Research Update
National Wild Horse and Burro Advisory Board Meeting
October 13-14, 2011

1. Aerial Population Survey Techniques for Wild Horses and Burros (WH&B)

An Instruction Memorandum (IM 2010-057) has been issued to outline how BLM will transition into using the improved population inventory techniques. The Population Inventory Lead position has been created and advertised, interviews were completed, and an offer of employment was made but declined by the applicant. The interview team is currently reconsidering the position description for re-advertisement to seek a wider pool of appropriate applicants. It is anticipated the position will be re-advertised within the next 6 months or sooner depending on requirements of the Human Resources branch and the results of the interview team's efforts. In the interim, plans to begin implementation of the new survey methods are as follows: 1) USGS conducted a training workshop in August for several field specialists from states with the largest horse populations and 2) a contract for statistical analysis of survey data collected over the course of the next year has been created. Full implementation of the new survey methods will not occur until greater field capability is developed.

The U.S. Geological Survey (USGS) has a publications in preparation or review on distance sampling, mark-resight and simultaneous double count with sightability bias correction methodologies applied to wild horses. We will continue to report milestones achieved with those publications. However, as the BLM makes the transition into applying the new techniques as management tools, they will no longer be included in this Research Update for the Board.

2. SpayVac®

The project to test the safety and efficacy of SpayVac®, the porcine zona pellucida (PZP) agent manufactured with a proprietary liposome technology, is ongoing. This collaborative project which includes BLM, USGS, APHIS, Oregon State University (OSU), and TerraMar Environmental Research, involves five tasks as follows:

1) demonstrate the safety and mechanism of action of SpayVac®,
2) obtain necessary regulatory approvals for use of SpayVac®,
3) using population and genetic modeling, establish the likely parameters (e.g., proportion of mares treated) within which SpayVac® can be safely used,
4) examine the efficacy and duration of SpayVac® through a captive breeding trial, and
5) examine the utility of SpayVac® in controlling population growth of one or more wild herds.

Task 1 has largely been completed. A recommendation to test 2 formulations in captive breeding trials was received from OSU. There were no safety concerns noted during this study. Final titer analyses are ongoing, and publication of results awaits these analyses.

Regarding Task 2, Mr. Mark Fraker, TerraMar Environmental Research, has obtained the necessary State and Federal (Environmental Protection Agency, EPA) approvals for the use of SpayVac® in the current projects. Registration of a product containing the "new active ingredient" PZP is still in-process with the EPA. This is based on the Humane Society of the United States' (HSUS) application for approval of the conventional, one-year, liquid PZP product. Further progress with approval of SpayVac® awaits this registration with the new active ingredient, PZP.

For Task 3, The Research Advisory Team discussed some preliminary results of modeling done by the USGS. The Team made recommendations to move forward with the software previously evaluated (the Vortex Population Viability Analysis package) while refining some of the inputs into the simulations the software will run.

The captive breeding trial for Task 4, began on March 30, 2011 at the BLM facility in Pauls Valley, Oklahoma. Two forms of SpayVac® are being tested with 30 mares in each treatment group, and 30 mares in a control group. Twelve stallions are included in the project with one being rotated into each pasture every 2 weeks followed by a rest period. Monthly blood draws are ongoing to monitor vaccine titer levels. Breeding activity is being monitored to ensure that stallions are covering mares. The breeding season will end in October, and the first pregnancy tests will be done in December of 2011.

Task 5, which is the evaluation of SpayVac® for controlling population growth rates of wild horse herds on the range, will be considered as results from the captive breeding trial are received.

3. Ongoing BLM sponsored Research to Develop a Longer Lasting Conventional PZP Agent

A second captive breeding trial of a longer lasting pelleted PZP product is being conducted in collaboration with Dr. John Turner from the University of Toledo. This pen trial is located at the Northern Nevada Correctional Center (Carson City Prison) in Carson City, NV. This trial began in March 2011 and involves 105 mares in several treatment groups. Stallions are being rotated through the pens, and breeding activity is being monitored by prison personnel. Several blood draws have occurred to monitor vaccine titer levels. The sampling schedule was also recently adjusted to add a few additional sampling times in an effort to clarify how the liquid PZP and PZP-22 pellets are functioning. These questions only recently came to light following results from the HSUS project in the Sand Wash, CO study using conventional PZP.

4. Collaborative Project with the Humane Society of the United States

Preliminary results from HSUS' collaborative field trials of the pelleted PZP-22 agent in the Sand Wash and Cedar Mountain HMAs were previously reported to the Board. Utah BLM is proposing a Catch Treat and Release gather in the Cedar Mountain HMA in January 2012 and the BLM has opened discussion with HSUS about further monitoring activities on the Cedar Mountain HMA. Monitoring of individual health, social dynamics, individual foaling, and population growth rates will continue at least through 2012.

No new information has been received concerning HSUS' discussions with the US Forest Service regarding remote darting with PZP of wild horses in the Jarita Mesa Territory in New Mexico.

5. Fertility Control Treatments

A manuscript describing the efficacy of treatments in the Pryors, Little Bookcliffs and McCullough Peaks has been accepted for publication in the Wildlife Society Bulletin. USGS field work continues only to monitor return to fertility of previously treated mares in the McCullough Peaks and Little Book Cliffs HMAs.

As the liquid PZP and PZP-22 fertility control applications currently being done by BLM are not part of an ongoing research project, the Research Team has suggested that future updates on this activity be included in the general Program updates rather than this Research Update.

6. Genetics Assistance Agreement-Dr. Gus Cothran Texas A&M University

The evaluation of genetic diversity among BLM wild horse herds is on-going, with hair samples collected at gathers being sent to Dr. Gus Cothran at Texas A&M University for analysis. Dr. Cothran's comprehensive analysis of genetic diversity among all herds sampled through calendar year 2010 is expected in FY 2012.