**WDC\_507 – Virtual Meeting**

**January 27-28, 2021**

Due to COVID and the travel restrictions associated with the pandemic, the 2021 meeting of the WDC\_507 “Wild Horse and Burro Management” was held virtually on January 27th and 28th in three separate sessions. The meeting was attended by 22 participants from 5 Western states and several State and Federal agencies.

The agenda for the meeting is provided below.

* Wednesday 27th 9:30-12:00 MST – Introductions, guest speakers: [https://usu-edu.zoom.us/j/83468997775?pwd=MDZsUUl4Um5NL0ppNUtwcTloWTM3dz09](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fusu-edu.zoom.us%2Fj%2F83468997775%3Fpwd%3DMDZsUUl4Um5NL0ppNUtwcTloWTM3dz09&data=04%7C01%7Cpritsos%40cabnr.unr.edu%7C4b6dcc9724e94032ffc408d8be6b4002%7C523b4bfc0ebd4c03b2b96f6a17fd31d8%7C1%7C0%7C637468715140810701%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=hZ1AAvhaSKtSt6wS5MQ0izYfgce73BC2muVo0%2BYSg18%3D&reserved=0)
	+ Please prepare a brief (~3 minute) introduction about your current role and your interest in participating in this multi-state research committee.
	+ We will hear from representatives from BLM, USFS, PLPCO, FREES, etc.
* Wednesday 27th 1:30-4:00 MST – Group reports: [https://usu-edu.zoom.us/j/86053821574?pwd=Yi9uUnhSL2VwWXBjL2hFZHRiOVMwZz09](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fusu-edu.zoom.us%2Fj%2F86053821574%3Fpwd%3DYi9uUnhSL2VwWXBjL2hFZHRiOVMwZz09&data=04%7C01%7Cpritsos%40cabnr.unr.edu%7C4b6dcc9724e94032ffc408d8be6b4002%7C523b4bfc0ebd4c03b2b96f6a17fd31d8%7C1%7C0%7C637468715140820593%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=8fASfgVOD9PNMDIDP8cUtwKDApofGLMzXRy9AFT%2ByKI%3D&reserved=0)
	+ Each group will have 30 minutes to update everyone else on their past efforts and future plans.
		- Group 1: Fertility Control (Chris Davies to coordinate)
		- Group 2: Survey (Nicki Frey to coordinate)
		- Group 3: Body condition (Eric Thacker and Derek Scasta to coordinate)
		- Group 4: Engaging broader systems including youth involvement (Jessie Hadfield to coordinate)
* Thursday 28th 9:30-12:00 MST –Application, Discussion, small group planning: [https://usu-edu.zoom.us/j/85231857769?pwd=UFhIOGp6R3JqTEdzblEydkVYRmhxdz09](https://nam04.safelinks.protection.outlook.com/?url=https%3A%2F%2Fusu-edu.zoom.us%2Fj%2F85231857769%3Fpwd%3DUFhIOGp6R3JqTEdzblEydkVYRmhxdz09&data=04%7C01%7Cpritsos%40cabnr.unr.edu%7C4b6dcc9724e94032ffc408d8be6b4002%7C523b4bfc0ebd4c03b2b96f6a17fd31d8%7C1%7C0%7C637468715140820593%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=poC8vj4ScvqEmHu0GSOT64USIyrRS%2BRsBbMpcj1Ev4o%3D&reserved=0)
	+ Discussion on formal multi-state application, goals, activities, etc.
	+ Time for groups to meet separately

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| --- | --- |
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**Wednesday January 27th Morning Session**

Brian Higginbotham and Chris Pritsos opened the meeting with a short welcome and opening comments for the group. Introductions of all participants followed.

The group next heard from representatives of BLM, US Forest Service, Utah Public Lands Policy Coordinating Office, and Free Roaming Equids and Ecosystem Sustainability (FREES).

**Wednesday January 27th Afternoon Session**

**Project Reports**

Wednesday afternoon project reports were presented to the group and then opened for discussion. Each discussion was led by someone chosen as the group leader with input during the presentation by the other members of the group. Following each presentation, an open discussion took place amongst all of the participants. Strategies were discussed on how to improve the study as well as next steps.

**Fertility Control Working Group Report January 2021 – Chris Davies Group Leader**

Two iUPOD breeding trials were conducted in 2019, one at the University of Massachusetts by Carlos Gradil and the one at Utah State University by Karl Hoopes and Dirk Vanderwall. Both studies involved natural breeding in a pasture (MA) or paddock (UT) setting of mares fitted with 40x16 mm or 38x16 mm iUPODs. In both studies, there was 100% iUPOD retention and 100% contraceptive efficacy. Many of the mares were shown to be fertile after iUPOD removal. Diestrus was only prolonged in a few of the mares. It is likely that presence of a stallion stimulated the mares to return to estrus. An article on the University of Massachusetts study was recently published (Gradil, C., *et al*. (2021) An intrauterine device with potential to control fertility in feral equids. *Animal Reproduction Science* 231:106795 doi: 10.1016/j.anireprosci.2021.106795). An article on the Utah State University study is currently under review. A study with copper containing iUPODs was conducted at Utah State University by Karl Hoopes and Dirk Vanderwall during the summer of 2020. The incorporation of copper seemed to increase inflammation, which isn’t desirable. Consequently, plain iUPODs without copper will be used in upcoming studies. We are currently trying to identify herds that can be used for larger, longer duration contraception trials. The goal is to insert 38x16 mm, and possibly 36x16 mm iUPODS and leave them in place for at least a year, and preferably longer, with natural cover by a stallion or rotating stallions and only occasional monitoring. One potential herd for this study is the Nevada penitentiary herd that the University of Nevada has been working with.

**Body Condition – Eric Thacker Group Leader**

Over the last year, the Rangeland group of the W507 has continued work on rangeland and wild horse health evaluations. To date, we have acquired 1,937,482 photos from NV, 17,496 photos from Utah, 51,994 photos from Wyoming and 19,000 photos from California (Table 1.). Wade Lieurance, from Dr. Stringham’s lab, applied machine learning tools to identify animals in photos and manually identified/counted animals in those photos for the NV, CA, and UT. The total number of photos with wild horses is 56,330 for all but CA. We are processing another 19,000 photos for CA (10,000 remaining). Dr. Hoopes trained vet students at USU to assign body condition scores (BCS) from randomly generated photo sequences; to date, we have scored horses in 4652 photos from across the study area (Table 1). In March of 2021, we received additional funding to increase our sample size to continue body condition scoring horse photos. We will continue scoring photos in fall 2021. We have developed graphs showing BCS change over time and preliminary assessments of vegetation compositional differences between the various HMA’s we are working across. Dr. Stoner presented the preliminary results of our data at the 2020 Wild Horse and Burro Summit in Cody, Wyoming. Dr. Scasta and Dr. Thacker recently submitted a manuscript for publication in Human-Wildlife Interactions that searched through media reports of wild horse and burro die-offs and emergency interventions, including gathers, feeding, and watering events. This was done as a way of assessing the conditions of wild horses and their habitat.

In the future, we plan to continue evaluating body condition scoring and assessments of rangeland condition in order to describe the linkage between wild horses and their habitats.

Table 1. Current project statistics.

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| --- | --- |
| **Indicator Name** | **Count** |
| Total no. states with sites | 4 |
| Number of unique sites counted/classified | 35 |
| Photos with animals counted/classified | 2,014,772 |
| Photos remaining to be classified in CA | 10,400 |
| Total number of BCS done to date | 38,338 |
| Total temporal sequences of animals with BCS | 1,652 |
| Total Photos with BCS | 4,625 |
| Total sites with BCS | 19 |
| Total states with BCS | 2 |

**National Survey Subcommittee – Nicky Frey Group Leader**

2020 Activities

In 2020, the Survey Subcommittee began implementing the national online survey. Funding secured through University of Nevada, Reno Agricultural Experiment Station and Utah State University Extension was matched with the base funding provided by Utah State University Agricultural Experiment Station’s Public Lands Initiative. The survey was created and edited by the subcommittee and then reviewed by the full W507 committee. Dr. Frey worked with Qualtrics to build the online survey instrument. In July the survey was launched and administered by Qualtrics. In mid-August, the survey had acquired 5000 responses. The survey was designed to acquire 400 responses in each of 5 regions. Our additional funding allowed for an additional 1000 responses from Nevada and 1000 responses from Utah. In the process of reaching the quotas for our demographics, additional responses were acquired above the base 400 in each region, resulting in 5000 responses.

Dr. Frey consulted with Dr. Xin Dai, a statistician employed by Utah State University Extension to determine the most appropriate methods for analyzing the data. The data were broken into several parts: Knowledge Questions, Opinion Questions, National Dataset (using a subset of the Nevada and Utah data to ensure an even distribution of responses), and Western Dataset (using a subset of Nevada and Utah data to ensure an even distribution of responses).

Presentations: Dr. Frey has presented the results of the national dataset of knowledge questions to the Wild Horse and Burro Summit in Cody Wyoming, the Utah State University Stock and Flock Talks, and the Bureau of Land Management’s Wild Horse and Burro Program staff. She has also presented the results of the national dataset of opinion questions to the Western Section of the Wildlife Society’s annual conference. She is scheduled to present a subset of the opinion survey to the national Wildlife Society’s annual conference in October 2021.

Website: Dr. Frey created a website to present basic findings of the survey, as they are examined and prepared for manuscripts. The website is designed to be informative, but very approachable to people new to the topic of free-roaming horses and burros. <https://www.usuhumanwildlifeinteractions.com/freeroamhorsesurvey.html>

Manuscripts: The subcommittee is co-authoring several papers that are very close to submission.

1. U. S. Knowledge of Wild Horses and their Management. Journal of Extension. This will provide a basic evaluation of the knowledge portion of the national dataset. The Extension journal is open access and is familiar to most Extension professionals nationally. We will promote this publication through social media outlets.
2. Western Knowledge of Wild Horses and their Management. Journal of Rangeland Ecology and Management. This data examines the differences among western state. We will submit this article as an open-access article.
3. U. S. Knowledge of Wild Horses and their Management Extension Publication. This data will be similar to (a) but written more for a public audience. This publication will be designed to be published for Nevada and Utah Digital Commons publications.

There are many additional publications slated for the future, as we delve into this data, including:

1. Public Opinion of Population Control of Wild Horses, Human Wildlife Interactions Journal, July 2021
2. Public Opinion of Lethal Control of Wild Horses, TBD
3. Nevada-specific analysis and a Utah-specific analysis with their full datasets.

Future Work:

This study was designed to be a first attempt at gaining insight into public perceptions of wild horse and burro management in the Western United States. There is much more to be done in the future including:

1. A similarly designed study as this initial study that focuses on wild burros
2. Working with native peoples to survey tribal management and opinions of free-ranging horses and burros.
3. A reflective survey that asks more in-depth questions about management actions, to gauge aspects such as ‘willingness to pay’, and situational acceptance of management actions.

**Youth/Community Engagement Committee – Jessie Hadfield – Group Leader**

Our committee broke our responsibilities into two phases:

Phase I: Answer, “what youth outreach is happening?”

Phase II: Increase youth and community engagement.

Phase I was accomplished by doing initial research and investigating existing programs involving mustangs and looking at opportunities for additional programming. What we discovered is that our programs are inward facing and do not do a great job of educating the public. We also discovered that the programs are shrinking or disappearing. The cause of this is partly due to a saturated market (new audience needs to be targeted) and partly to increased pressure from advocate groups. In an effort to grow the program, in 2019 Utah State University Extension and Youth Programs held their annual Youth Mustang Challenge and increased their scope by creating a Military Mustang Challenge. These were very well received and we look forward to making this event even larger in the future.

Our goal moving forward is to continue with our existing programming and share these with surrounding states. Our hope is that other organizations will look to doing similar programs and agree to collaborate with us on additional projects. To combat the inward facing nature of our existing programs, we have come up with some other ideas. Mustang Camp, a collaborative event between the Mustang Heritage Foundation, BLM, and USU Extension, will target youth in suburban communities and focus on education. The pilot camp is scheduled for July 2021, and two additional Mustang Camps are planned for 2022. Collateral benefits of these camps is the creation and utilization of research based curricula and other educational materials.

We will continue to explore partnership possibilities and try to grow our committee to expand our reach. Some great ideas from the group were to seek funding and support from RFDTV, Protect the Harvest, and NSF. We will reach out to the Desert Research Institute to see if we can collaborate and work together for “green box” kits surrounding ecology and healthy herds. We will also complete ag in the classroom, discover 4-H, and project curriculums.

**Thursday January 28th Morning Session**

Thursday morning session was divided into two sessions. The first session was led by Chris Pritsos, who made a presentation on the history of the group and future goals. The project is currently in its last year as a Western Development Committee project (ends 9/30/22). A discussion was had on whether to continue with this project and if so by what mechanism. The group was enthusiastic in continuing on with this important work. The group decided that the best mechanism forward for the group would be to submit a WERA proposal. After some discussion about what would be required for such a proposal the formal meeting was adjourned. Several of the groups adjourned and met separately to discuss future plans.