to the uterus, and so they would be sterile. The other was a forward-looking scope, putting a ligature around the oviduct to cut off the blood supply to the ovary. The reality was that some of the ovaries caused adhesions in the abdomen or dropped to the floor, and maintained the production of hormones, so the mares continued to cycle. The other was a laser and cutting the oviduct and tube. That one could not be done in the field because of equipment. You would have to have a laser guided endoscope, so that is tens of thousands of dollars that would not work well in the field. Dr. Lenz said that SpayVac is most promising for this type of procedure for these types of horses in this type of environment.

Dr. Griffin referred again to the report by the National Academy of Sciences and recommended that the Board also consider additional information that came in afterwards and that NAS concluded that spaying via colpotomy was suitable for use in management and that it is a well established procedure. The research has more to do with the stage of the pregnancy and how the horses interact.

Dr. Griffin described how PZP is formulated, through the use of pig ovaries. He also explained that there are other research looking into the development of recombinant protein through the harvesting of microbes. In any case, it would have to be demonstrated that it is biologically active, that it works and at what concentrations under what protocols.

Mr. French asked about the cost of a dose of PZP. Dr. Griffin answered that a dose of liquid PZP is about \$28, that is to say the cost of purchasing that dose is \$28. The cost of PZP22 pellet vaccine is \$580, and the other is about \$50. That doesn't mean it's \$30 to give a mare a dose of PZP, because you have to have that mare in hand. To get the mare in hand, you have to capture her, and to capture a mare, you typically have to capture at least a stallion and .4 or .5 foals on average. So, if you're talking about \$1,000 to capture each animal, it's a \$30PZP dose, and then \$3,000 to catch the animals. There has been discussions about which HMAs are suitable for darting. And you have to know what that mare is and what her history is. You use a different regimen if it's a primer or booster dose. If you give two primer doses, it leads to horrible abscessing

The Board asked if PZP22 is now dartable. Dr. Griffin stated that BLM has been told that it is dartable, however we are not confident and are hesitant until we see a further demonstration about how often all of those pellets get injected and to the right musculature and so on. So, we're hesitant to rely on darting for PZP22.

Dr. Griffin talked about other research, including an ongoing cooperation with Texas A&M University. Our handbook calls for roughly every ten years, we try to sample a number of animals from herds when they're gathered. We send off the samples, and we get information about heterozygosity. The population right now is four times what it was in 1971. Genetic viability is not really a big concern for most populations, and moreover, each herd really shouldn't be considered an isolated population, as Mr. French pointed out that there's a lot of movement between herds, and we can facilitate movement as management agency to make sure that each herd is viable. Mr. Woehl asked if there is there a minimum number in a herd to be genetically viable? Dr. Griffin explained that if you had an endangered species like a toad living in one pond, then yes. Different people will give you different numbers whether it's 50 or 500 or 5,000. But horses are not an endangered species. They number in the millions around the planet. They come from breeds that are pretty well known. Most come from breeds that have recently come about, and they're not isolated. Geographically, there's nothing in the act that says that they need to be maintained by themselves. BLM has a purview to move animals between herds.

The meeting was adjourned at 5:00 p.m.



U.S. Department of the Interior
Bureau of Land Management

NATIONAL WILD
HORSE & BURRO
ADVISORY BOARD

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October 10-11, 2018

Volume 2

Day 2 Meeting Minutes

U. S. Department of the Interior
Bureau of Land Management

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DRAFT

Thursday, October 11, 2018

Welcome

Mr. Fred T. Woehl, Jr., Chair, Wild Horse and Burro Advisory Board

Mr. Woehl called the meeting to order at 8:00 a.m. and turned the time over to Mr. Bruce Rittenhouse, the BLM Acting Division Chief of the Wild Horse & Burro Program to introduce the panel to discuss healthy horses and burros, healthy rangelands, and continue to discuss the context of the complex management of public lands in a multiple use environment. Mr. Rittenhouse introduced the panelists and turned the time over to them.

ASPCA: Wild Horse & Burro Opportunities and Obligations

Nancy Perry, Senior Vice President of Government Relations, American Society for the Prevention of Cruelty to Animals (ASPCA)

Ms. Perry introduced herself and talked about the ASPCA, the first animal welfare organization to be formed on this continent. The focus of the ASPCA has not been on wild horses until fairly recently, primarily because we felt that there are now opportunities for making a genuine difference. We are here to discuss the ways we see forward and opportunities to address some of the potential obstacles to moving forward. The ASPCA initially got involved in Nevada, meeting with stakeholders and discussing with people who have dramatically different views on this topic. We were able to focus on where we agreed, we found we had a lot more common ground than we even knew walking in the door, which led to fruitful conversations. The ASPCA cares about ecosystem health, humane treatment, fiscal responsibility, and a long-term vision. We all want this to be something that can be resolved quickly, and we all know if we are looking hard at this problem, that it requires a long-term commitment, and working in Washington, D.C., I know that that is not always a given, and it's a big challenge that we all face together. Getting any administration to commit to something that lives beyond them is difficult.

Ms. Perry went on to explain how the ASPCA has been working on a proposal and has met with the Secretary of the Interior, leaders at the BLM, budget folks, and more to provide a proposal that genuinely focuses on how to move forward, what the logistics should look like, and a non-lethal approach to managing wild horses. The ASPCA is willing to argue for robust roundups and gathers and to prioritize where the rangeland has been degraded, where wildlife is impacted, and where there is T&E species. We want to focus on a regional approach rather than an HMA-based approach. We couple those efforts in the proposal with the need to be very committed to fertility control, treating at least 80% of the horses on the range to realize the benefits of prevention in this plan. We believe that we have an effective tool with PZP, if it's properly applied. I think we should start with the tools that we have at our disposal now and bring new things online as they are appropriate. Ms. Perry stated that we have a real interest in making sure all of the tools that are brought online are humane and effective, but we are very interested in being pragmatic too about whatever fertility control methods are applied.

Ms. Perry talked about the steps following a gather and stated that there are potential streamlining benefits in the long term holding part of any proposal. There have been a lot of interested parties in helping with this problem, and we believe that if we can commit to a non-lethal, synergistic, multi-pronged approach, we can see long-term, cost effective pasturing. Ms. Perry talked about adoptions and stated that she has been really encouraged to hear about some of the innovative ideas that are really taking hold now around the adoption program. The ASPCA is a huge proponent of adoption, in many different ways. The ASPCA is really great at marketing and has offered the administration opportunities to lean in. Edge Research did a study with us a year and a half ago and found that 2.3 million people have the resources now to take in the horses and desire to. It is about finding them and marketing.

In summary, Ms. Perry stated that first, prevention, getting out on the range and having a commitment to the rangeland work, finding success in adoptions, and prevention on the range is going to be critical. Some of the challenges are building trust and making sure we can bring the right partners along in the plan. We can prevent horses going to slaughter by including provisions with time limits, having the ability to report concerns, and having a database to track buyers. We should revisit roundup protocols to ensure comprehensive animal welfare protocols are in place and training for contractors to avoid problems and build trust. We cannot do nothing, but we cannot kill as a management option. We can euthanize, but killing healthy horses to control the population will not be supported in Washington or among Americans. I think working together and collectively, and really emphasizing where we agree is going to be the way to get done what

we need to get done in the long-term.

Mr. Woehl asked for questions from the Board.

Mr. Masters asked about where the money would come from in a private partnership approach to taking care of the horses that would be gathered, estimating 100 to \$150 million annually to feed and house those animals? Ms. Perry responded that we won't have certainty about anything that we do, but we have to have a strong enough plan that we can look at where that money should be spent. We have been working with a biologist and an economist to model out options for gathering, but there is cost savings if we know how many we need in long-term holding to prevent moving animals multiple times in the process, all while maintaining stable contracts. This also requires building up adoptions and employing preventative measures on the range

Mr. Masters asked if there are entities that could commit \$20 million annually for the next 15 years? Ms. Perry responded that they have not gotten far enough to identify specific corporate entities that would be in that position. I know there are some entities, like the American Mustang Foundation, as a potential long-term holder with some facilities already online. I think we are a little premature to have examples of those corporate entities, however, I think there is an appetite for this.

Mr. Yardley asked, how do you propose to accomplish all of this work (gathers) and treat 80% of horses on the range while at the same time minimizing helicopter gathers? Ms. Perry responded, I think the helicopter gathers are always going to be necessary in certain geographies and we appreciate that. I think finding the areas where they are not necessary will help avoid some of the incidents that erode trust in the agency's management. I'm not suggesting that we don't do helicopter gathers. Mr. Yardley asked, what is the opposition or concern with helicopter gathers? Mr. Perry responded that she thinks most of the incidents that happened in recent days, months, and years, that gain a lot of attention have to do with the stress of helicopter gathers, and frankly, some inappropriate behavior on the part of contractors. Mr. Yardley pointed out that the things the ASPCA is recommending are going to require a greatly increased amount of helicopter gathers versus the current amount. Ms. Perry agreed.

Mr. French asked if the ASPCA would have an interest in brokering international adoptions to make sure that the receiving end of the adoptions is appropriate? Ms. Perry responded that the ASPCA is a domestically focused organization, with few external connections. Ms. Perry said that she would feel more comfortable keeping them in this country, because we have laws in place that would help us if we did see problems. That doesn't mean there wouldn't be potential for someone good taking horses and giving them good jobs in another country.

Mr. Woehl asked about ASPCA's support of euthanasia for cats and dogs, but not horses. Ms. Perry explained that the ASPCA has been actively engaging with the shelter community and encouraged them to move towards a higher live release rate and get to the point where euthanasia is not employed for space purposes. Ms. Perry explained that it is the goal to not use it as a population control technique for dogs and cats. We have seen live release rates go up in our shelter community. It is important for our voice to be in favor of pushing everyone away from utilizing euthanasia lightly or conveniently. If we feel the problem is partially our responsibility, then we have an obligation to pursue non-lethal methods of management.

Ms. Kathrens asked if the ASPCA proposal presupposes AML of 26,710 horses, which many organizations believe is unrealistically low to sustain certain small populations? Ms. Perry responded that the ASPCA starts the conversation with AML and recognizes this is what the agency is working toward. We recognize that AML may need to be adjusted, but agrees that a precise number may not be the critical piece, rather more work is needed regardless and if the number was 35,000 instead of 82,000, the conversation would be very different. It would be great to have more conversation about this.

Mr. Woehl mentioned that if we have a policy in place, that when abused or when they result in one or two isolated cases where something terrible happens, we should not reject the policy completely. Ms. Perry agreed but suggested that we can look at the policies together.

BLM: Grazing Administration

Alan Bass, BLM Rangeland Management Specialist, Vernal, Utah

Mr. Bass introduced himself and stated that his presentation would focus on livestock grazing on public lands while thinking about how horses are managed, considering with or without the same kind of regulations or direction. Mr. Bass reviewed the history of livestock grazing in the United States. The western U.S. range livestock industry boomed after the Civil War. This was because of minimal start-up costs, free forage and unregulated use of land. It was an attractive investment for eastern banks and foreign venture capitalists. The post-Civil War prosperity in the east created big demand for livestock products. “Free for all” led to overstocking and deterioration of the range, which led to tension between cattle, sheep growers, homesteaders, and downstream communities whose watersheds were denuded. Sheepmen could roam at will, often across federal lands that cattle ranchers were counting on for seasonal forage needs. Cattle ranchers used deadly force to keep sheep from the public ranges. Homesteaders began to settle on the lands and “crowding” the western stockman. As time went on, ranchers began to homestead as well.

Mr. Bass reviewed the Taylor Grazing Act of 1934: “to stop injury to the public grazing lands by preventing overgrazing and soil deterioration; to provide for their orderly use, improvement, and development; to stabilize the livestock industry dependent upon the public range, and for other purposes.” Of note, Section 1 authorizes the Secretary of the Interior to create “grazing districts” from public domain lands that in his opinion are “chiefly valuable for grazing.” Section 3 authorizes bona fide settlers, residents and other stock owners to be issued grazing permits for up to 10-year terms within districts. Section 3 also provides that “those within or near a district who are landowners engaged in the livestock business, bona fide settlers, or owners of water or water rights...” have first priority to receive a permit. Another term for the “first priority” is “preference.” Section 3 also authorizes a grazing fee. Section 4 authorizes issuing permits or entering into “cooperative arrangements” to construct range improvements. Section 15 authorizes issuing leases to graze public lands outside grazing districts. In the 1930’s and 40’s there was adjudication of the range based on permit application and recommendations of the Board of District Advisors on who, where, when, and how much to graze. Mr. Bass reviewed other acts that influence livestock grazing administration, including: Wilderness Act (1964), NEPA (1969), Wild Free-Roaming Horses and Burros Act (1971), Endangered Species Act (1973), Clean Water Act (1973), Federal Land Policy and Management ACT (1976), Public Rangelands Improvement Act (1978), and Archeological Resources Protection Act (1979).

Mr. Bass reviewed the 2017 grazing statistics: 17,886 permits/leases, 12.3 million AUMs active of which 8.8 million are billed (sold) and 3.5 million in non-use. 1.96 million AUMs suspended. Mr. Bass reviewed 43 CFR 4100 Grazing Regulations (10-1-05): 4100.0-8; 4110.3; 4110.3-1; 4110.3-2; 4120.3-1; 4130.2; 4130.3; 4130.3-1; 4130.3-2; 4130.3-3; 4140.1; 4160.1; and 4180.1. In summary, the administration of livestock grazing by the Bureau of Land Management is to:

- promote healthy sustainable rangeland ecosystems;
- to accelerate restoration and improvement of public rangelands to properly functioning conditions;
- to promote the orderly use, improvement and development of the public lands;
- to establish efficient and effective administration of grazing of public rangelands; and
- to provide for the sustainability of the western livestock industry and communities that are dependent upon productive, healthy public rangelands.

These objectives shall be realized in a manner that is consistent with land use plans, multiple use, sustained yield, environmental values, economic and other objectives as stated in the Taylor Grazing Act and the Federal Land Policy and Management Act. Mr. Bass turned it over to the Board for questions.

Mr. Woehl asked about water rights in the west. Mr. Bass deferred to Mr. Redge Johnson, the next speaker on the panel. Mr. Bass went on to respond that the BLM holds many water rights and that permittees hold many water rights and for a myriad of those interactions we are able to work together for the joint purpose of improvement of public lands. They need water on the ground to have better health of their animals. It is our goal is to distribute water across allotments as we are able and to design systems that do that. There are cases with shared management where only a few hold the water rights but many benefit, including wild horses and burros from the use of the private water rights, so it is our goal to maintain those positive relationships.

Mr. Yardley asked if Mr. Bass could talk about the socioeconomic benefits to the state of Utah from public grazing. Mr. Bass responded that many rural communities rely on public grazing. He pointed out that the grazing industry is very flexible in helping to maintain the range, primarily because it is their livelihood. There are positive relationships to

maintain the health of the land. The livestock operators understand what is going on and know there are management practices that are better than others and can provide feedback to the agency. Livestock grazing has been occurring on this landscape for many years and it our goal to continue to manage that and make a multiple use mission work.

Mr. French pointed out that water rights, specifically in Nevada, are not always competition between livestock and horses, sometimes it is the case where springs have been beat out and quit flowing. In many cases, water projects were funded by 8100 funds (Range Improvement), having to do with pipelines and troughs. He mentioned that the nature of horses to gather around those water locations, they damage them often to the point where they quit working. This has implications for more than just livestock, including wildlife in that area. Mr. French went on to point out that there is a paradigm shift going on right now with regard to the Taylor Grazing Act regarding the sustained yield model and orderly use. As for water, we are seeing a lack of snow and snow pack, which dramatically changes how water is delivered during the season. Mr. French asked, what is the shift in management protocol from the livestock industry regarding these changes? Mr. Bass stated that BLM is having discussions with permittees about hauling water and the implications of doing so. In Utah, there have been proposals to consolidate allotments and have bigger herds that run through rotations quicker, which would require significant water negotiations and management. There are conversations about the resource objectives and determining where we want to be in 10 or 15 years.

Mr. French pointed out that with wildfires and water concerns, the competition between users on the ground is becoming much more critical. Livestock operators have been able to provide voluntary actions to help the situation.

Mr. Woehl turned the time over to Mr. Redge Johnson.

Utah Governor's Office: Healthy Rangelands, Ecosystems, Herds and Economies
Redge Johnson, County Liaison for the Governor's Public Lands Coordinating Office

Mr. Johnson introduced himself and thanked the Board for the opportunity to present on behalf of Governor Gary Herbert and welcomed the Board to Utah. Mr. Johnson reviewed the history and origins of wild horses in the west. 57% of the State of Utah is public lands. Every decision that is made at the federal level impacts our economy, and our ecosystem, and local communities. Mr. Johnson went on to discuss how his family is fully aware of the management challenges, having owned horses and having responsibility growing up to train nearly 80 foals every year. All 80 mares their family owned ran on open range year round. His family was very specific regarding when they put their herd into a pasture, how much they let them utilize a pasture, and the number of horses that they put in a pasture. Those three elements determine the grasses you see under the horses, and they had to manage that in order to maintain a healthy range and a healthy herd. Mr. Johnson explained the multiple use mandate that the BLM operates, including the BLM Mission and Multiple Use and Sustained Yield Mission: The Bureau of Land Management's mission is to sustain the health, diversity, and productivity of public lands for the use and enjoyment of present and future generations; Congress tasked the BLM with a mandate of managing public lands for a variety of uses such as energy development, livestock grazing, recreation, and timber harvesting while ensuring natural, cultural, and historic resources are maintained for present and future use. The economy in Utah is based 67% on public lands and requires support of the multiple use and sustained yield mission. Mr. Johnson also pointed out that unhealthy rangelands impact more than just horses, burros, and livestock, there are T&E species, and other wildlife that depend on the same rangeland.

Mr. Johnson talked about recreation in Utah and mentioned the mighty five, or five National Parks in the state. Of note, grazing is a critical impact for local communities, for their economies as well as for the cultural and historic aspects of that lifestyle that we strive to protect.

Mr. Johnson showed how the landscape has changed in the last three decades. This is a dry state, and water is key in these desert communities and what we are seeing is some significant impacts to the water sources. As for defoliation, over time, and at high levels of grazing, root growth is severely limited because plants are allocating resources to leaf growth to increase photosynthesis. There is a loss of root mass that then limits the ability of a plant to survive disturbance moving forward. If we don't leave half of a plant to regrow, then the percent of root growth is decreased. It is important to note as well that horses compact the earth more than cloven hooved animals. Cloven hoof animals almost till the earth when they walk, but the solid hoof compacts it.

Mr. Johnson presented five recommendations:

1. Achieve Appropriate Management Level within 3 years
2. Use all available fertility control options; HMA's will require site specific solutions
3. Remove young adoptable animals
4. Retain an adequate number of high quality, young animals for herd viability and genetic diversity
5. Implement proven grazing principles

Mr. Johnson reiterated that we have a lot to do to get to where we need to be. Seeding is unsuccessful in areas where we are over AML. The Governor's office is in support of using available fertility control options. Of course, different HMAs will require different solutions. Some may require permanent sterilization and some we can do the darting but we have to look at each HMA and see what works in those areas. We also propose removing young adoptable animals. Mr. Johnson, based on his experience and background, stated that it is easier to train younger animals, and we should concentrate on bringing off those animals that are trainable and adoptable. Mr. Johnson discussed ways to maintain genetic viability. As for management of where, if we don't think about how to move the animals and ways to get them to new pastures, we will always end up with localized impacts. We need to work as partners, and this includes finding ways for both grazing and free-roaming horses to coexist, rather than being in conflict with each other. Mr. Johnson then turned it over to the Board for questions.

Mr. French asked if there is appetite on the part of the state and local governments to partner with the federal government to achieve the recommendations? Mr. Johnson responded that yes, two years ago the legislature put \$500,000 to doing rangeland projects and \$250,000 went in this year for managing rangelands, including some water projects and some gathers. The State has not done anything on the adoption side or fertility side. Mr. French commented that the subject matter experts and the ability to provide specific management direction is crucial. He also stated that he thinks that part of the solution is going to be not only public and private partnerships but also state and local partnerships.

Mr. Johnson stated that State and county Resource Management Plans provide local ecological knowledge. There are management practices that are working and we have seen marked improvement in many areas.

Mr. Masters asked, based on estimates of 800 to 1,000 horses outside of HMAs, and a doubling effect every 4 years, does the state of Utah have a plan on what to do with potentially exponential growth of horse herds outside of HMAs? Mr. Johnson responded that it is the intent of the State to work together with partners, wildlife divisions, BLM, and local land use authorities to manage the problem of horses outside of HMAs. Mr. Masters asked a clarifying question, does a horse, an unclaimed horse that's on state land, that's not inside an HMA or HA, belong to the BLM? Mr. Gus Warr answered the question by stating that when there are horses reported outside of HAs, the BLM tries to determine if it is a feral horse that would fall under the Wild Horse and Burro Act, or whether it is a horse that has simply been turned loose. A horse that's unbranded, unclaimed, on public lands falls under the Wild Horse and Burro Act.

The Board commented on Mr. Johnson's comments about returning healthy horses to the herd and that it would be beneficial to provide more training to contractors that complete gathers and to encourage people in the industry to participate in adoptions.

Mr. Woehl turned the time over to the next panelist, Dr. Steven Petersen.

BYU: Ecological Interactions of Free-roaming Horses and Rangeland Resources

Dr. Steven Petersen, Plant and Wildlife Sciences, Brigham Young University, Provo, Utah

Dr. Petersen introduced himself and talked about his background in rangeland ecology and management. He talked about rangeland management principles to conserve rangeland resources, including the following:

- Sustain rangelands as renewable resources;
- Maintain green plants to capture solar energy and sustain grazing animals;
- Provide protection to soil, water, vegetation, and climate; and
- Sustain multiple uses of rangelands (food, water, wildlife habitat, ecosystem dynamics)

Dr. Petersen went on to explain the things that keep the rangelands sustainable: precipitation is the single most important

factor in determining the type and productivity of vegetation; and soil texture, structure, depth, and organic matter influences forage production. Dr. Petersen stressed the relationship between where the horses are on the range and the annual average precipitation in those areas. He pointed out that it is really important to think about the influence of the environment and the ecological responses to these conditions. When thinking about rangeland, consider the potential disturbances. One of the disturbances is animal density and is the most important of all grazing management decisions. It has to deal with frequency, intensity, and duration of grazing. Ecosystem sustainability also depends on carrying capacity. These ecosystems are tolerant of disturbance and over time we can see the level an ecosystem can support and maintain. The goal is to avoid damage to vegetation in order to maintain the ecological processes and maintain the plant community. The plants stabilize the soils, allows for infiltration rates and nutrient cycling and other processes that result in overall rangeland health. Dr. Petersen pointed out that it is important to understand individual plant species responses.

Dr. Petersen referred to the BLM management direction to maintain a thriving natural ecological balance. This is accomplished by setting AML (stocking rates) and managing lands to prevent rangeland deterioration.

Dr. Petersen referred to studies on the rangelands: upland plant community response to free-roaming horses.

- Compared vegetation and soil surface characteristics in grazed areas and ungrazed
- Horse grazed areas had lower sagebrush density and plant diversity, greater soil penetration resistance, and lower soil aggregate stability
- Herbaceous cover and density generally did not differ between grazed and ungrazed treatments
- Horses may have an affect on the ecological function of semi-arid rangelands (risk of soil erosion and lower water availability)

Another study considered the impact on other wildlife at water sources where horses were included and at water sources where horses were excluded. In the case of pronghorns and based on observations, when horses were present at water sources, pronghorns would vacate the water source 50% of the time. We think this is mostly due to size.

In summary, Dr. Petersen made the following points:

- Increasingly dependent on manager's knowledge of range management, agronomy, animal husbandry, and wildlife management
- Integrated (coordinated) resource planning
- Need skilled personnel who can evaluate rangeland condition and assess risks
- Implement technological advancements to improve management strategies

He then turned the time back to the Board for questions.

Mr. Yardley commented that this may be the most important information that has been presented at this meeting, understanding the significant impact that the rangeland resource has on many different animals. He asked, what are the ramifications on arid and semi-arid communities of crossing an "ecological threshold" and how long does it potentially take to reclaim or return to its natural state? Dr. Petersen responded that it depends on the soil, decomposition rates, and water infiltration. All of these processes are nitrogen cycling. When a site is degraded, no matter the cause, it can disrupt those processes. We first have to determine at what point, a threshold, where there is a decoupling. For example, in cases where you start to lose soils and the ability to infiltrate water, going from biotic to abiotic, these are much more difficult to recover. If the degradation goes on long enough, it could be hundreds or even thousands of years to recover.

Mr. Yardley asked, what is the cost involved and the success rate in arid communities through recovery efforts, such as reseeding. Dr. Stevensen responded that simply, it costs a lot. In areas with 10 inches or less of annual average precipitation, the ability to seed and have the seed germinate and be established, 1 to 5% success rate is pretty good.

Ms. Carlisle pointed out that in the studies presented by Dr. Petersen, the degradation does not preclude other large hoof ungulates, the goal is to figure out how to better manage. She agreed that we need better information to help us do the right thing and supports that. She thanked Dr. Petersen.

Dr. Perryman asked Dr. Petersen to clarify statements that there is no such thing as grazed or ungrazed, that it is always in some context of timing, duration and intensity. Dr. Petersen explained that the rangeland, and the plants on the rangeland,

are sensitive to the way they are grazed. The timing of grazing is really important. Also, grazing during a critical growing period when they are producing their inflorescences, will impact plant health, especially if grazed multiple times in a single growing season. Dr. Perryman added that the study in Sheldon, although there were no major differences between the two treatments, it was only true under that specific grazing scenario of timing, duration and intensity. If you change that timing, duration and intensity, you can expect different results, depending on whether it was more intense or less intense.

Advisory Board Discussion Part 1

Mr. Woehl asked the Board members to report on the subcommittee work sessions held on Wednesday, October 9 and to discuss any of the topics from presentations made in the last two days.

Ms. Kathrens brought up the use of reflective posts and lighting (Strieter-lites) on major roads near HAs and HMAs to reduce vehicle-horse incidents. She also brought up signage to provide HMA identification, visitor information, which includes signs relating to regulations, interpretation, resource protection, general information, safety, and wayfinding.

Mr. Yardley commented that the Board should consider the options presented to Congress, presented to the Board by Mr. Alan Shepherd, and find one, or a combination of several, to support and recommend. Ms. Carlisle suggested that the Board should support much more detailed solutions, not just the options presented, a solution that outline the resources and time to complete.

Ms. Carlisle referred to the marketing survey that recommended that the BLM do some branding to provide consistency between and among their adoption events. Ms. Carlisle and other members of the Board agreed that implementing the marketing plan could be a good recommendation by the Board.

The Board discussed increasing adoptions. The Board discussed the wording regarding horse sales. Perhaps it should be reworded to prevent undesirable sales, or sales that result in the slaughter or mistreatment of animals.

Dr. Lenz reported on the population growth suppression working group. We believe the consensus was once at AML, a combination of current contraceptives sterilization, sex ratio adjustments and removals should be able to maintain herds at an acceptable level. Other members of the Board commented that fertility controls could be utilized more so now.

The Board discussed on-range euthanasia in cases of suffering. There was some disagreement and alternatives to this proposal, including that even before AML is achieved that we increase use of fertility control in all situations. Members of the Board pointed out that euthanasia is sometimes the humane option in cases of suffering.

Ms. Carlisle suggested that it would be bold and empowering to unify as a Board to make recommendations that don't include euthanasia.

Mr. French pointed out that the Board should be talking about the land being able to ever support animals again. There are cases where we are beyond the point of return and any additional inaction is going to be disastrous. He suggested that this is about habitat and that the Board should be making recommendations to improve that habitat. Other members of the board emphasized the carrying capacity of the land and how that impacts wildlife, grazing, and horses and burros. If we don't maintain the habitat, we lose options for the future.

The Board discussed private partnerships that could be leveraged to increase long-term holding. The Board agreed that partnerships should be a part of any solution moving forward and that the energy in the room could be the catalyst for these groups and the BLM together to take action and move forward.

Advisory Board Discussion Part 2

Mr. Woehl asked the Board members to continue discussions and to move toward proposing specific recommendations or topics to consider in the recommendations.

Mr. Yardley proposed the Board consider supporting option one of the options presented to Congress and advise the BLM to support that option moving forward. Ms. Carlisle suggested that there were elements of each option that are good, however they lack details. The Board discussed how the options were developed and to whom they were presented. The options were presented from BLM leadership, through the Department of the Interior and then to OMB, PMB, and then to the consolidated appropriations committee (Congress). The Board asked if the Interior Secretary's office acknowledged the development of the report and if they, and members of Congress, have received the information and asked about it. BLM staff responded that there have been follow-up questions from staff and others and that there has been some attention to it from both the Secretary of the Interior and Congress. BLM reported that they are looking forward to a response from Congress, the report was requested by and prepared for them and the agency is interested in their response. It is unknown if and when they will receive a response.

The Board discussed a proposed recommendation, that is to encourage BLM to gather horses on HMAs that are over AML that are reliant upon supplemental water. The Board discussed the impacts involved with providing supplemental water, both positive and negative, acknowledging there are circumstances where it is deemed necessary. Mr. French pointed out, in light of earlier discussions of ecosystems and preservation of those ecosystems, that there are BLM districts that have programmed water hauling on an annual basis. In those HMAs, that is a clear indication that they are well above carrying capacity.

Mr. French proposed that the BLM provide specific policies that address the triggers for emergency gathers that consider wildlife habitat and threatened and endangered species. There may be cases where HMAs have greater sage-grouse spring brood habitat that are potentially competing for the same lush riparian habitat. The Board agreed that more information on this topic would be helpful when considering management of wild horses.

Mr. Masters proposed that the BLM: notify all western states governor's offices, western counties, RACs and state wildlife agencies where wild horses exist that the Bureau of Land Management's wild horse and burro program is unsustainable, underfunded and has no plan to stop the exponential growth of wild horse and burros which are currently three times over the appropriate management level; notify these parties that thousands of horses have already left the defined herd management areas, and that large breeding herds are expanding in number and range, far outside where they are legally designated; notify these parties to expect the increased potential for ecological impacts, economic ramifications, highway safety concerns, litigation from multiple parties, and needed press; and to recognize that if it's beyond the Bureau of Land Management's current ability to stop either the population growth or the expansion of these wild horse herds, to encourage states and local stakeholders to develop management plans for thousands of breeding horses outside of herd management areas. Ms. Carlisle stated that this sounded like trying to blame the BLM for all of the problems, but that preparing state agencies for participation in what is going to take many stakeholders, including counties, states, and cities is a way forward. She agreed that there is a need to involve different levels of administration. Other Board members commented that the BLM is 100% committed but agree that tackling the issue is going to take cooperation from federal, state, and local agencies as well as support from private and non-government organizations.

Public Comments

A public comment period was conducted from 2:30 p.m. to 4:15 p.m. allowing individuals and individual representatives of groups the opportunity to address the Board. Speakers were encouraged to submit their comments in a written format. A summary of the individual comments and written comments have been provided as subsequent volumes 3 and 4, respectively.

Advisory Board Discussion Part 3

The Board proposed draft recommendations and discussed the wording of those recommendations together. Topics included the following:

- Cooperation between interested third-parties and BLM
- The role of BLM in managing partnerships with interested parties
- Maximizing adoptions and marketing opportunities
- Considerations for sales without limitations
- The BLM report to Congress and the options proposed to reach AML in 10 years

- Emergency gathers in priority habitat and habitat for threatened, endangered, and sensitive species
- Horses that rely on supplemental water
- PZP, PZP 22, other reversible options, and humane, permanent sterilization
- Tracking of mares and database management

Wild Horse & Burro Advisory Board Recommendations

Present:

Fred Woehl, Chair

Dr. Tom Lenz

Ben Masters

Ginger Kathrens

Steven Yardley

Celeste Carlisle

Jim French

Excused:

Dr. Sue McDonnell

Dr. Barry Perryman

1. Encourage BLM to gather horses in HMA's that are over AML that are reliant upon supplemental water. Once HMA is at AML, stop hauling supplemental water except under extreme circumstances.

Approved. Vote was unanimous.

2. Continue to support and increase funding and the use of programs like the Mustang Heritage Foundation Trainer Incentive Program to place horses and burros in good homes.

Approved. Vote was unanimous.

3. Encourage volunteer and partnership opportunities for fertility control and adoptions including inmatetraining programs or 4-H and youth programs, local fertility control advocacy groups, public off-range pastures, and organizations like The Mustang Heritage Foundation.

Approved. Vote was unanimous.

4. Support the existing Great Lakes Marketing Research Report submitted to BLM. Support and implement the list of feasible recommendations from the marketing report.

Approved. Vote was unanimous.

5. Reach out to military and veteran organizations for help with adoption and volunteer fertility control application.

Approved. Vote was unanimous.

6. Board accepts Option 1 and the required changes to the regulation and the Act (*Wild Free-Roaming Horse and Burro Act*) from the report to Congress as the preferred path forward to reach AML.

Approved. Split vote of five in favor and two opposed, Ms. Carlisle and Ms. Kathrens.

7. The advisory board recognizes the value of and supports ongoing research and funding of humane permanent sterilization as one of many viable tools in our quest to achieve a thriving ecological balance by achieving and maintaining AML.

Approved. Split vote of five in favor and two opposed, Ms. Carlisle and Ms. Kathrens.

8. The board encourages the BLM to collaborate with interested equine advocacy groups to decrease current unadoptable horse and burro inventories.

Approved. Vote was unanimous.

9. We recommend that the BLM first focus resources on reaching AML in 3-5 years by utilizing removals as can be accomplished and accommodated by off-range holding.

Approved. Split vote of four in favor, two opposed, Ms. Carlisle and Ms. Kathrens, and one abstain, Mr. Masters.

10. On the HMA and HA that exceed AML, initiate emergency gathers where these boundaries overlap primary habitat of sensitive, threatened and endangered species and initiate the evaluations to establish carrying capacity.

Approved. Vote was unanimous.

11. Implement safe, reversible fertility control vaccines as part of the management control to mares captured and returned to the range.

Approved. Vote was unanimous.

12. Update and make available to all BLM field offices the existing national database to track all treated mares.

Approved. Split vote of six in favor and one opposed, Mr. Yardley.

13. We as the Board, prefer non-lethal management options for population control purposes when possible.

Approved. Split vote of four in favor and three opposed, Mr. Yardley, Dr. Lenz, and Ms. Kathrens.

The Board unanimously voted to approve the executive summary and minutes from the Advisory Board Meeting dated October 18-19, 2017 in Grand Junction, Colorado.