PRAIRIE DOG CONSERVATION TEAM

Representing the states of Arizona, Colorado, Kansas, Montana, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming

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Dear Michael,

I must apologize for the tardiness in this letter. Traditionally, I try and have this prairie dog summary letter sent off by April 1 of each year. However, I was in the process of assisting with completing a draft range-wide conservation plan for the lesser prairie chicken during the month of March and was unable to complete this letter until now. As in past years, I am writing the U.S. Fish and Wildlife Service (Service) to provide an update on the prairie dog conservation efforts associated with the Western Association of Fish and Wildlife Agencies (WAFWA) Memorandum of Understanding for the *Conservation and Management of Species of Conservation Concern Associated with Prairie Ecosystems* (MOU). This MOU was implemented by WAFWA in January 2006, and was unanimously voted to continue for another five years at the January 2011 mid-winter WAFWA meeting. The participating agencies agree that cooperation is necessary to collect and analyze data on grassland dependent species and their habitats, and to plan and implement actions necessary to establish and/or maintain viable populations of each species that are sufficient to preclude present or future endangerment, within the constraints of approved budgets and authorities. This letter summarizes prairie dog conservation activities for calendar year 2012.

PRAIRIE DOGS IN GENERAL

POPULATION MONITORING UPDATE

Since 1999, many States have been actively engaged in implementing conservation actions found in State-specific management plans and/or State Wildlife Action Plans focused on achieving prairie dog related conservation goals. Central to this conservation effort is population monitoring. Prior to these coordinated efforts, prairie dogs had not received much attention by managers, especially as it relates to population inventory and monitoring. No systematic or consistent methods for managers were in use. However, in 2007, all four states within the Gunnison's prairie dog (GPD) range and 2 of 3 states within white-tailed prairie dogs (WTPD) agreed to use occupancy surveys and modeling to monitor these prairie dog species. However, several methods were developed and were in use for monitoring for black-tailed prairie dogs (BTPD). Survey methodology ranged from aerial transects and ground surveys to use of satellite

imagery. Not all methods provided repeatable, statistically valid estimates of the parameters of interest and are not comparable between states.

At the November 2008 the Prairie Dog Conservation Team (PDCT), decided to convene an evaluation board to review prairie dog survey methodologies and recommend a methodology for implementation a consistent strategy for monitoring. On January 25-28, 2010 a survey methodology workshop was held in Fort Collins, Colorado. The meeting was facilitated by Dr. Lee Lamb of *Negotiation Guidance Associates.* Dr. Michael Hutchins, Executive Director of *The Wildlife Society,* provided opening remarks. This workshop took an interactive approach where WAFWA partners and interested parties presented their survey methodology to an evaluation board (Board). The Board consisted of 6 members. They were the late Dr. Warren Ballard, Texas Tech University, Dr. John Koprowski, University of Arizona, Dr. Dave Otis, Iowa Cooperative Fish and Wildlife Research Unit at Iowa State University, Dr. Lyman McDonald, Western EcoSystems Technology, Inc., Dr. Thomas Stanley, U.S. Geological Survey, and Dr. Dean Biggins, U.S. Geological Survey. The intent was to have participants follow an agreed upon presentation and homework format, which was sent to the board prior to the workshop for review. After the presentation, a dialog occurred between the presenter and the evaluation board to answer any questions about the methodology. While all the states were able to send the informational homework, only 9 out of 12 states were able to directly participate in the workshop and present information on their survey methodologies.

In May 2011, the evaluation board, under the guidance of the USGS, produced a report entitled *Recommended methods for range-wide monitoring of prairie dogs in the United States.* While the Board recommended the survey method already being employed by nearly all the states within the range of the Gunnison's and white-tailed prairie dogs, the board made a new range-wide recommendation for a BTPD survey method. However, before being fully implemented by partners, the Board identified several action items to be completed before moving forward. These actions included:

1. Formally define a rigorous and biological meaningful definition of a BTPD colony.
2. Convene a panel of experts to prepare written guidelines or document to train map interpreters on detecting potential PD colonies from NAIP imagery.
3. Formalize guidelines on how to circumscribe features using NAIP Imagery.
4. Convene a panel of experts to prepare written guidelines or documents to guide aerial surveyors on the classification of features as null, occupied, or unoccupied.

There were 2 other objectives requiring actions but did not influence the survey method directly. The Board did not feel as though they had adequate information to conduct a robust cost analysis. Only a simplistic analysis was done tabulating costs provided by the states. In general, the average cost of imagery type surveys cost half as much as aerial transecting ($49,500 vs.

$109,000). The Board recommended the states conduct their own cost analysis to determine which is better for their State. The other action was to better articulate objective 6 from the Multi-state conservation plan for the BTPD. This objective is:

> 5) Maintain distribution over at least 75% of the counties in the historic range or at least 75% of the historic geographic distribution.

Finally, there were two optional recommendations made by the Board. One was to evaluate the probability of detection of burrows and scat and correct classification of scat (fresh or not) during ground surveys and retaining the services of a statistician to critique state specific methods being used as it relates to the multi-state plan for BTPDs.

At their annual meeting in July 2012, the WAFWA Directors directed the WAFWA Grassland Coordinator (WGC) to address the four action items in the Board's recommendation. At the most recent PDCT meeting held in Fort Collins, Colorado on January 24, 2012, two work groups were formed to begin working on action items 1 and 2. A work group was formed to work on action item 1 and is headed by Matt Peek, of Kansas Parks, Wildlife, and Tourism. This work group has held several conference calls and reviewed literature to better inform the group on defining a rigorous and biological meaningful definition of a BTPD colony. A draft definition has been developed and they are in the process of finalizing it for full PDCT review and concurrence in 2013. A conference call is scheduled in April 2013 by the group to discuss and address comments received from review. I expect something to forward to the entire PDCT by the summer WAFWA meeting.

Although the states have not yet completed standardizing BTPD survey methods, states have recognized the benefits of using imagery and are conducting additional survey efforts evaluating the use of NAIP Imagery. The most significant evaluation to date was conducted by Oklahoma Department of Wildlife Conservation in conjunction with the 2009 Competitive State Wildlife Grant awarded to WAFWA. This evaluation used 2010 NAIP imagery scanned at a scale of 1:4000 to locate signs of prairie dog colonies across the 40 prairie dogs counties in Oklahoma. It is estimated in 2010 there were approximately 200,000 acres of area occupied by prairie dog colonies in OK. Nearly 75% of the population is located in the three panhandle counties. While the average for occupancy in these three counties is 49,838 acres, the remaining 37 counties are expected to contain an average of 1,667acres. However, they cautioned these results. A plague outbreak was observed during the ground-truthing component of this effort in 2011 and many of the towns identified on the imagery were not active. Further ground survey efforts are occurring and more accurate estimates of actual occupancy are expected in September 2013. Another state evaluating NAIP imagery is North Dakota. Their results are also expected in 2013.

BLACK-TAILED PRAIRIE DOGS

I am pleased to report the states have met, or exceeded the first three objectives of the Multi-State Conservation Plan for the BTPD in the United States" (MSCP; Luce 2003) and are currently working on the three distributional goals identified in the plan. The current acreage estimate for BTPDs in the United States stands at 2,434,326 acres (Table 1). Notable additions include information from Oklahoma as reported above and Texas. Texas reported having a complex that encompasses 25,000 acres and will be submitting a proposal to obtain ferrets for reintroduction in 2013. The states of KS, CO, and SD are preparing to conduct surveys in 2013. Also, during the 2012 effort, many states identified counties with the highest rates of occupancy for prairie dogs (see Table 2). A competitive state wildlife grant proposal was submitted on behalf of WAFWA by the AGFD to conduct further analysis of using NAIP imagery for survey efforts. We ask you to encourage your staff to support this proposal. Results from the effort would assist with identifying areas to prioritize the black-footed ferret incentive effort within the NRCS's Working Lands Initiative.

Besides the United States, Canada and to some extent Mexico continues to report on their BTPD populations. In 2012, Canada reported 2052 occupied acres in 18 colonies in Grassland National Park in Saskatchewan, which is within 15 miles of the international border. This estimate is down slightly from 2011. The loss is contributed to drought and plague outbreaks. Dusting for plague, which began in 2010, appears to have mitigated continued losses. In 2011, BTPD were recommended for up-listing to Threatened in Canada due to vulnerability. Canada also reported a self-sustaining population of BTPD that have existed in the wild for 50 years at an old wildlife park near Edmonton, Alberta, about 600 km north of all the other colonies in and near Grassland National Park. Although the area and number of animals are small, the colonies existence so far north deserves some recognition (see attached). The last acres reported by Mexico were in 2009 and were in association with their black-footed ferret project. At that time, the Janos–Casas Grandes Complex consisted of 91 BTPD towns, ranging in size from 5 to 15,518 acres (with the largest town being fragmented and sparsely populated). Overall, the prairie dogs colonies covered a surface of 36,561 acres. Also, a biosphere reserve was created in the area to protect this important ecosystem.

It should be noted that even though the survey methods used by the state wildlife agencies between 1999 and 2012 were not uniform across the species range, this is the best available estimate of occupied acreage. While PDCT recognizes that the difference in occupied acreage between 1961 and 2012 does not represent a true measurement of trend, but reflects better and more intense survey methods, the more recent trend (2002-2012) for the species appears to be stable to upward across the BTPD range. While decreases were observed and anticipated by some states (OK and TX), other states anticipate or have recorded increases. For example, results from Colorado's survey effort empirically documented a 29% increase since 2002 and SD has seen an increase from 412,122 acres in 2003, to 625,410 acres in 2006, to 630,849 acres in 2008.

Other notable activities include Arizona continuing their reintroduction efforts for BTPD within the Las Cienegas National Conservation Area (LCNCA). In October 2011, for the first time, biologists released BTPDs from Mexico. The AGFD and Mexico's Comisiòn de Ecología y Desarrollo Sustenable del Estado de Sonora (CEDES) released 60 individuals to the three existing sites in the LCNCA to bring genetic diversity to existing colonies. In 2012, to increase survival, supplemental feeding of prairie dogs occurred at the reintroduction sites. Nearly 130 pups emerged from the burrows, the highest number since reintroduction has begun in 2008. AGFD also secured a $400,000 grant from the National Fish and Wildlife Foundation to restore 700 acres of grassland and genetic work. In addition to Arizona, Thunder Basin National Grasslands (TBNG), Wyoming, continued to release prairie dogs.

As a result of this trend information and proactive conservation actions, it is the view of the PDCT this factor still has not rose to the level of a threat. As before, the PDCT will continue range wide monitoring that will provide a population trend over time, and if necessary, allow managers to adjust management. Please see Table 1 and Figure 1 for the best available occupied acreage estimates as of December 2012.

GUNNISON'S PRAIRIE DOGS

In January 2007, the PDCT agreed that the GPD states would implement an Occupancy Model methodology (Appendix B in the GPD conservation plan) developed and tested by Colorado Division of Wildlife (Now Colorado Parks and Wildlife (CPW). All the states correctly implemented this monitoring strategy in 2010 and the data was analyzed and reported by CPW in 2011. They reported 921 plots were sampled to develop a baseline range-wide occupancy of 0.200 (Credible Intervals (CI) = 0.080 – 0.290) for the GPD. A total of 88,891 plots of the potential 444,451 in the range-wide sampling frame were estimated to be occupied (CI = 71,536-108,512). Estimated occupancy probabilities ranged from 0.048 in South Park of Colorado to 0.369 in Region 3 of Arizona. The estimated number of occupied plots varied from 1188 in Utah to 52,509 in New Mexico. The next survey is scheduled for 2016.

In addition to the occupancy monitoring, in 2011 Arizona mapped GPD colonies throughout Arizona similar to what was done in 2007. Arizona found 109,402 acres of GPD, which included more detailed mapping in Aubrey Valley and Espee Ranch in association with their black-footed ferret reintroduction efforts. This statewide effort is up slightly from the mapping completed in 2007, which mapped 108,353 acres. This increase is encouraging despite documenting significant plague die-offs. At the Espee reintroduction site GPD occupancy decreased from about 8000 acres in 2009 to about 1200 acres in 2010. The Espee continues to have low levels of plague and canine distemper titers as evidenced through predator sampling. However, prairie dog densities increased significantly between 2011 and 2012. Between summer 2011 and summer 2012

total colony size increased 65% from 2322 ha (5738ac) to 3850 ha (9514ac). While, the area appears to be recovering from the recent plague event, GPD densities continue to be low. Arizona also mapped the Aubrey Valley GPD Complex using a density mapping method. Between summer 2011 and summer 2012 total colony size increased 0.11% from 21848 ha (53988ac) to 21872 ha (54047ac).

In 2012, AGFD worked with Habitat Harmony (a non-profit organization), the U.S. Forest Service, and the Williams School District to translocate 263 Gunnison's prairie dogs from school grounds to Forest Service land in Kaibab National Forest. The state is exploring barrier installation to prevent return of prairie dogs to the school grounds. AGFD is also coordinating with Showlow Airport on planning removal of prairie dogs from runways and barrier installation.

As a result of this trend information and proactive conservation actions, it is the view of the PDCT this factor still has not rose to the level of a threat. As before, the PDCT will continue range wide monitoring that will provide a population trend over time, and if necessary, allow managers to adjust management.

WHITE-TAILED PRAIRIE DOGS

Since the original pilot study in 2003, Colorado has completed 3 years of occupancy surveys for WTPDs (2004, 2008, 2011). Results from the surveys found WTPDs occupying 24.1% (Standard Error [SE] = 12.8) in 2004, and 23.1% (SE = 2.1) in 2008, of 47,710 0.25-km^2 plots. In 2011, both aerial and ground surveys were conducted at 317 plots to determine prairie dog presence. The probability of detection for ground surveys was 0.94 and for aerial surveys was 0.34. CO estimated trends in occupancy using an annual rate of change (λ) for unequal intervals between surveys. An estimated total of 12,264 of the 47,710 (25.7%, SD = 4.0%) plots were occupied in the sampling frame. From 2004-2008, λ was estimated to be 1.008 (95% credible interval: 0.936, 1.080), and from 2008-2011, λ was 0.921 (95% CI: 0.809, 1.033). The 95% credibility interval for change in occupancy between 2008 and 2011 only slightly overlapped 1.0, indicating that a decline was likely. Examination of area-specific changes showed that the North-West stratum was most responsible for the measured decline. A plague epizootic detected in this stratum in 2008 has resulted in significant die-offs of WTPD within colonies. This plague outbreak is most likely the culprit to the drop in occupancy (see attached report). The next survey effort will be in 2017.

Utah also uses the occupancy-model survey to monitor their WTPDs. Utah's first survey effort using this method was in 2008. WTPD's were detected on 76 of 164 plots with an observed occupancy rate of 46% and ψ of 0.465 (S.E. = 0.039). On 64 plots prairie dogs were detected on both visits and on 12 plots only during one visit. Probability of detection (p) was estimated at

0.913 (S.E. = 0.025). The estimated number of occupied plots in Utah was 12087 (S.E. = 1020). Inclusion of elevation resulted in little improvement to the model.

In 2011, WTPD's were detected on 89 of 163 plots with an observed occupancy rate of 55% and ψ of 0.55 (S.E. = 0.039). On 73 plots, prairie dogs were detected on both visits and on 16 plots only during one visit. Probability of detection (p) was estimated at 0.901 (S.E. = 0.025). The estimated number of occupied cells in Utah was 14,335 (S.E. = 1027). The statistics were generated from a model with 1 group and detection probabilities not time specific. The model with 1 group and detection probability time specific improved the AIC score from 334.61 to 332.43 (ΔAIC =-2.18). In the Southeastern Region WTPD's were observed on 32 of 69 (46%) of the plots, in the Northern Region 5 of 9 (56%), and in the Northeastern Region 52 of 85 (61%) of the plots.

The lowest elevation where WTPD's were detected was 1,264 m and the highest 2099 m. Of the plots, (32%) of the center points were classified as on private land and 116 (68%) were on federal or state-owned land. The model used to define the sample universe performed acceptably. Observers may not have used the criteria correctly but did report suitability status of all plots. They classified 119 (73%) as suitable, 30 (18%) as marginal and 14 (9%) as unsuitable. The next survey effort will be in 2014.

WTPD's remain widely distributed and abundant within their range in Utah. The percentage of occupied plots increased in all 3 Regions. Since 2008, the estimated number of occupied cells increased from 12087 (S.E. = 1020) to14335 (S.E. = 1027). The detection probability was invariant in 2011 compared to 2008, which suggests that the occupancy methodology will be very suitable for long-term monitoring.

The first estimate of prairie dog abundance in Wyoming and other states was completed in part due to a growing concern that prairie dogs were becoming rare due to the high success of poisoning campaigns (US Bureau of Sport Fisheries and Wildlife 1961). In 1961, only 15,410 acres (6,236 ha) of WTPD colonies were estimated to remain in Wyoming (US Bureau of Sport Fisheries and Wildlife 1961). A decade later, a second attempt was made to estimate abundance in Wyoming and 45,702 acres (18,494 ha) of WTPD colonies were recorded (Clark 1973). When strychnine was banned in 1972, federally subsidized poisoning campaigns were halted, and the WTPD escaped additional persecution. The WTPD occurs primarily on federal lands managed by the Bureau of Land Management. Consequently, these federal lands served as refuge for the WTPD during the next 15-20 years that followed the ban of strychnine. By the mid 1990s WGFD with the help of private consultants, University of Wyoming, had began to inventory and map what was perceived as the "best available" habitat for the black-footed ferret in Wyoming. During this effort 385,988 acres were mapped from the ground and air. In 2004-2006 several small portions of the Shirley Basin/Medicine Bow WTPD complex were mapped for ferret management purposes. Overall the complex has increased by >18K acres in portions Wyoming

has been monitoring and mapping since 1991. However, no other efforts were made to estimate abundance statewide until 2007-08.

In 2007, Wyoming began selecting survey quadrants with the objective of implementing the same survey method as Colorado and Utah. However, the survey protocol was costly and not compatible with aerial survey methods. As part of Wyoming's evaluation process, data on presence and status of colony was collected for analysis. This pilot study enabled Wyoming to develop an alternative approach using aerial photos and surveys to develop a robust estimate of occupied area with confidence intervals. The technique follows statistical measures developed by Cochran (1977), Skalski (1994) and Bowden et al. (2003). In 2008, Wyoming flew 600 quadrants (500m X 500m), estimated area occupied within each quadrant, and evaluated the status of each colony present.

In Wyoming, WTPD colonies were present on 272 (68 %) quadrants. There were 206 quadrants (76 %) that had colonies that extended beyond the quadrant. Of the 272 colonies overlapping quadrants, 228 (84 %) were classified as healthy. Additional WTPD colonies were recorded within 1,500 m of the 600 quadrants 64 % (256) of the time. The mean size of quadrants in the high stratum was 24.97 ha (61.71 ac) and the mean in the low was 24.86 ha (61.43 ac). Quadrants in the high stratum had a mean of 3.68 ha (9.1 ac) WTPD colony area while those in the low stratum had a mean WTPD colony area about half (mean = 1.68 ha [4.15 ac]). The habitat model used (Seglund et al. 2006), estimated potential habitat for the WTPD in Wyoming to be 27,822,847 ac (11,511,356 ha). For 2008, Wyoming estimated that there were 2,893,487 WTPD colony acres (95 % CI: 2,372,597 to 3,414,377 colony acres). No further work was completed in 2012.

Montana is at the northern edge of WTPD distribution. Current known estimates of occupied acreage range from 118 acres (Knowles 2004) to 366 acres (Atkinson and Atkinson 2005) in 11 colonies. White-tailed prairie dog colonies in Montana have not been rigorously mapped since 2005 yet 8 of the 11 colonies remain active. One of the 8 colonies was re-established through translocation efforts. Analysis of 2005 NAIP imagery did not readily identify areas with evidence of recent WTPD colonies.

It has been indicated numerous activities are impacting WTPD habitat. Those activities include oil and gas development, agricultural conversion, and off road vehicle use. While many of these activities can impact WTPD at a local level, monitoring across the entire range does not indicate a major threat to the long-term persistence of the species and their habitat. It should be noted, more site-specific information on WTPD populations are collected in association with black-footed ferret (BFF) reintroduction efforts to monitor natural variation on a year to year basis.

BFF habitat evaluation data have been collected nearly every year since 2000 (and sporadically before that) using a transecting approach called the "Biggins Method". Using this method, an

area of prairie dog colonies is mapped/delineated, and within that area, some part of the colonies is surveyed/sampled with transects, and prairie dog activity status and densities (using inactive/active burrow counts) are evaluated (Biggins et al. 1993). This evaluation method was designed to determine, based on BFF energetics, the number of BFFs an area could support. With this WTPD information, agencies can address management issues at a local level as they arise and this information serves as an indicator on the status of the WTPD across a sample area. However, studies have shown prairie dog populations are dynamic on a year-to-year basis and determining population trends with the current measured variation is impossible.

Although different methods are being used by the states for monitoring, all survey methods indicate a robust or stable range-wide WTPD population. White-tailed prairie dogs continue to persist across the entire historical range despite numerous localized impacts. In general, WTPD populations continue to be wide spread.

As a result of this trend information and proactive conservation actions, it is the view of the PDCT this factor still has not rose to the level of a threat. As before, the PDCT will continue range wide monitoring that will provide a population trend over time, and if necessary, allow managers to adjust management.

UTAH PRAIRIE DOG

It should be noted the Utah prairie dog continues to be monitored on a regular basis as well. In 2012, it was reported 33,108 acres were occupied in 2012. The Division of Wildlife Resources has been translocating UPD's since 1972 to release sites throughout the range of the species. While initial attempts showed low success levels, recent efforts have shown an increase in survival. Several adjustments have been made to the translocation protocol since inception including the continued use of plastic tubing to create artificial burrows and the addition of artificial nest boxes. A recapture effort, initiated in 2008, was designed to evaluate the efficacy of using "nest boxes" in conjunction with artificial burrows at the release sites. Unfortunately, the data was insufficient for a rigorous test of the results; however the initial results are encouraging. In addition to improved burrow systems, the number of Utah prairie dogs released at translocation sites has been doubled to a maximum of 400 animals.

A second recapture study was conducted to determine if maintaining family groups at each relocation colony would increase survival rates over releasing unrelated animals together. Complete results and conclusions of this research project should be available in the 2012 Annual Recovery Report.

PLAGUE MONITORING

It is likely that plague is the most important factor that has the ability to impact prairie dog species range wide. Plague continues to be documented in various areas across the west in all prairie dog species. While impacts can occur over large landscapes as observed in Conata Basin, South Dakota and Espee Ranch in Arizona, it is also important to note, in the case of ferret reintroduction areas, managers try and mitigate for the impacts of plague. This mitigation includes dusting for fleas to reduce the impacts of plague outbreaks. In 2012, 4,290 acres in UTPD, 1010 acres in GPD, and 16,168 acres in BTPD were reported by partners being dusted for fleas to manage plague.

The PDCT recognizes the need for further research into the dynamics of plague in prairie dogs. One of the exciting venues for future plague research is thought to be examining the use of oral vaccines. On December 16, 2010 the black-footed Ferret Recovery Implementation Team's Executive Committee established the Sylvatic Plague Vaccine Project[1] (SPV Project or Project). The Committee then drafted a Project concept paper and asked WAFWA to collaborate in the anticipated 5-year effort. On January 9, 2011, WAFWA endorsed the effort, as a component of its Western Grasslands Conservation Initiative.[2] WAFWA also agreed to contract for services of a Project Coordinator on behalf of the Executive Committee. The SPV Project concept paper was modified on February 1, 2011 to reflect Executive Committee and WAFWA consensus and to establish the BFFRIT SPV Subcommittee[3] under which the work to operationalize the SPV vaccine would be coordinated. A copy of the SPV Project concept paper is available from the Project Coordinator, Terry Johnson.

The purpose of the SPV Subcommittee is to coordinate the work that will ultimately result in implementation of an oral sylvatic plague vaccine for prairie dogs (PDs, *Cynomys* spp.). An effective SPV would enable agency and stakeholder cooperators to maintain specific populations of prairie dogs at robust levels, while enabling control of other prairie dog populations to resolve site-specific agricultural or human health concerns. Success in those two areas would enhance conservation of prairie dogs range-wide and facilitate recovery of the black-footed ferret (BFF, *Mustela nigripes*). Both research/conservation projects continued in 2012.

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[1] (a) The Project was originally known as the oral plague vaccine project (OPV). In November 2011, it was re-named the Sylvatic Plague Vaccine Project (SPV Project), to avoid emergent confusion with literature and media references to the long-established oral polio vaccine (OPV). (b) The Black-footed Ferret Recovery Implementation Team Executive Committee is referenced hereafter as Executive Committee or Committee. (c) The Western Association of Fish and Wildlife Agencies is referenced hereafter as WAFWA.

[2] The WAFWA grasslands initiative operates under auspices of a multi-state, multi-agency Memorandum of Understanding that WAFWA approved in January 2006 and renewed in January 2011.

[3] The SPV Subcommittee (hereafter Subcommittee) was created in December 2010 as a sylvatic plague vaccine entity, with several Work Groups. To ensure compliance with the Endangered Species Act of 1973 and the Federal Advisory Committee Act, in December 2011 the USFWS chartered the SPV effort as a Subcommittee of the Executive Committee. SPV Project subgroups are called Work Groups, to conform to terminology for other Subcommittees.

Plague field trial efforts in 2012 was focused in large part on completing Phase 1: clinical trials, field safety trials, and SPV registration. NWHC had the lead on clinical and registration aspects. CO and NWHC had the lead in structuring and conducting field safety trials (all were conducted in Colorado). The Science Work Group played a primary role in structuring the components of Phase 1, with USGS taking the lead on NEPA compliance and USDA-APHIS and USFWS playing a supporting role. Field safety trials were completed in September. The data were analyzed by the Science Work Group and discussed with the Subcommittee in November. USGS completion of the registration process is ongoing, but anticipated shortly.

The second major area of emphasis in 2012 was planning for Phase 2: 3-year field efficacy studies. A request for partners was disseminated in late 2011 and proposals were evaluated throughout 2012. Potential sites were evaluated on the basis of criteria developed by the Science Work Group, with final concurrence from the Subcommittee as a whole. Sites were selected to ensure robust coverage of the four species of PDs. All sites proposed were approved, contingent on the lead (proposing) agency: (a) securing adequate funding; (b) completing the necessary NEPA (and any other required) compliance; and (c) participating in a Phase 2 training workshop in Fort Collins CO on January 29, 2013. The total minimum number of sites is 31 (BTPD 14, GPD 6, UPD 6, WTPD 5). The total maximum number is 36 (BTPD 15, GPD 8, UPD 6, WTPD 7). The Science Work Group is refining the teaching tools to present at the January 2013 workshop, which will be held in conjunction with the annual meeting of the BRRIT Conservation Subcommittee. A Competitive State Wildlife Grant in the amount of $291,375 was awarded to WAFWA for sylvatic plague vaccine field trails. Funding will go to the states of AZ, TX, MT, and WY.

Also in 2008, the AGFD contracted with Northern Arizona University to examine whether or not genetic diversity in the Major Histo-compatibility Complex (MHC), a set of genes important for mammalian immune systems, differed between Aubrey Valley populations of GPD and other populations in Arizona (see attached). Since many Arizona populations of GPDs have experienced declines related to plague, and no declines had been documented in Aubrey Valley, managers had hypothesized the Aubrey Valley population carried some genetic-based resistance to this disease and were genetically differentiated from other populations.

In addition, WAFWA is continuing to work with a private company to develop a rapid field test for plague detection. A coordination meeting and a outline was developed for moving this project forward was developed in conjunction with USDA APHIS Wildlife Services, the private company and WAFWA. However, elements of sequestration hindered progress on this project. Further discussions are occurring to determine if funding to move this project forward can be obtained in 2013.

GENETIC SAMPLING IN GPD RANGE

Current results from the genetic data collected across the range of the GPD were submitted by CPW (see attached). There is clear evidence that supports continued recognition of two genetically distinct subspecies of *C. gunnisoni*. All five testable predictions of the hypothesis based on the combined analysis of mtDNA sequences and microsatellite genotypes were evident. Nonetheless, further research is necessary to assess the degree that the two putative subspecies have different morphological, behavioral and ecological characteristics concordant with the molecular data. Importantly, the distribution map requires some revision. The genetic data provided little support for the southern extension of the *C. g. gunnisoni* distribution down through the Rio Grande valley into north central New Mexico. Instead, the boundary between the two species is best represented as straight line. However, there is evidence of the spread of genes in both directions across the boundary, suggesting the boundary between the two putative subspecies is best represented as an area rather than a single line.

Continued evaluation of the subspecies is warranted and a peer review evaluation of the data produced will occur prior to any decision being made on the designation of putative subspecies. Currently there is not an agreed upon definition for designation of a subspecies and even more difficulty can arise because subspecies can appear ecologically and/or genetically different. After completion of the entire analysis process, CO and the CU researchers involved in this project will consider along with other experts whether there is enough genetic and ecological evidence to pursue separate subspecies designation for the GPD.

PRIVATE LANDOWNER INCENTIVE EFFORTS

Through the leadership of the Black-footed Ferret Recovery Implementation Team, a proposed program to provide financial incentives, management support, and regulatory assurances to private landowners who manage their lands to benefit the endangered black-footed ferret and associated wildlife species, like prairie dogs is being work on by the states and their partners. The proposed program would provide benefits to several endangered and sensitive species while decreasing federal and state wildlife management expenses, reducing endangered species regulatory burdens, and increasing income and operational flexibility for landowners who choose to participate in this voluntary program for potential BFF reintroduction.

CONTROL INFORMATION

Once again, one of the more controversial elements faced by the states this past year revolved around lethal control of prairie dogs. The EPA approved the use chlorophacinone (Rozol) in many of the prairie dog states despite protest by state agencies. The perceived advantage being that, unlike zinc phosphide (traditionally used), these two poisons do not require prebaiting.

While WAFWA recognizes and supports lethal control as one of many management tools for prairie dogs, we have concerns with anticoagulants and the potential impacts of secondary poisoning on other grassland dependant species. Mortality from secondary poisoning due to

Rozol application in prairie dog towns has been documented in a badger collected in Kansas in 2006 and a bald eagle collected in Nebraska in 2007. As WAFWA stated before it is our belief when the 1993 USFWS Biological Opinion was conducted on 16 vertebrate control agents including Rozol, Kaput, and zinc phosphide, Rozol and Kaput were not registered for prairie dog control at the time, and therefore, not reviewed for potential secondary impacts.

While lethal control using poison impacts local populations, wide-spread campaigns to eliminate the species no longer exist. States use poisoning as a means for control, not elimination. For example, South Dakota reports poisoning 30-40,000 acres a year from 2004-2006. Despite poisoning roughly 10% of their population, their overall statewide population expanded over 50% from 412,122 acres in 2003 to 625,410 acres in 2006. In 2012, 2,285 acres of UTPD were controlled under the use of a 4(d) rule and 44,113 acres in BTPD were reported controlled across the range.

STATE REGULATIONS

Many of the states have or have the ability to establish shooting dates or seasons for prairie dogs. However, in most cases, except Arizona, the closure only occurs on public lands or in association with black-footed ferret reintroduction sites. In most cases, shooting closures were put in place to allow pregnant females to whelp and raise their young to dispersal age. North Dakota did note an increase in nonresidential licenses in 2006 that allow for the shooting of prairie dogs and postulated the increase was possibly due to season closures in surrounding states.

In closing, the WAFWA grassland states remain committed to the multi-state conservation effort and sound management of prairie dogs and other grassland associated species, and their habitats. If you have any questions about information in this letter, please contact me or the appropriate states directly.

Sincerely,

Bill E. Van Pelt
WAFWA Grassland Coordinator

cc: WAFWA Prairie Ecosystem Directors
Pete Gober, Michelle Shaughnessy, USFWS

BLACK-TAILED PRAIRIE DOG STATUS
31 DECEMBER 2012

State	Year of last survey	Minimum 10-year Objective Acres[c]	Minimum 10-year Objective Acres[c]	Acreage Objective in State Management Plan	Current Occupied Habitat
AZ	2010	4,594	4,594	4,594 (Draft)	32
CO	2006-07	255,773	255,773	255,773	788,673
KS	2009	148,596	148,596	148,596	148,000
MT	2008	240,367	240,367	104,000[d]	193,239
NE	2003	137,254	137,254	137,254 (Draft)	136,991
ND	2006	100,551	100,551	33,000[e]	22,396
NM	2008	87,132[f]	87,132[f]	87,132[f]	41,000[f]
OK[g]	2002	68,657	68,657	68,657	200,000
SD	2008	199,472	199,472	166,958	630,849
TX	2010	293,129	293,129	293,129	43,539[h]
WY	2009	158,170	158,170	158,170 (Draft)	229,607
Total		1,693,695	1,693,695	1,457,263	2,434,326

[a] Refers to total potential habitat encompassed within the range (Hall 1981), not occupied habitat.
[b] Gross habitat = (total acreage of primary range x 1%) + (total acres of peripheral range x .1%)
[c] Suitable habitat = gross habitat minus habitat with >10% slope, or other unsuitability factors
Acres of suitable habitat = Minimum 10-year objective.
[d] The acreage objective in the State of Montana's 2001 Management Plan is 90,000-104,000 acres for non-tribal lands. The state's acreage objective will be subject to modification in response to a financial incentives program for landowners if an incentives

program is funded. Separate objectives will be set by individual Native American tribes. The current occupied range is based upon a partial survey effort of the southeastern portion of the state.

[e] The current acreage objective listed in the North Dakota Management Plan is 33,000 acres, including non-tribal and tribal lands. The state of North Dakota and the Standing Rock Indian Reservation will determine the target acreage for each jurisdiction. The state is willing to consider an objective of 100,551 acres on non-tribal lands if a financial incentives program for private landowners is funded. Tribal lands will have separate acreage objectives.

[f] The New Mexico acreage objective is based on a percent increase per year, which would take approximately 10 years to achieve the current acreage objective. If future statewide survey efforts indicate a different acreage than the estimated minimum current acreage listed, the rate for achievement of the 10-year objective may be adjusted accordingly.

[g] Oklahoma estimate is based upon 2010 NAIP. A plague die off was observed and a more accurate estimate is anticipated in 2013

[h] Texas information is not a range wide survey but its 12 focal areas. In 2005, this area equaled 47,821 acres.

Note: Neither the current habitat estimate nor the state objectives include Native American lands in Montana and South Dakota.

Table 2. Counties within states with the greatest presence of prairie dogs based upon most recent survey

Arizona – BTPD: Pima GPD: Coconino, Yavapai, Apache
Colorado – BTPD: Baca, Weld, Prowers WTPD: Moffat, Rio Blanco, Delta GPD: Chaffee, La Plata, Archuleta
Kansas – BTPD: Logan, Hamilton, Sherman
Montana- BTPD: Custer, Rosebud, Phillips
Nebraska- No report
New Mexico – BTPD: Colfax, Union, Curry GPD: San Juan, Torrance, Mora
North Dakota – BTPD: Sioux, McKenzie
Oklahoma – BTPD: Cimarron, Texas, Beaver
South Dakota- BTPD: Shannon, Dewey, Pennington
Texas- BTPD: Randall, Deaf Smith, and Dallam.
Wyoming- BTPD: Converse, Weston, Niobrara WTPD: Carbon, Sweetwater, Lincoln
Utah-WTPD: Uintah, Duchesne, Grand GPD: San Juan, Grand UTPD: Iron, Garfield

Figure 1. Best available estimate of black-tailed prairie dog occupied acreage in the U.S. in 1961 (U.S. Fish and Wildlife Service), 2000 (U.S. Fish and Wildlife Service 2000), and 2012 (Prairie Dog Conservation Team).