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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17 July 2014

Michael Thabault
Assistant Regional Director
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Dear Michael,

It seems as though this annual summary is being completed later each year. If my count is correct this is the fourteenth prairie dog conservation summary provided to the U.S. Fish and Wildlife Service (Service) from the states and agencies 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 2013.

PRAIRIE DOGS IN GENERAL

OVERALL STATUS AND BACKGROUND

Since 2008 when I became the Grassland Coordinator, I have focused on state conservation activities since 1999 when the first coordinated prairie dog conservation effort was initiated under the *Black-tailed prairie dog conservation assessment and strategy* (Van Pelt 1999). However, management and conservation efforts have not been fully into context from a historical perspective. Typically, historical accounts quote 100 million acres, 5 billion prairie dogs, and a Texas prairie dog town being 140 miles long. They talk about the decline from these numbers of 95%-98%. What is not acknowledged in these accounts is the increase of numbers from the historical lows. I would like to provide some additional information regarding these lows I collected from the National Archives in the late 1990s when I was in the process of drafting the black-tailed prairie dog conservation assessment and strategy.

On May 16, 1961 Howard Merrill, the Acting Branch Chief of Predator and Rodent Control, which was housed under the Bureau of Sport Fisheries and Wildlife's Fish and Wildlife Service,

sent a memorandum to his regional directors directing them to conduct an inventory of approximate acreages presently populated by prairie dogs (see attached). This directive was in response to the "increasing number of articles and news items implying that prairie dogs are becoming extinct." He asked for reports to be submitted to his office by October 15, 1961. This information was summarized in tabular form sometime in 1961-1962, and to my knowledge, is the only complete inventory conducted for all prairie dogs over the same time frame, which was the summer 1961. On December 31, 1962 the 1961 inventory, in the form of a summary table, was sent to Dale Combs a member of the public requesting the information.

In this summary table, the entire acres in the United States occupied by all four prairie dog species totaled 1,714,591. Below, is a break out of prairie dogs by state from the 1961 information:

Table 1. Summary of acres occupied by prairie dog species found in the United States in 1961.

State	Black-tailed	White-tailed	Utah	Gunnison's	Totals
Arizona	0	-	-	445,390	445,390
Colorado	96,150	80,300	-	115,650	292,100
Kansas	50,000	-	-	-	50,000
Montana	28,286	70	-	-	28,356
Nebraska	29,901	-	-	-	29,901
New Mexico	17,330	-	-	384,940	402,270
North Dakota	19,750	-	-	-	19,750
Oklahoma	15,207	-	-	-	15,207
South Dakota	32,991	-	-	-	32,991
Texas	25,515	-	-	-	25,515
Utah	-	207,550	1,225	100,000	308,775
Wyoming	48,926	15,410	-	-	64,336
Totals	364,056	303,330	1,225	1,045,980	1,714,591

WAFWA felt it was important to have these numbers up front, when reporting on the most recent prairie dog population numbers.

BLACK-TAILED PRAIRIE DOGS

The WAFWA 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 still working on the three distributional goals identified in the plan. The current acreage estimate for BTPDs in the United States stands at 2,158,110 acres (Table 2), which is nearly six times higher than the estimate in 1961. Notable changes include information from Oklahoma and South Dakota. In our letter last year, we identified occupied acres in Oklahoma at 200,000 acres based upon mapping

of colonies using NAIP imagery. However, ground verification had not occurred on this mapping effort as originally reported by the Oklahoma submittal. I have taken the population estimate back to the previously reported acreage, which was 28,000 acres, until ground verification can occur. As reported last year, South Dakota conducted 2013 surveys using 2012 NAIP imagery and ground truthing. They estimated occupied acres at 526,641 acres. This is down from the estimate of 630,849 acres made in 2008. Contributing factors to the decline includes sylvatic plague outbreaks. The states of KS and CO are preparing to conduct surveys in 2014. A 2014 competitive state wildlife grant proposal was submitted on behalf of WAFWA by the AGFD to conduct further analysis of BTPD populations using NAIP imagery for survey efforts. Results from the effort would assist with identifying areas for focused conservation efforts and could lead to prioritize these areas for the black-footed ferret incentive effort within the NRCS's Working Lands Initiative.

Besides the United States, Canada and Mexico continue to report on their BTPD populations. In 2013, both countries reported declines in their populations. Canada reported having 1544 acres. This estimate is down slightly from 2012 estimate of 2052 acres. The loss is contributed to drought and plague outbreaks. In 2011, BTPD were recommended for up-listing to Threatened in Canada due to vulnerability. Mexico attended both the Black-footed Ferret and the Trilateral conservation committee meeting this year. The good news was their ability to measure the prairie dog towns. The bad news was the significant declined that has been documented for the BTPD. 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. In 2013, this same complex was reported to be only 4942 acres. Habitat conversion and severe drought is suspected to have contributed to the declines.

It should be noted that even though the survey methods used by the state wildlife agencies between 1999 and 2013 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 2013 does not represent a true measurement of trend, but reflects better and more intense survey methods, the more recent trend (2002-2013) for the species appears to be stable to upward across the BTPD range. While decreases were observed and anticipated by some states (OK and SD), other states anticipate or have recorded increases.

Other notable activities include Arizona continuing their reintroduction efforts for BTPD within the Las Cienegas National Conservation Area (LCNCA). In 2013, to increase survival, supplemental feeding of prairie dogs occurred at the reintroduction sites during the whelping period for pups. Approximately, 192 pups emerged from the burrows this spring, the highest number since reintroduction began in 2008. Also, AGFD with assistance from WAFWA secured

a $400,000 grant from the National Fish and Wildlife Foundation to restore 700 acres of grassland. The initial clearing of mesquite has allowed one of the towns to expand to twice its size from 8 to 16 acres. Funding from this grant will also allow the genetics of this species to be examined using current methodologies.

As a result of this trend information and proactive conservation actions, it is the view of the PDCT the BTPD continues to show resiliency on the landscape despite drought conditions and the presence of sylvatic plague, an exotic disease introduced to the United States. 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 Tables 2 and 3, Figure 1, at the end of the letter for the best available occupied acreage estimates as of December 2013.

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 2013. Between summer 2012 and summer 2013 total colony size increased 40% from 3850 ha (9514ac) to 5397 ha (13,336ac). Arizona also mapped the Aubrey Valley GPD Complex using a density mapping method. Between summer 2012 and summer 2013 total colony size was virtually the same size 21872 ha (54,047ac) to 21,932 ha (54,194 ac). Mapping efforts state-wide are underway for 2014.

In 2013, AGFD worked with Habitat Harmony (a non-profit organization), the U.S. Forest Service, and the Williams School District to translocate 70 Gunnison's prairie dogs from urban development areas 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. Translocation efforts at Sevilleta National Wildlife Refuge and on the Vermajo Ranch in New Mexico.

As a result of this trend information and proactive conservation actions, it is the view of the PDCT the GPD continues to show resiliency on the landscape despite drought conditions and the presence of sylvatic plague, an exotic disease introduced to the United States. 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.

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 next survey effort will be in 2014.

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 2013 specific for WTPD. Monitoring associated with black-footed ferrets continue in Shirley Basin.

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 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 the WTPD continues to show resiliency on the landscape despite drought conditions and the presence of sylvatic plague, an exotic disease introduced to the United States. 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. Last year, it was reported 33,108 acres were occupied in 2012. This is a 27 times increase from the low in 1961! Obviously proactive measures have contributed to this increase. For example, 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 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.

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 2013.

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

[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.

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. Additional funding for the coordinator and supplemental site funding were included in the 2014 competitive state wildlife grant proposal.

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. 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. Funding to continue this effort was included in the 2014 competitive state wildlife grant proposal.

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 2014.

GENETIC SAMPLING IN GPD RANGE

Current results from the genetic data collected across the range of the GPD were submitted and accepted by the journal Biological Conservation. The citation for this work is as follows:

L.C. Sackett, A. Seglund, R.P. Guralnick, M.M Mazzella, D.M. Wagner, J.D. Busch, A.P. Martin. 2014. Evidence for two subspecies of Gunnison's prairie dogs (*Cynomys gunnisoni*), and the general importance of the subspecies concept.*Biological Conservation*, in press. http://dx.doi.org/10.1016/j.biocon.2014.03.010.

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Genetic results from all five predictions supported the existence of two distinct subspecies within the confines of a proposed revision in the boundary between subspecies. The subspecies differed marginally in morphology and significantly in their habitats, suggesting ecological differentiation. The results, which are in line with historical descriptions of morphologically distinct subspecies, suggest the subspecies should be recognized. This work provides support for the utility of integrating multiple data and analysis types to inform systematics and conservation.

PRIVATE LANDOWNER INCENTIVE EFFORTS

Through the leadership of the Black-footed Ferret Recovery Implementation Team, a 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 was completed by the states, USFWS, USDA Wildlife Service, NRCS, and NGO partners in 2013. The first black-footed ferret reintroduction taking advantage of this effort occurred on the 4000 acre BTPD complex found on the Walker Ranch in Colorado. This new program will 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

TABLE 2. BLACK-TAILED PRAIRIE DOG STATUS, 31 DECEMBER 2013

State	Year of survey	Historic Habitat[a]	Gross Habitat[b]	Minimum 10-year Objective Acres[c]	Acreage Objective in State Management Plan	1961 Occupied Habitat	2013 Occupied Habitat
AZ	2013	7,047,137	7,047	4,594	4,594 (Draft)	0	24
CO	2006-07	27,352,880	273,529	255,773	255,773	96,150	788,673
KS	2009	35,835,079	150,714	148,596	148,596	50,000	148,000
MT	2008	60,442,757	297,286	240,367	104,000[d]	28,286	193,239
NE	2003	36,035,433	146,741	137,254	137,254 (Draft)	29,901	136,991
ND	2006	11,045,269	110,453	100,551	33,000[e]	17,330	22,396
NM	2005	39,021,449	96,661	87,132[f]	87,132[f]	19,750	41,000 [f]
OK[g]	2002	21,606,120	70,868	68,657	68,657	15,207	28,000
SD	2012	29,262,553	218,121	199,472	166,958	32,991	526,641
TX	2010	78,592,452	310,945	293,129	293,129	25,515	43,539 [h]
WY	2009	22,067,599	179,072	158,170	158,170 (Draft)	48,926	229,607
Total		368,308,727	1,861,463	1,693,695	1,457,263	364,056	2,158,110

[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 3. 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).