From:	Crystal Rucker
To:	Williams, Martha M; Walsh, Noreen; Gober, Pete
Cc:	Deb_Halland@ios.doi.gov; EXSEC, EXSEC; katie_mills@ios.doi.gov; Foster, Maureen D; Sellars, Roslyn; Robbins, Tasha L; Luginbill, Jason S; Brandon@Buddfalen.com; jcarlson@stillwateroffice.net; Craig Uhrich
Subject:	[EXTERNAL] Smoky Hill SHA issues and FOIA request
Date:	Friday, November 5, 2021 7:58:54 AM
Attachments:	image002.png Logan County Response FWS Bundled 110421.pdf USFWS Letter to Logan County SHA WO Maps 082321.pdf

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Dear Ms. Williams, Walsh and Others:

The Logan Board of County Commissioners (BOCC) has completed its analysis of the ESA Section 10(a)(1)(A) requirements for Enhancement of Survival Permits under the June, 1999 U.S. Fish and Wildlife Service Safe Harbor Policy.

Through this correspondence, the BOCC is notifying the U.S. Fish and Wildlife Service of our concerns and conclusions the Service likely has not fulfilled the Federal Register notifications, National Environmental Policy Act assessments, or other federal requirements necessary to legitimately issue Certificates of Inclusion to Cooperators for participation in the Smokey Hill Safe Harbor Agreement.

The Logan BOCC is bound by Kansas State law and our own land use ordinances (attached) to control Black Tailed Prairie Dogs on lands throughout Logan County. Until US Fish and Wildlife Service demonstrates that the lands purported for enrollment in the Smoky Hill Safe Harbor Agreement have been fully enrolled in the SHA, we believe state law and our ordinances require us to continue with county-wide Black Tailed Prairie Dog eradication programs.

Please contact me or the Logan Board of County Commissioners as you have questions or comments. Our expectation is you will bring the documents requested by the Budd-Falen law firm to the meeting you requested with us on November 18, 2021.

Sincerely,

Crystal Rucker
Logan County Clerk

Crystal Rucker

Logan County Clerk/Election Officer

710 W. 2nd Street, Oakley, KS 67748

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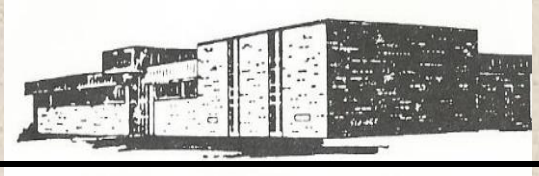
Logan  County

COMMISSIONERS
785-671-4244; Fax: 785-671-1231
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710 W. 2nd St.
Oakley, KS 67748

November 3, 2021

Ms. Martha Williams
Acting Director
U.S. Fish and Wildlife Service
1849 C Street NW, Mail Stop 3359
Washington, DC 20240

Ms. Noreen Walsh
Regional Director, Region 6
U.S. Fish and Wildlife Service
134 Union Blvd, Suite 400
Lakewood, CO 80228

Mr. Pete Gober
Black-Footed Ferret Recovery Coordinator
U.S. Fish and Wildlife Service
PO Box 190
Wellington, CO 80549

Mr. Jason Luginbill
Project Leader
U.S. Fish and Wildlife Service
2609 Anderson Avenue
Manhattan, KS 66502

Re: Review of the Federal Procedures and Standards for Issuance of ESA Section 10(a)(1)(A) Enhancement of Survival Permits under the 1999 Final USFWS Safe Harbor Policy; Procedural and Technical Information Required for Logan County to evaluate the status of the Smoky Hill Safe Harbor Agreement; Conflicts between Federal and State Laws Requiring Resolution.

Via: Electronic Mail and US Postal Service - Return Receipt

Dear Ms. Williams, Walsh and Messrs Luginbill, Gober:

The Logan, Kansas Board of County Commissioners (BoCC) is responding to the August 23, 2021 correspondence from the U.S. Fish and Wildlife Service (FWS).[1] Your letter communicates that FWS and cooperating landholders in Logan County have completed the federal procedural and public notification processes that enable FWS to legitimately issue site-specific ESA Section 10(a)(1)(A) Enhancement of Survival Permits for inclusion of lands in the 2013 parent Black-Footed Ferret Programmatic Safe Harbor Agreement (2013 PSHA).[2]

I. Purpose; Federal Requirements For Enhancement Of Survival Permits -

Logan County is a political subdivision of the State of Kansas whose elected officials have constitutional and statutory responsibility for the health, safety, tax, and general welfare of our residents. Our commission has specific statutory authority[3] and personal liability[4] under Kansas law to eradicate Black-Tailed Prairie Dog (BTPD) populations on public and private lands across the county. In February 2021 the BoCC legislated a program that provides for county-wide control of BTPD populations on both public and private lands in accordance with controlling state law.[5]

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[1] Correspondence. U.S. Fish and Wildlife Service to Logan Board of County Commissioners. August 23, 2021.
[2] Black-Footed Ferret Programmatic Safe Harbor Agreement. October 23, 2013.
[3] K.S.A. 80-1202 *Eradication of prairie dogs; duties of township trustee; entry upon land, exception; assessment of costs*
[4] K.S.A. 80-1208 *Same; penalty for failure to perform duties*.
[5] Resolution 21-06. *A Resolution of Logan County Kansas Adopting the Black-Tailed Prairie Dog Health, Safety and Management Plan*. February 5, 2021.

The Logan BoCC has reviewed the federal requirements, procedures and technical standards that are required to legitimately issue ESA Section 10(a)(1)(A) Enhancement of Survival (EOS) permits under the 1999 US Fish and Wildlife Service Final Safe Harbor Policy,[6] the National Environmental Policy Act (NEPA)[7], and the 2013 PSHA. This letter documents our findings, raises substantive questions and conflicts, and relays our concerns about the status and procedural legitimacy of the enrollment of local cooperators in the Smoky Hill Safe Harbor Agreement.

Your correspondence communicates that between June and November 2019 FWS and several local cooperators assessed the baseline conditions and fulfilled the federal requirements necessary for enrollment of several parcels in the Smoky Hill Safe Harbor Agreement. The landholders of record, the parcel sizes and other information are listed on Table 1.

In order to be issued a certificate of inclusion under the 2013 PSHA Section 10(a)(1)(A) EOS permitting program, the FWS and each cooperating landholder are required to fulfill the following federal processes, notifications and enrollment tasks:

1) Provide a written determination by U.S. Fish and Wildlife Service documenting the net conservation benefit to be achieved, all conservation and management actions, the measurable conservation benefit to the Black-Footed Ferret (BFF), and the scientific reasoning[8] behind how those conclusions were determined;[9]
2) Perform a title ownership and split estate inquiry to determine if the varying interests could impair wildlife management, result in conservation conflicts, or may be recorded with the Logan County register of deeds for future title and tax inquires; [10,11,12,13]
3) Provide, for public comment in the Federal Register, a *Monitoring Plan* that assures that each ESA Section 10(a)(1)(A) proposed under the Smoky Hill Safe Harbor Agreement meets federal information standards[14] and the scientific requirements[15] outlined in the controlling 1999 FWS Safe Harbor Policy;
4) Publish its determination under the National Environmental Policy Act of the significant impacts to the human environment expected through issuance of permits under Smoky Hill Safe Harbor Agreement, including a controversiality assessment[16] and any economic, social, historical, or cultural impacts to the human environment.

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[6] 64 Federal Register No. 116. 32717 - 32726. **Notices.** Thursday, June 17, 1999.
[7] The National Environmental Policy Act. 42 USC. §§4321 - 4347.
[8] *70 FR 2664*, Notice of Policy Statement, *Endangered and Threatened Wildlife and Plants: Notice of Interagency Cooperative Policy for Peer Review in Endangered Species Act Activities*
[9] 64 FR 32723. *Part 4. What is Species Net Conservation Benefit From Safe Harbor Agreements?*
[10] 2013 Programmatic Safe Harbor Agreement. Page 11.
[11] 64 FR 32724. *Part 7. What are Assurances to Property Owners?*
[12] 64 FR 32725. *Part 11. Can Agreements be Transferred?*
[13] 50 CFR § 13.25 *Transfer of permits and scope of permit authorization.*
[14] Section 515(a) US Treasury and General Government Appropriations Act of 2001, Pub.L. 106-554.
[15] 64 FR 32723. *Part 5. What are the Standards and Development of a Safe Harbor Agreement Issuance under Section 10(a)(1)(A) of the Act?*
[16] 40 CFR § 1508.27(b)(4).

II. Required Documents and Procedures -

Prior to enrollment of any lands in the 2013 PSHA or issuance of a site-specific, *Smoky Hill Safe Harbor* EOS *Permit*, the Cooperators and FWS are required to complete the following federal site-specific documents, determinations, and notification tasks:

- Prepare maps that depict the parcel boundaries, the location of the Black Tailed Prairie Dog (BTPD) Conservation and Management Zones and incorporate descriptions of each management activity to be undertaken or prohibited in the Conservation or Management Zones.[17,18]
- Complete an adequate publicly noticed[19] *Monitoring Plan* that provides assurance that each participating cooperator will implement the requirements and provisions of the 1999 US Fish and Wildlife Service Safe Harbor Policy.
- Document that FWS and local cooperators have notified and accounted for the concerns of non-participating neighboring landowners, and have engaged in public review and comment processes prior to issuance of each individual permit for inclusion in the 2013 PSHA:

> *"The Services will make every Safe Harbor Agreement available for public review and comment as part of the evaluation process for issuance of the associated enhancement of survival permit. This comment period will generally be 30 days; with the comment period for large or programmatic Agreements 60 days."*[20]

and,

> "*The Service will not enter into an Agreement with a willing landowner as a Cooperator without first considering the concerns of non-participating landowners*."[21]

- Prepare a NEPA determination, published in the Federal Register, of the potential for significant impacts to the human or natural environments that would occur through approval of site-specific permits proposed issued under the Smoky Hill Safe Harbor Agreement. This includes an analysis of the individual or cumulative impacts and a NEPA determination of the potential for controversiality of what decidedly is a Major Federal Action.[22]

> *"The Services will review each Safe Harbor Agreement and associated permit action for any significant environmental, economic, social, historical, or cultural impact, or for significant controversy….."*[23]

and,

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[17] 2013 Programmatic Safe Harbor Agreement **Glossary**. Pages 6, 7, 8.
[18] 64 FR 32723. *Part 5. What Are the Standards and Development of a Safe Harbor Agreements and Permit Issuance Under Section 10(a)(1)(A) of the Act?*
[19] 64 FR 32725. *Part 9. Is Monitoring Required?*
[20] 64 FR 32726. *Part 15. Will there be Public Review?*
[21] 2013 Programmatic Safe Harbor Agreement. **Non-Participating Neighboring Landowners.** Page 33.
[22] 40 CFR § 1508.18.
[23] 64 FR 32725. *Part 6. How Does the Services Comply with National Environmental Policy Act?*

> *"If the Services conclude that a significant impact could occur, the issuance of a permit would require preparation of an EA or EIS….."*[24]

III. Issues and Conflicts -

The Logan BoCC recognizes our governmental and personal responsibility under Kansas state law and county ordinance to control BTPD populations on public and private lands throughout the county. The BoCC also recognizes the authority of the Endangered Species Act to preempt state law for those programs that have legitimately, fully, and demonstrably complied with federal law, procedures, and notifications.

Logan County is acutely aware of the benefits, tax implications and controversiality of the BFF introductions, as some of the landowners who are proposing to be cooperators in the Smoky Hill Safe Harbor Agreement also participate in the Butte Creek Ranch SHA, a separate and distinct BFF introduction site located several miles to the west of the proposed Smoky Hill SHA site. Situated in between the Butte Creek Ranch and Smokey Hill SHA sites are multiple parcels of lands controlled by landowners who have a material interest in public processes, and who are uninterested in BFF or BTPD propagation onto or across their lands.

In 2014 resident landowners from Logan County attended a public hearing and gave sworn testimony attesting to the tax impacts, safety issues, property devaluation, and other property damage resulting from propagations of BTPDs purported to be originating from the Butte Creek Ranch SHA site.[25] In one instance, a complete devaluation of a landlocked properties due to BTPD infestations was noted into the public record.[26]

IV. Conclusions; Documents Required to Determine Status -

Our assessment of the status of the purported enrollment of lands into the Smoky Hill SHA is that the public record is lacking in the minimum procedural, notification, or technical documents necessary to legitimately issue a ESA Section 10(a)(1)(A) Enhancement of Survival Permit for each individual cooperator to participate in the Smoky Hill Safe Harbor Agreement.

Because the Logan BoCC, local landholders, and county residents have a material interest in reviewing the documents and the public record, this BoCC is notifying FWS to bring three (3) complete copies of the following documents with you to the meeting on **Thursday, November 18, 2021**.

1) The written determinations from FWS that document the net conservation benefits from management actions at each site;
2) Confirmation of title and split estate inquiries that assess if the varying land interests could impair wildlife management;
3) Copies of the *Monitoring Plan* and Federal Register notifications that assure that each ESA Section 10(a)(1)(A) under the Smoky Hill Safe Harbor Agreement meets the standards and requirements of the 1999 Final SHA Policy;

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[24] 64 Federal Register 32725, Part 6. How Does the Services Comply with National Environmental Policy Act?

[25] 50 CFR § 13.50 - **Acceptance of liability**.

[26] *Finding of Facts and Conclusions of Law of the Kansas Natural Resource Coalition.* In Re: The Advisability of Listing The Lesser Prairie Chicken as a Threatened Species under the Endangered Species Act. Kansas Natural Resource Coalition. January 29, 2014. Pages 8-12.

4) Demonstration that FWS has completed the Federally required NEPA determinations, including the Federal Register notifications confirming that FWS has reported any significant economic. social, historical, and/or cultural impacts, and provided the public with the opportunity for input on the issuance of permits under Smoky Hill Safe Harbor Agreement;

5) Copies of each site-specific Reintroduction Plan, including cadastral maps depicting the location of the Conservation Zones. Management Zones. property boundaries, and a description of each management activity to be undertaken or prohibited for that parcel;

6) Copies of all Fish and Wildlife Service policies, Solicitor Opinions and/or Department of Interior Memoranda that regulate or limit access to information requested in Numbers 1 through 5 above.

V. Inconsistencies and Omissions Between 2013 PSHA and Final Safe Harbor Policy -

Our review of the Federal Procedures and Standards for Issuance of ESA Section 10(a)(1)(A) Enhancement of Survival Permits reveals substantive procedural requirements codified in the 1999 Final FWS Safe Harbor Policy that were omitted from the 2013 Black-Footed Ferret Programmatic Safe Harbor Agreement document. Specifically omitted were public notification and review opportunities codified in Parts 9 and 15 and the National Environmental Policy Act notification and determination requirements at Part 10.

These omissions raise substantive questions as to whether any ESA Section 10(a)(1)(A) Enhancement of Survival Permit issued between October 23, 2013 and the present for sites in Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming were properly noticed in the Federal Register or if the public had a procedural opportunity for input.

SIGNED AND DATED THIS 3rd DAY OF 2021

BOARD OF COUNTY COMMISSIONERS:
LOGAN COUNTY, KANSAS

Cody Younkin, Chairman
Commissioner District 1

David Hubert
Commissioner District 2

Attachment A

64 Federal Register No. 116. 32717 - 32726.
Notices. Thursday, June 17, 1999.

the regulatory assurances included in the draft policy.

Response 14. The Services agree that tax incentives or financial payments would also be effective in furthering voluntary actions by non-Federal landowners and would help defray the costs of implementing some of the necessary management activities. However, the Services do not have the authority to provide tax incentives without an express authorization from Congress. The Services' Ten Point-Plan for the fair implementation of the Act included a recommendation to Congress on these types of incentives as a way to garner additional support for voluntary management actions to benefit listed species. In addition, in fiscal year 1999, the FWS will initiate a pilot grant program to help provide some limited funding to participating landowners for the implementation of management activities under the auspices of signed Safe Harbor Agreements.

Issue 15. A few commenters requested further clarification regarding the need for National Environmental Policy Act (NEPA) compliance in terms of implementing the Safe Harbor program.

Response 15. The Services agree that NEPA compliance is necessary for the implementation of the Safe Harbor program. However, the Services expect that Safe Harbor Agreements/permits will provide benefits to covered listed species and their habitats and would have minor or no effects on other environmental values or resources. Because these permits can result in incidental take of individuals and/or habitats that would not exist but for these Agreements, and because current baseline conditions will be maintained under these Agreements, the Services expect that activities conducted within the Safe Harbor program would qualify for a categorical exclusion. Regardless of NEPA public review provisions, the Act's regulations to implement Safe Harbor Agreements and permits impose specific public review and comment requirements. For large-scale agreements that may encompass an entire State or a significant portion of the covered listed species' range, the Services are committed to preparing the necessary NEPA documentation.

Issue 16. A number of commenters inquired about the status of the necessary implementing regulations for the National Marine Fisheries Service.

Response 16. NMFS expects to amend its section 10(a)(1)(A) regulations to accommodate Safe Harbor Agreements in the next few months. Currently, NMFS does not have any approved Safe Harbor agreements and none are under consideration. However, we welcome inquiries on possible Agreements which would further the protection of listed species under NMFS' jurisdiction. The lack of revised 10(a)(1)(A) regulations should not discourage landowners from seeking an agreement with NMFS.

Issue 17. A number of commenters inquired about the interrelation, if any, between the Safe Harbor program and other Federal habitat restoration efforts and programs (e.g., Farm Bill related programs).

Response 17. The Services recognize that it would be beneficial if other Federal wildlife habitat restoration and/or enhancement programs also were able to provide Safe Harbor type assurances. Currently, the Services are exploring streamlined processes to provide Safe Harbor type assurances to non-Federal participants of these programs, some of which are implemented by other agencies of the Federal government (e.g., Farm Bill programs run by the Natural Resources Conservation Service). The Services are exploring potential possibilities to provide these Safe Harbor type assurances to the private landowners that participate in the Federal programs as long as the affirmative conservation mandates of Federal agencies are met.

Issue 18. Several commenters requested further clarification as to the duration of the assurances provided under the Safe Harbor program.

Response 18. In general, the assurances provided under the Safe Harbor program ''run with the land'' as long as the permit is effective and as long as the participating landowner is implementing the agreed upon terms of the Agreement and permit. The Services intend that the assurances will continue even after the ''net conservation benefit'' standard has been achieved, thus encouraging the landowner to maintain the benefits of the management actions and refrain from returning the land to baseline conditions at the end of the Agreement. If subsequent owners of the land are willing to sign a new Agreement, continue necessary management actions, and maintain the baseline once the net conservation benefit has been achieved, the assurances will continue. A permit that ''runs with the land'' provides the participating landowner (or subsequent landowner) with the option of not immediately returning his or her property back to its original baseline conditions. Clarifying language has been included in the final policy.

However, the Services are prepared as a last resort to revoke a permit implementing a Safe Harbor Agreement where continuation of the permitted activity would be likely to result in jeopardy to a species covered by the permit, although the Services would first have to exercise all possible means to remedy such a situation prior to taking such a step.

Revisions to the Draft Policy

The following represents a summary of the revisions to the proposed policy as a result of the consideration of the public comments.

(1) The Services clarified how baseline should be determined and the implications of these determinations.

(2) The Services clarified the ''net conservation benefit'' language to indicate that the benefits should be reasonably expected to occur during the Agreement.

(3) The final Safe Harbor policy provides a mechanism to allow landowners to terminate their voluntary Agreements before the expiration date.

(4) The final Safe Harbor policy and implementing regulations establishes specific public review periods.

(5) The Services have clarified in the final policy how Safe Harbor Agreements are to be treated in determining the recovery of a listed species covered by such Agreements.

(6) The Services included in the final policy general interim guidelines regarding monitoring provisions for Safe Harbor Agreements.

(7) The Services clarified how they will address neighboring property owners to non-Federal property owners who receive Safe Harbor assurances.

Final Safe Harbor Policy

Part 1. What Is the Purpose of the Policy?

Because many endangered and threatened species occur exclusively, or to a large extent, upon privately owned property, the involvement of the private sector in the conservation and recovery of species is critical to the eventual success of these efforts. Private property owners are often willing to be partners in the conservation and recovery of listed fish, wildlife, and plant species and their habitats. However, they often may be reluctant to undertake proactive activities that increase the likelihood of use of their properties by endangered and threatened species due to their fear of future additional property-use restrictions. Safe Harbor Agreements are a means of providing incentives to property owners to restore, enhance, or maintain habitats and/or populations of listed species that result in a net conservation benefit to these species. Although such Agreements may not permanently conserve or recover such populations or their habitats, they

nevertheless offer important short-term, mid-term, and, in some cases, long-term net conservation benefits. These net conservation benefits may result from reducing fragmentation of habitats, increasing the connectivity of habitats, maintaining or increasing populations, insuring against catastrophic events, enhancing and restoring habitats, buffering protected areas, and creating areas for testing and implementing new conservation strategies.

The purpose of this policy is to ensure consistency in the development of Safe Harbor Agreements. Safe Harbor Agreements encourage proactive species' conservation efforts by private and other non-Federal property owners while providing certainty relative to future property-use restrictions, even if these efforts attract listed species onto enrolled properties or increase the numbers or distribution of listed species already present on their properties. These voluntary Agreements will be developed between either Service, or the Services jointly, and private and other non-Federal property owners. The Services will closely coordinate development of these Agreements with the appropriate State fish and wildlife or other agencies and any affected Tribal governments. Collaborative stewardship with State fish and wildlife agencies is particularly important given the partnerships that exist between the States and the Services in recovering listed species. Approved Safe Harbor Agreements will be covered under a new category of ''enhancement of survival'' permits issued under section 10(a)(1)(A) of the Act.

Safe Harbor Agreements may be initiated by property owners, or the Services may take the initiative on their own or in concert with other Federal or State agencies to encourage property owners to voluntarily enter into Safe Harbor Agreements for a given area, particularly when many non-Federal parcels of property are involved. The Services will work with the participating landowner to develop an ''enhancement of survival'' permit application and the Safe Harbor Agreement. The Services will assist landowners in identifying actions that the landowners will voluntarily undertake or forego to provide a net conservation benefit to the listed species to be covered by the Agreement.

Development of an ''enhancement of survival'' section 10(a)(1)(A) permit application and an adequate Safe Harbor Agreement are intricately linked. All parties to the Agreement will coordinate the development of the Agreement to ensure that the measures included in the Agreement and permit are consistent.

The Services recognize that Safe Harbor Agreements are not appropriate under all circumstances. In particular, where the land or water is occupied by a listed species and the property owner seeks immediate ''incidental take'' authorization, application for and development of a Habitat Conservation Plan (HCP) and issuance of an incidental take permit under section 10(a)(1)(B) is the appropriate tool. Also, an Agreement is not appropriate in situations that do not meet the net conservation benefit standards of this policy. For example, if the Services can reasonably anticipate that a proposed Agreement would only redistribute the existing population of a listed species or attract a species away from a habitat that has provided long-term protection to a habitat without such protection, the Services would not enter into an Agreement. Also, if a species is so depleted or its habitat so degraded that considerable improvement over baseline conditions is necessary to result in a net conservation benefit, an Agreement may not be appropriate. For certain aquatic, riverine, and/or riparian species it may be too difficult to reach a net conservation benefit since returning to the baseline conditions could have serious negative effects that would negate or outweigh the benefits achieved through the Agreement.

Availability of resources will also be a governing factor for the Services. While the Services expect the interest in Safe Harbor Agreements and the demand for technical assistance to property owners to increase, Safe Harbor Agreements are developed by FWS using limited funds appropriated for recovery activities. Therefore, the Services will focus on potential Agreements that provide the greatest contribution to the recovery of multiple listed species. Another factor will be whether there is sufficient information to develop sound conservation measures. The Services will work with State, Tribal, and other interested parties to develop information on species' conservation requirements that have not been adequately documented in the scientific literature.

Part 2. What Definitions Apply to This Policy?

The following definitions apply for the purposes of this policy.

''Baseline conditions'' means population estimates and distribution and/or habitat characteristics and determined area of the enrolled property that sustain seasonal or permanent use by the covered species at the time the Safe Harbor Agreement is executed between the Services and the property owner.

''Covered species'' means a species of fish or wildlife that is the subject of a Safe Harbor Agreement. Covered species are limited to species that are Federally listed as endangered or threatened and are included in the Safe Harbor Agreement and accompanying enhancement of survival permit.

''Enhancement of survival permit'' means a permit issued under the authority of section 10(a)(1)(A) of the Act.

''Enrolled property'' means all private or non-Federal property, waters, or natural resources to which the assurances in a Safe Harbor Agreement apply and on which incidental taking is authorized under the enhancement of survival permit.

''Management activities'' are voluntary conservation actions to be undertaken by a property owner that the Services believe will benefit the covered species.

''Net conservation benefit'' means the cumulative benefits of the management activities identified in a Safe Harbor Agreement that provide for an increase in a species' population and/or the enhancement, restoration, or maintenance of covered species' suitable habitat within the enrolled property, taking into account the length of the Agreement and any off-setting adverse effects attributable to the incidental taking allowed by the enhancement of survival permit. Net conservation benefits must be sufficient to contribute, either directly or indirectly, to the recovery of the covered species.

''Non-Federal property owner'' includes, but is not limited to, private individuals, organizations, businesses, State, local, and Tribal governments, and other non-Federal entities who own the enrolled property. Federal agencies can be involved in the development of Safe Harbor Agreements, but will not receive the same assurances provided through these Agreements as non-Federal property owners.

''Safe Harbor Agreement'' means an Agreement signed by the Services and a property owner and any other cooperator, such as the holder of a ''programmatic'' permit, if appropriate, that (a) sets forth specific management activities that the private or non-Federal property owner will voluntarily undertake or forgo that will provide a net conservation benefit to covered species and (b) provides the property owner with the Safe Harbor assurances described within the Agreement and

authorized in the enhancement of survival permit.

''Safe Harbor Assurances'' are assurances provided by the Services to a non-Federal property owner in the Agreement and authorized in the enhancement of survival permit for covered species. These assurances allow the property owner to alter or modify enrolled property, even if such alteration or modification results in the incidental take of a listed species to such an extent that it returned the species back to the originally agreed upon baseline conditions. Such assurances may apply to whole parcels or portions of the owner's property as designated in the Agreement. These assurances depend on the property owner complying with obligations in the Agreement and in the enhancement of survival permit.

Part 3. How Is the Cooperation and Coordination With the States and Tribes Described in the Policy?

Coordination with the appropriate State agencies and any affected Tribal governments is important to the success of Safe Harbor Agreements. Coordination allows the special local knowledge of all affected entities to be considered in the development of the Agreements. The Services will work closely with State agencies on matters involving the distribution of materials describing the Safe Harbor Agreement policies and programs, the determination of acceptable baseline conditions, and development of appropriate monitoring efforts. Because of the Services' trust responsibilities, the Services will also closely coordinate and consult with any affected Tribal government that has a treaty right to any fish or wildlife resources covered by a Safe Harbor Agreement.

Part 4. What Is Species Net Conservation Benefit Fro m Safe Harbor Agreements?

Before entering into any Safe Harbor Agreement, the Services must make a written finding that all covered species will receive a net conservation benefit from management actions undertaken pursuant to the Agreement. The finding must clearly describe the expected net conservation benefits and how the Services reached that conclusion. Net conservation benefits must contribute, directly or indirectly, to the recovery of the covered species. This contribution toward recovery will vary and may not be permanent. The Services will not rely solely on these benefits as the basis to delist any species. A Safe Harbor Agreement does not have to provide permanent conservation for enrolled property; however, Agreements must be sufficient to provide a net conservation benefit to all covered listed species, thereby contributing to the recovery of such species over time.

Conservation benefits from Safe Harbor Agreements include, but are not limited to, reduction of habitat fragmentation rates; the maintenance, restoration, or enhancement of habitats; increase in habitat connectivity; maintenance or increase of population numbers or distribution; reduction of the effects of catastrophic events; establishment of buffers for protected areas; and establishment of areas to test and develop new and innovative conservation strategies. The Services believe a ''net conservation benefit'' test is necessary to justify the issuance of an enhancement of survival permit under section 10(a)(1)(A) of the Act. The contribution to the recovery of listed species by Safe Harbor Agreements must be evaluated carefully, since realized benefits from these Agreements will be affected by the duration of the Agreement, among other things.

Part 5. What Are the Standards and Development of a Safe Harbor Agreement and Permit Issuance Under Section 10(a)(1)(A) of the Act?

A non-Federal property owner may obtain an enhancement of survival permit under section 10 (a)(1()A) of the Act to incidentally take a covered species above the agreed upon baseline conditions of the Safe Harbor Agreement, if the Agreement satisfies the following requirements:

The Agreement must—

(1) Specify the species and/or habitats covered, including the habitat conditions, and identify the enrolled property covered by the Agreement;

(2) Include a full description of the agreed upon baseline conditions for each of the covered species within the enrolled property;

(3) Identify management actions that would be undertaken to accomplish the expected net conservation benefits to the species, where and when the benefits would be achieved, and the agreed upon time frames these management actions will remain in effect to achieve the anticipated net conservation benefits;

(4) Describe any incidental take associated with the management actions during the term of the Agreement;

(5) If appropriate, incorporate a notification requirement to provide the Services or appropriate State agencies with a reasonable opportunity to rescue individuals of a covered species before any authorized incidental taking occurs;

(6) Describe what activities would be expected to return the enrolled property to baseline conditions and the extent of incidental take that would likely result from such activities;

(7) Satisfy other requirements of section 10 of the Act; and

(8) Identify a schedule for monitoring and the responsible parties who will monitor maintenance of baseline conditions, implementation of terms and conditions of the Agreement, and any incidental take as authorized in the permit.

The Services will consult under section 7 of the Act on proposed issuance of the enhancement of survival permit.

Part 6. What Are Baseline Conditions?

The Services, the property owner, and any other cooperator(s) must accurately describe the baseline conditions of the property and species covered by the Safe Harbor Agreement. The baseline conditions must reflect the known biological and habitat characteristics that support existing levels of use of the property by species covered in the Agreement. However, for circumstances beyond the control of the property owner (e.g., loss of nest trees due to storm damage), the parties to the Agreement may revise the baseline conditions to reflect the new circumstances and may develop a new baseline upon which all parties agree.

(A) *How do you Determine Baseline Conditions?* This policy requires a full description of baseline conditions for any species covered in an Agreement (see Part 5 above). The Services, or appropriate cooperators, with the concurrence of the participating property owner, will describe the baseline conditions for the enrolled property in terms appropriate for the covered species such as number and location of individual animals, if determinable, existing habitat areas or characteristics that support the species covered at the time of the Agreement, and other appropriate attributes. On-site inspections, maps, aerial photographs, remote sensing, or other similar means can help determine baseline conditions. To the extent determinable, the parties to the Agreement must identify and agree on the degree to which the enrolled property is inhabited, permanently or seasonally, by the covered species. When either Service does not directly determine the baseline conditions, they must review and concur with the determination before entering into an Agreement, and, if necessary, conduct on-site visits. Formulation of baseline conditions can incorporate information provided by the

property owner and any other appropriate agency or species experts, as appropriate. For species that are extremely difficult to survey and quantify, an estimate and an indirect measure (e.g., number of suitable acres of habitat of the species) is acceptable and should be based on the best available techniques and information. The Services will develop the estimate, and hence baseline conditions, following a protocol agreed upon by all parties to the Agreement. The Services will use population estimates, where available, to determine the degree of occupancy of the enrolled lands by covered species. However, in most cases, the baseline conditions will be described as the amount and condition of habitat in the enrolled lands and not the number of individuals of covered species, since the number of individuals could fluctuate over time. For example, if population numbers did vary naturally during the term of an Agreement, and the baseline was described as number of individual animals, the landowner could be found to be in non-compliance with an Agreement when a return to baseline is desired simply because of natural population fluctuations and not as a result of his or her own actions. In cases where no seasonal or permanent occupation by covered listed species is documented, the Services will determine baseline conditions to be zero, unless the participating landowner agrees to a higher baseline.

(B) *Are Plants Covered by the Safe Harbor Policy?* The Act's ''take'' prohibitions generally do not apply to listed plant species on private property. Therefore, the incidental take assurances provided in this policy are legally not necessary for listed plant species. However, the FWS strongly encourages and often enters into Agreements with non-Federal property owners to restore and enhance habitats for listed plants.

In addition, the Services must review the effects of the Safe Harbor permit on listed plants under section 7 of the Act, even when those plants are found on private property. In approving an enhancement of survival permit and entering into a Safe Harbor Agreement, the Services must confirm under section 7 that the Agreement is not likely to ''jeopardize the continued existence'' of any listed plants. In the interest of conserving listed plants and complying with their responsibilities under section 7, the Services will encourage a property owner to voluntarily assist the Services in restoring or enhancing listed plant habitats present within the enrolled property.

(C) *What are the Considerations for Future Section 7 and Assurances?* In reviewing a proposed Safe Harbor Agreement under section 7, the Services must determine whether anticipated future property use changes within the enrolled property and incidental take consistent with the established baseline conditions will jeopardize listed species of fish and wildlife or plants, or destroy or adversely modify designated critical habitat. If a future action on the enrolled property with a Federal nexus prompts the need for additional section 7 review, and take of the listed species that does not move them below baseline conditions is likely, the Services will issue a non-jeopardy biological opinion and incidental take statement that is consistent with the Safe Harbor Agreement as long as the activity was initiated by the participating landowner (e.g., the need for a Clean Water Act section 404 permit). In particular, the Services will provide the Federal agency with reasonable and prudent measures to minimize incidental take that require only implementation of the terms and conditions provided to the participating landowner in the Safe Harbor Agreement and associated 10(a)(1)(A) permit. This approach is warranted because the effects of any incidental take consistent with the established baseline conditions would previously have been considered during the Services' intra-agency section 7 review of the proposed Agreement. However, if the future action was not initiated by the participating landowner's, (e.g., condemnation of lands for a highway project), the action agency may receive a Biological Opinion with reasonable and prudent alternatives or measures that are different from those included in the affected landowner's Safe Harbor Agreement/permit.

Part 7. What Are Assurances to Property Owners?

A property owner who enters into an Agreement and later wishes to return enrolled property to the baseline conditions needs to demonstrate that the agreed upon baseline conditions were maintained and that activities identified in the Agreement as necessary to achieve the net conservation benefit were carried out for the duration of the Agreement. If the property owner carried out the management actions and complied with the permit and the Agreement conditions, the property owner would be authorized to use the property in any manner that does not result in moving the enrolled property to below baseline conditions. These assurances run with the enrolled lands and are valid for as long as the participating landowner is complying with the Safe Harbor Agreement and associated permit. An Agreement may be of a relatively short duration if the management actions and net conservation benefits can be achieved within, for example, 10 years. However, a 10(a)(1)(A) permit may extend beyond the life of an Agreement since the assurances will run with the land, not just the length of the Agreement. Because the assurances run with the enrolled lands for as long as the permit is valid, the participating landowner has the opportunity to sustain covered species within the enrolled lands even after the expiration of the Safe Harbor Agreement and defer take, thus extending the temporal extent of the ''net conservation benefits'' achieved under the Agreement. When land subject to a Safe Harbor Agreement is transferred, the new landowners will, at their option, be able to receive assurances by signing a new Agreement and receiving a new permit.

The Services are prepared as a last resort to revoke a permit implementing a Safe Harbor Agreement where continuation of the permitted activity would be likely to result in jeopardy to a species covered by the permit. Prior to taking such a step, however, the Services would first have to exercise all possible means to remedy such a situation.

Part 8. How Does the Services Manage Occupation by Non-Covered or Newly Listed Species?

The possibility exists that after an Agreement is signed and an enhancement of survival permit is issued, a listed species not addressed in the Agreement may occupy enrolled property. If the Services conclude that the species is present as a direct result of the property owner's conservation actions taken under the Agreement, the Services will:

(1) At the request of the property owner, amend the Agreement to reflect the changed circumstances and describe the baseline conditions for the added species, as appropriate; and

(2) Review and revise the permit, as applicable, to address the presence of additional listed species on enrolled property.

The Services will not extend assurances in the permit to a non-covered listed species if the species was specifically excluded from the original Agreement at the participating property owner's request, or if its presence is a result of activities not directly attributable to the property owner's management activities. However, if the parties to the Safe Harbor Agreement

agree that a listed species that was not in the original Agreement should be included, then addenda to the Agreement and permit are necessary. If it is appropriate to add species to the Agreement, the Services must determine enhancement or maintenance actions that are specific to the newly covered species, baseline conditions, and a net conservation benefit to that species.

Any change to a Safe Harbor Agreement or amendment to a section 10 (a)(1)(A) permit to include a non-covered species would be subject to the same review process (e.g., section 7 and NEPA review) and issuance criteria (standards) as the original Safe Harbor Agreement and permit.

Part 9. Is Monitoring Required?

The Services will ensure that adequate monitoring is included in each Safe Harbor Agreement/permit. The Services are committed to providing as much technical assistance as possible in the development of acceptable monitoring programs. In addition, the public will have an opportunity to review the monitoring plan during the public comment period on the issuance of the permit. Monitoring programs must be agreed upon before finalization of the Agreements and issuance of the permits. The monitoring component of these Agreements ensure that the participating landowner is implementing the provisions of these Agreements. Additionally, these monitoring programs will provide valuable program implementation information for the Services to evaluate the overall program and ensure its continued evolution toward a more effective and efficient program. Larger scale or complex Safe Harbor Agreements will require more in depth and thorough monitoring programs.

Part 10. How Does the Services Comply With National Environmental Policy Act?

The National Environmental Policy Act of 1969 (NEPA), as amended, and the regulations of the Council on Environmental Quality (CEQ) require all Federal agencies to examine the environmental impact of their actions, to analyze a full range of alternatives, and to use public participation in the planning and implementation of their actions. The purpose of the NEPA process is to help Federal agencies make better decisions and to ensure that those decisions are based on an understanding of environmental consequences. Federal agencies can satisfy NEPA requirements by either a Categorical Exclusion, Environmental Assessment (EA), or Environmental Impact Statement (EIS), depending on the effects of their proposed action.

The Services will review each Safe Harbor Agreement and associated permit action for any significant environmental, economic, social, historical, or cultural impact, or for significant controversy (516 Departmental Manual 2, Appendix 2 for FWS and NOAA's Environmental Review Procedures and NOAA Administrative Order Series 216–6). If the Services conclude that a significant impact could occur, the issuance of a permit would require preparation of an EA or EIS, although the Services believe that the need for an EIS will be rare. General guidance on when the Services exclude an action categorically and when and how to prepare an EA or EIS is found in the FWS's Administrative Manual (30 AM 3) and NOAA Administrative Order Series 216–6. If a Safe Harbor Agreement and associated permit are not expected to individually or cumulatively have a significant impact on the quality of the human environment or other natural resources, the Agreement/permit may be categorically excluded. The Services are committed to develop NEPA documentation for complex or large scale (e.g., statewide) Safe Harbor Agreement/permits to ensure effective environmental review of such significant actions.

Part 11. Can Agreements Be Transferred?

If a property owner who is party to a Safe Harbor Agreement transfers ownership of the enrolled property to a non-Federal entity, the Services will regard the new owner as having the same rights and obligations with respect to the enrolled property as the original property owner, if the new property owner agrees to become a party to the original Agreement and enhancement of survival permit. Actions taken by the new participating property owner that result in the incidental take of species covered by the Agreement would be authorized, so long as the new property owner complies with the management actions identified in the Agreement and maintains the baseline conditions. However, the new property owner would not be responsible for any provisions of the Agreement and would not receive any assurances relative to section 9 restrictions, unless the new owner agrees to become party to the Agreement and permit.

All Safe Harbor Agreements will commit the participating property owner to notify the Services before any transfer of ownership of any property subject to the Agreement. This will allow the Services to contact the new property owner to explain the prior Safe Harbor Agreement and to determine whether the new property owner agrees to continue the original Agreement or desires to enter a new Agreement. If the new property owner agrees to continue an existing Safe Harbor Agreement, the Services will honor the original baseline conditions for the enrolled property under consideration.

Part 12. Do Property Owners Retain Their Discretion?

Nothing in this policy prevents a participating property owner from implementing management actions not described in the Agreement as long as such actions maintain the original baseline conditions and do not affect the beneficial actions set forth in the Agreement. The Services will provide technical advice, to the maximum extent practicable, to the property owner, when requested. Additionally, a participating landowner that, for circumstances out of the landowner's control, needs to terminate the voluntary management actions that he or she agreed upon under the Safe Harbor Agreement, can terminate the Agreement prior to its expiration date and return the land to baseline conditions even if the expected ''net conservation benefits'' have not been realized. For example, if, due to unanticipated circumstances, the participating landowner needs to generate income to deal with a family emergency, the landowner has the option of terminating the Agreement with the Services to use his or her land, water, and/or natural resources to deal with the emergency.

Part 13. What Is the Discretion of All Parties?

Nothing in this policy compels any party to enter into a Safe Harbor Agreement. Entering a Safe Harbor Agreement is purely voluntary for non-Federal entities and the Services, and presumes that the Agreement will serve the interests of all affected parties. An Agreement does not otherwise create or waive any legal rights of any party to the Agreement.

Part 14. How Do the Services Manage Neighboring Landowners?

The potential effects and/or implications of a Safe Harbor Agreement on neighboring properties may be an important consideration in deciding whether to enter into a Safe Harbor Agreement. In some cases, actions carried out voluntarily by a landowner under a Safe Harbor Agreement may

result in listed species occupying adjacent properties.

The Services will use the maximum flexibility allowed under the Act in addressing neighboring properties under Safe Harbor Agreements and associated take authorizations, including, but not limited to, granting of incidental take authority to the owners of neighboring lands, where occupation of neighboring lands is expected as a result of the Agreement. Neighboring landowners would only be required to agree to such conditions as would be necessary to ensure that the Agreement does not circumvent those obligations or requirements, if any, under section 9 of the Act that were applicable at the time the Agreement was signed. Implications to neighboring landowners with non-enrolled lands will be determined on a case-by-case-basis, and the Services will make every effort to include them as a signatory party to the Agreement and enhancement of survival permit when the occupation of their lands by covered species is expected. For neighbors to receive the Safe Harbor Assurances, they would sign an Agreement with the following requirements: (1) Allow an assessment/establishment of the baseline on their properties with concurrence by all parties, (2) notify the Services prior to significantly modifying the habitat, and (3) allow the Services access to capture and translocate individuals of the covered species on their property that would be expected to be adversely affected by those habitat modifications. To facilitate neighboring landowner's participation, the Services will encourage them to become signatory parties to these Agreements, where appropriate.

Part 15. Will There Be Public Review?

The Services will encourage property owners to involve the public in the development of an Agreement. However, public participation must be agreed to by the property owner. The Services will make every Safe Harbor Agreement available for public review and comment as part of the evaluation process for issuance of the associated enhancement of survival permit. This comment period will generally be 30 days; with the comment period for large or programmatic Agreements 60 days.

Part 16. What Is the Scope of the Policy?

This policy applies to all Federally-listed species of fish and wildlife administered by the Services, as provided in the Act and its implementing regulations.

Dated: March 22, 1999.

Jamie Rappaport Clark,

Director, U.S. Fish and Wildlife Service.

Dated June 10, 1999.

Penelope D. Dalton,

Assistant Administrator of Fisheries, National Marine Fisheries Service.

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

National Marine Fisheries Service

Announcement of Final Policy for Candidate Conservation Agreements with Assurances

AGENCY: Fish and Wildlife Service, Interior; National Marine Fisheries Service, NOAA, Commerce.

ACTION: Announcement of final policy.

SUMMARY: The Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (jointly the Services) announce a joint final Policy for Candidate Conservation Agreements (Agreements) with Assurances under the Endangered Species Act of 1973, as amended (Act). This policy offers assurances as an incentive for non-Federal property owners to implement conservation measures for species that are proposed for listing under the Act as threatened or endangered, species that are candidates for listing, and species that are likely to become candidates or proposed in the near future. Published concurrently in this **Federal Register** are the FWS's regulations necessary to implement this policy.

DATES: This policy is effective July 19, 1999.

ADDRESSES: Chief, Division of Endangered Species, U.S. Fish and Wildlife Service, 1849 C Street, N.W., Washington, D.C. 20240 (Telephone 703/358–2171, Facsimile 703/358–1735); or Chief, Endangered Species Division, National Marine Fisheries Service, Office of Protected Resources, 1315 East-West Highway, Silver Spring, MD 20910 (Telephone 301/713–1401, Facsimile 301/713–0376).

FOR FURTHER INFORMATION CONTACT: Richard Hannan, Acting Chief, Division of Endangered Species, U.S. Fish and Wildlife Service (Telephone 703/358–2171) or Marta Nammack, Endangered Species Division, National Marine Fisheries Service (Telephone 301/713–1401).

SUPPLEMENTARY INFORMATION:

Background

On June 12, 1997, the Services issued a draft policy (62 FR 32183), and the FWS issued proposed regulations to implement the policy (62 FR 32189). This policy is intended to facilitate the conservation of proposed and candidate species, and species likely to become candidates in the near future by giving citizens, States, local governments, Tribes, businesses, organizations, and other non-Federal property owners incentives to implement conservation measures for declining species by providing certainty with regard to land, water, or resource use restrictions that might be imposed should the species later become listed as threatened or endangered under the Act. Under the policy, non-Federal property owners, who enter into a Candidate Conservation Agreement with assurances that commit them to implement voluntary conservation measures for proposed or candidate species, or species likely to become candidates or proposed in the near future, will receive assurances from the Services that additional conservation measures will not be required and additional land, water, or resource use restrictions will not be imposed should the species become listed in the future.

Much of the land containing the nation's existing and potential fish and wildlife habitat is owned by private citizens, States, local governments, Native American Tribal governments, businesses, organizations, and other non-Federal entities. The future of many declining species is dependent, wholly or in part, on conservation efforts on these non-Federal lands. Such conservation efforts are most effective and efficient when initiated early. Early conservation efforts for proposed and candidate species, and species likely to become candidates or proposed in the near future can, in some cases, preclude or remove any need to list these species as threatened or endangered under the Act.

By precluding or removing any need to list a species through early conservation efforts, property owners can maintain land use and development flexibility. In addition, initiating or expanding conservation efforts before a species and its habitat are critically imperiled increases the likelihood that simpler, more cost-effective conservation options will still be available and that conservation will ultimately be successful.

Attachment B

2013 Parent Black-Footed Ferret
Programmatic Safe Harbor Agreement

Black-Footed Ferret Programmatic Safe Harbor Agreement

October 23, 2013

U.S. Fish and Wildlife Service Black-footed Ferret Recovery Program

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Appendix F. Black-footed Ferret Recovery Team Members

Glossary

10(a)(1)(A) Enhancement of Survival Permit (Permit) – This Permit also may be referred to as an incidental take permit or a recovery permit. It authorizes incidental take of a threatened or endangered species that would otherwise be prohibited by section 9 of the Endangered Species Act (Act) when such take is a result of activities for scientific research or to enhance the propagation or survival of a listed species. Section 10 of the Act provides for exceptions to prohibited activities identified in section 9 of the Act. Section 10(a)(1)(A) allows the Secretary of Interior to issue permits to authorize incidental take of threatened and endangered species for scientific research or to enhance the propagation or survival of such species. The Safe Harbor policy (64 FR 32717) provides for the extension of this authority to non-federal landowners who volunteer to enroll in a Safe Harbor Agreement that provides a net conservation benefit to covered species.

10(j) Experimental Population – Section 10(j) of the Act allows the Secretary of Interior to introduce experimental populations of threatened or endangered species into the wild as long as they are wholly separate from non-experimental populations of the same species. This designation is accomplished through a rulemaking process and allows for regulatory flexibility within the section 10(j) designated areas.

Assurances – Regulatory certainty provided by the U.S. Fish and Wildlife Service (Service) pursuant to the Safe Harbor policy (64 FR 32717) that it will not impose additional conservation measures and restrictions on the use of land, water, or resources beyond those measures and restrictions agreed upon in the Safe Harbor Agreement as a result of voluntary conservation actions by participating landowner interests (Cooperator) that benefit covered threatened or endangered species. These assurances are conveyed to the Cooperator through certificates of inclusion issued under a 10(a)(1)(A) enhancement of survival permit.

Baseline – Population estimates and distribution (if available or determinable) of the covered threatened or endangered species and/or habitat characteristics of enrolled property at the time of enrollment under the Safe Harbor Agreement as mutually agreed upon by the Black-footed Ferret Recovery Coordinator (Permittee) and the Cooperator. Baseline for this Agreement will be zero black-footed ferrets for both existing and new reintroduction sites, because none will occur on any property until reintroduction of the species, and none will likely occur in the foreseeable future on any property that may have ferrets now without purposeful management of prairie dogs to protect both ferrets and prairie dogs from sylvatic plague—a recurring non-native disease that will likely result in any extant ferret population being reduced to zero without active management.

Biological Opinion – A document, pursuant to Section 7 of the Act, stating the opinion of the Service on whether or not a Federal action is likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. In this

instance, the Federal action is the implementation of a Programmatic Safe Harbor Agreement and related permit for the black-footed ferret.

Bottleneck – A reduction of a population due to a natural or manmade cause, such that the surviving population is no longer self-sustaining.

Certificate of Inclusion – The document issued by the Permittee to a Cooperator that conveys the Permit's incidental take authorization for covered threatened and endangered species.

Changed Circumstances – Changes in circumstances affecting a threatened or endangered species or geographic area covered by a Safe Harbor Agreement that can be reasonably anticipated and planned for by the Service (e.g., the listing of a new species, or a fire or other natural catastrophic event in areas prone to such events).

Conservation Activities – The actions that will be taken or avoided under this Safe Harbor Agreement to provide a net conservation benefit to the black-footed ferret. Conservation activities may be carried out by the Permittee (or designee), the Cooperator, as described in the Reintroduction Plan for the enrolled property, or partners approved by the Permittee and Cooperator.

Conservation Zone – An area that can contribute to the necessary attributes to support at least 30 adult ferrets. Typically, it will be a minimum of 1,500 acres of black-tailed prairie dog occupied habitat or 3,000 acres of white-tailed prairie dog or Gunnison's prairie dog occupied habitat. It may be owned by one or more Cooperators. All otherwise legal activities may be conducted as appropriate, except those that are incompatible with ferret recovery. Inappropriate, prohibited activities will include any activity that reduces prairie dog numbers, including, but not limited to, poisoning, shooting, and major landscape alterations (e.g., tilling soil). The Conservation Zone will be identified on a map of the enrolled lands. All conservation activities within the Conservation Zone will be described in the Reintroduction Plan for the enrolled property. Prohibited activities will also be identified in the Reintroduction Plan.

Cooperator – Any non-federal landowner—including but not limited to private individuals, Tribes, States, counties, and municipalities—eligible for enrollment in the Safe Harbor Agreement who voluntarily chooses to assist in the development and implementation of a Reintroduction Plan for black-footed ferrets on their lands (or some portion of their lands). Under the Agreement, the Permittee issues each Cooperator a Certificate of Inclusion, which conveys the Permit's incidental take authorization.

Covered Species – The species listed under the Act for which the Safe Harbor Agreement is designed to provide a net conservation benefit and for which incidental take and Safe Harbor assurances are authorized. For this particular Agreement, the covered species is the black-footed ferret.

Delist – The removal of a species from a listed status under the Act. Usually delisting is a result of successful recovery actions that have increased a species' numbers and addressed threats to its viability. For the black-footed ferret, delisting is expected to require the establishment of at least 3,000 breeding adult ferrets in 30 or more populations in at least nine states within the historical range of the species, with no fewer than 30 breeding adults in any population. Management efforts will continue to address threats to the species, especially from disease.

Downlist – The reclassification of a species from endangered to threatened. Usually downlisting is a result of successful recovery actions that have increased a species' numbers and addressed some portion of the threats to the species. For the black-footed ferret, downlisting is expected to require the establishment of at least 1,500 breeding adult ferrets in 10 or more populations in at least six states within the historical range of the species, with no fewer than 30 breeding adults in any population. Management efforts will continue to address threats to the species, especially from disease.

Endangered species – An animal or plant species in danger of extinction throughout all or a significant portion of its range.

Enrolled lands – Non-federal lands (see below) that are included in the Black-footed Ferret Programmatic Safe Harbor Agreement through the process of Cooperators signing and the Permittee issuing Certificates of Inclusion.

Experimental population – A population (including its offspring) of a listed species, designated by rule published in the Federal Register, that is wholly separate geographically from other populations of the same species. An experimental population may be subject to less stringent prohibitions than are applied to the remainder of the species to which it belongs.

Incidental Take – Incidental take is the accidental or inadvertent take of a species listed as threatened or endangered under the Act while carrying out otherwise legal activities.

Kit – A kit is the young of a black-footed ferret.

Landowner – Any entity with a legally recognized interest in a parcel of land including, but not limited to, surface, mineral, mortgage, and/or lease rights.

Management Zone – An area adjacent to or near a Conservation Zone. It may or may not have occupied prairie dog habitat. All otherwise legal activities may be conducted as appropriate, including lethal control of prairie dogs—except for the use of anticoagulant toxicants such as chlorophacinone (Rozol®) or diphacinone (Kaput®). The Management Zone will be identified on a map of the enrolled lands. The precise characteristics and size of a Management Zone, including the associated conservation activities, may vary for each enrolled property, depending on the physical and biological attributes of a particular property, the needs of the Cooperator, and the potential concerns of non-participating neighboring landowners. Consequently, site-specific details will be described in each individual Reintroduction Plan.

Net conservation benefit –Improved status of the covered species or population as a result of a Safe Harbor Agreement's conservation actions minus the impacts from any incidental take of the species.

Non-essential experimental population – An experimental population whose loss would not appreciably reduce the prospect of survival of the species in the wild.

Non-federal lands – Lands owned by entities other than the Federal government, including Tribes (see tribal lands below), States, counties, municipalities, private individuals, and non-governmental organizations.

Non-participating landowner – Any landowner within the vicinity of a black-footed ferret reintroduction site developed under the Black-footed Ferret Programmatic Safe Harbor Agreement—including private individuals, Tribes, States, and municipalities—who does not participate. Under this Agreement, non-participating neighboring landowners will be covered for incidental take, via an associated Biological Opinion, of any black-footed ferrets that may disperse onto their lands.

Parties – The Permittee, the Cooperator, and others as described in Part 10.3 of this Safe Harbor Agreement and identified in the Reintroduction Plan.

Permittee – The entity who holds the 10(a)(1)(A) Enhancement of Survival Permit issued under the Safe Harbor Agreement. Under this Agreement, the Permittee is the Service's Black-footed Ferret Recovery Coordinator.

Programmatic Safe Harbor Agreement (Agreement) – The parent document, prepared by the Service, that describes the conservation strategy and activities that will be carried out to provide a net conservation benefit for the covered species, in this case the black-footed ferret. It also describes the process and requirements for developing the site-specific Reintroduction Plans for lands to be voluntarily enrolled in the Agreement.

Reintroduction Plan – The document that describes site-specific characteristics of any lands enrolled in this Agreement. It will include: (1) a description of the ownership interest; (2) a map of the enrolled land, identifying boundaries of any nearby Conservation and Management Zones; (3) a description of the conservation activities to be carried out in any Conservation and Management Zones on the enrolled lands; and (4) a description of any activities that may be prohibited within the Conservation or Management Zone. The Permittee and the Cooperator will develop a Reintroduction Plan prior to enrollment of any property and prior to issuing any Certificate of Inclusion. Upon completion, it will be signed by the Permittee and the Cooperator. Information provided in a Reintroduction Plan could be made public as a result of a Freedom of Information Act request. A template for the Reintroduction Plan is in Appendix B of this Safe Harbor Agreement.

Routine Livestock Grazing and Ranching Activities – Those activities required to manage a livestock operation. For the purposes of this Safe Harbor Agreement, any livestock grazing or ranching practice that does not reduce prairie dog occupied habitat to a degree that the viability of a ferret population occupying the same lands would be impacted would be appropriate. Prohibited activities within any Conservation Zone would include lethal control of prairie dogs and/or major landscape alterations, except in unusual circumstances as agreed to by both the Permittee and Cooperator.

Split Estate – For purposes of this Safe Harbor Agreement, a split estate refers to any property where the management of wildlife habitat may be diminished by other ownership interests (e.g., mineral rights, mineral leases, hunting agreements, etc.).

Take – Defined by the Act as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Take may include significant habitat modification or degradation if it kills or injures wildlife by significantly impairing essential behavioral patterns including breeding, feeding, or sheltering.

Threatened species – An animal or plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range.

Tribal Lands – Tribal lands refer to those lands within the boundaries of an Indian reservation or land outside of an Indian reservation that are held in trust by the United States for the benefit of an individual Indian or Indian Tribe, held by an individual Indian or Indian Tribe, or held by a dependent Indian community.

Unforeseen Circumstances – Circumstances affecting a species or geographic area covered by a conservation plan or agreement that could not reasonably have been anticipated by the Service at the time of development of the Safe Harbor Agreement, and that result in a substantial and adverse change in the status of the covered species.

Black-Footed Ferret
Programmatic Safe Harbor Agreement

1.0 Introduction

The U.S. Fish and Wildlife Service (Service) Safe Harbor Program (64 FR 32717) is a program that provides regulatory flexibility to non-federal landowners who voluntarily commit to implementing or avoiding specific activities over a defined timeframe that are reasonably expected to provide a net conservation benefit to species listed under the Endangered Species Act (Act). In exchange for this commitment, enrolled landowners (Cooperator) receive assurances from the Service that no additional future regulatory restrictions will be imposed or commitments required for species covered under a Safe Harbor Agreement. The purpose of this Black-Footed Ferret Programmatic Safe Harbor Agreement (Agreement) is to encourage non-federal landowners to voluntarily engage in conservation activities to benefit and advance recovery of the endangered black-footed ferret *(Mustela nigripes*). The primary conservation activity under this Agreement will be reintroductions of ferrets on properties of willing landowners. Cooperators who enroll in this Agreement may withdraw at any time without penalty, providing they give the Service an opportunity to retrieve any ferrets on their lands.

Based on this Agreement and compliance with all other associated regulations and laws, the Service will issue a section 10(a)(1)(A) Enhancement of Survival Permit (Permit) to the Service's Black-Footed Ferret Recovery Coordinator (Permittee) for a term of 50 years. Under the Permit, the Permittee may enroll eligible and willing non-federal landowners through Certificates of Inclusion for a minimum term of 10 years under this Agreement. The Certificates of Inclusion will convey the Permit's incidental take authorization and the Safe Harbor assurances to Cooperators. An attendant Biological Opinion will be developed as a result of an intra-Service section 7 consultation, under the Act, on the effects of the issuance of the Permit and implementation of the Agreement. This Biological Opinion will provide incidental take of black-footed ferrets to non-participating landowners (i.e., nearby non-enrolled landowners) where dispersing ferrets from a reintroduction effort under this Agreement may affect their ownership interests. Cooperators who withdraw from the Agreement become non-participating landowners and will also be covered for future incidental take of ferrets through the Biological Opinion. Split estate owners of severed mineral interests are covered for any incidental take of ferrets related to otherwise lawful activities as non-participating landowners.

The Permittee has the capability and commitment to administer the Permit and the terms of the Agreement. The Permittee oversees the recovery efforts of the black-footed ferret with the assistance of the Black-footed Ferret Recovery Implementation Team (BFFRIT). The BFFRIT was established in 1996 and reaffirmed with a revised charter in 2012. The BFFRIT is guided by an Executive Committee made up of various State and Federal agencies, Tribes, and non-governmental organizations with a purpose of recovering the ferret

through coordinated efforts of many interested entities (Appendix F). All of these partners have been instrumental in the implementation of ferret recovery efforts to date. The Permittee will work closely with the BFFRIT on the implementation and monitoring of this Agreement. To date, the Permittee, with the assistance of the BFFRIT, has established a successful captive breeding program, initiated 20 reintroduction sites, and coordinated the release of more than 2,700 ferrets since 1987.

This Agreement is programmatic in nature and applicable across the 12-state historical range of the black-footed ferret, which includes portions of Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming. However, the Service expects that the Agreement will be implemented in only a small portion of this area because only 0.08 percent of the ferret's historical range will be needed to recover (delist) the species (U.S. Fish and Wildlife Service 2013). This historical range includes a wide variety of landscapes, habitat types, and potential partners. This broad diversity in landscapes necessitates site-specific black-footed ferret Reintroduction Plans (Reintroduction Plan) for the enrolled lands. Reintroduction Plans will describe the specific conservation and management details of each site within identified Conservation and/or Management Zones on each enrolled property. Each Reintroduction Plan will be developed by the Permittee and the Cooperator, with technical input from other partners as appropriate. Partners may include State wildlife agencies, Tribes, the Natural Resources Conservation Service, Animal Plant Health Inspection Service/Wildlife Services, and others as appropriate. The Permittee will issue a Certificate of Inclusion to each Cooperator after a Reintroduction Plan is approved and signed by the Permittee and the Cooperator. Collectively, the Permittee and the Cooperator are hereafter called the Parties. The programmatic nature of this Agreement provides Cooperators with a streamlined process for obtaining assurances that actions taken to benefit black-footed ferrets on their land will not restrict current land use or result in additional regulatory obligations associated with the species under the Act.

Prior to enrollment of any landowner as a Cooperator to the Agreement, inquiries will occur to determine if any split estate ownership may exist that could limit management of wildlife habitat. If these split estate ownership interests occur, the Service will either attempt to enroll all the interests as Cooperators or evaluate if the exercise of any activities pursuant to these ownership interests could materially limit any potential net conservation benefit for the black-footed ferret. For example, if the ownership of subsurface mineral rights was severed from surface ownership, the likelihood and extent of any development of those minerals would be evaluated. Enrollment of partial ownership interests for a property may or may not be determined to be appropriate based on this evaluation.

2.0 Background

The black-footed ferret is an endangered carnivore with a black face mask, black legs, and a black-tipped tail. It is approximately 18 to 24 inches long and weighs up to 2.5 pounds. It is the only ferret species native to North America. The ferret is mainly solitary, except when

breeding and when mother and young are together (Forrest et al. 1985). In the wild, it first breeds at 1 year of age, usually from mid-March through early April with litter sizes averaging 3.5 individuals (Wilson and Ruff 1999). The mean life expectancy of wild ferrets in the last known free-ranging population in Meeteetse, Wyoming was 0.9 years (Biggins et al. 2006).

Black-footed ferrets are specialists that prey primarily on prairie dogs (*Cynomys spp*.) and use their burrows for shelter and denning (Henderson et al. 1969, Hillman and Linder 1973, Forrest et al. 1985, Biggins 2006). Since ferrets depend almost exclusively on prairie dogs for food and shelter, and the ferret range directly overlaps that of certain prairie dog species (Anderson et al. 1986) with no documentation of ferrets breeding outside of prairie dog colonies, we believe that ferrets were historically endemic to the range of three of the prairie dog species (Gunnison's, white-tailed, and black-tailed). The historical range of these prairie dog species collectively occupied approximately 100 million acres of intermountain and prairie grasslands within a potential range of an estimated 562 million acres extending from Canada to Mexico (Anderson et al. 1986, Biggins et al. 1997, Ernst 2008). Today, largely due to a number of anthropogenic factors including land conversion, poisoning, and the non-native disease sylvatic plague, most prairie dogs occur in highly fragmented subpopulations (Luce 2003, U.S. Fish and Wildlife Service 2010). Significantly reduced and fragmented prairie dog populations that fluctuated spatially and temporally created bottlenecks for ferret populations. The ferret population declined precipitously as a result (Fagerstone and Biggins 1986, Cully 1993, Biggins 2006, Lockhart et al. 2006). Nevertheless, prairie dogs appear able to persist in smaller, more fragmented populations than were common historically. However, ferrets require relatively large, stable prairie dog complexes to maintain a viable population. Accordingly, management efforts to successfully recover the ferret must coordinate with landowners to provide appropriate stable prairie dog habitat for the species.

The same historical factors that have impacted prairie dog numbers have also impacted black-footed ferrets. By 1987, the last remaining wild ferrets were taken into captivity for captive breeding purposes (Hutchins et al. 1996, Garelle et al. 2006). Approximately 280 animals currently make up the captive population at six facilities. Multiple facilities ensure redundancy, reducing the risk of a single or even multiple catastrophic events eliminating the entire captive ferret population. A Species Survival Plan ensures their genetic fitness and provides surplus animals for release. After successful captive breeding efforts, the first captive bred ferrets were released back into the wild at Shirley Basin in Wyoming in 1991. Today, in addition to the six captive breeding facilities, a minimum of approximately 274–448 adult ferrets exist at 20 managed reintroduction sites across their historical range (U.S. Fish and Wildlife Service 2013). Captive breeding and the release of surplus ferrets continues, in efforts to augment existing sites and establish more ferret populations throughout their range. Reintroduction efforts have met draft recovery goals at four sites. Ferret populations at many reintroduction sites are challenged by disease (U.S. Fish and Wildlife Service 2013). Considerable effort has been undertaken to identify additional suitable reintroduction sites to advance recovery of the species.

Previous studies suggest that a minimum of approximately 75 acres of occupied black-tailed prairie dog habitat or 100–150 acres of occupied white-tailed or Gunnison's prairie dog habitat are needed to support one female black-footed ferret (Biggins et al. 2006). However, conservative field observations suggest the prairie dog acreage required to support a female ferret may be as much as 225–375 acres depending on prairie dog densities, which vary by species, and other factors including disease and climactic conditions (U.S. Fish and Wildlife Service 2013). Male ferrets have overlapping ranges with female ferrets and do not require additional prairie dog habitat beyond that considered for females (Biggins et al. 2006). These conservative estimates of 225 acres of black-tailed prairie dog occupied habitat and 375 acres of Gunnison's or white-tailed prairie dog occupied habitat to support one female ferret were used to determine the amount of habitat needed for downlisting and delisting criteria (U.S. Fish and Wildlife Service 2013).

The amount of habitat needed by a black-footed ferret population is directly related to the amount of occupied prairie dog habitat and the density of prairie dogs on that habitat (Biggins et al. 1993). Therefore, prairie dog management can be crucial to ferrets. However, landowner attitudes toward prairie dogs vary greatly and prairie dogs have long been a focus of conflict with agricultural producers (Miller et al. 2007). The principal conflict centers on competition between livestock and prairie dogs for forage, but also includes concern for livestock safety.

Competition for forage between prairie dogs and livestock in some instances—depending on factors such as prairie dog density, rainfall, temperature, and stocking rates—may be a threat to the economic viability of livestock producers. However, competition among herbivores is a complex interaction that varies by livestock operation size, geographic location, vegetation type, biomass productivity, season, and year (Derner et al. 2006, Detling 2006). The complexity associated with this interaction and related ranching concerns have led to ongoing control of prairie dogs in some areas. Successful reintroductions of black-footed ferrets, which depend on healthy prairie dog populations, cannot be sustained without addressing this concern. Judicious and targeted management of prairie dog colonies is necessary to maintain support for the conservation of the ferret from landowners whose ranches provide suitable ferret habitat and from their neighbors.

Prairie dog management can involve either lethal or non-lethal methods. Lethal control of prairie dogs typically includes poisoning or shooting, both of which can limit the number of black-footed ferrets that a site can support (Pauli 2005, Reeve and Vosburgh 2006). Poisoning of prairie dogs is regarded as a major factor in the historical decline of prairie dogs and ferrets (Forrest et al. 1985, Cully 1993, Forest and Luchsinger 2005). Currently, most poisoning is more limited in nature and undertaken by landowners at very localized locations (U.S. Fish and Wildlife Service 2009). Toxicant use on or adjacent to ferret reintroduction sites is of particular concern due to the potential use of toxicants with secondary impacts to non-target wildlife, including ferrets that consume prairie dogs. However, carefully managed and implemented use of specific toxicants with identified

management objectives has been important to address prairie dog encroachment issues at ferret reintroduction sites (Gober pers. comm. 2012a, Griebel 2010). At one reintroduction site in Kansas, management of prairie dogs by Animal Plant Health Inspection Service/Wildlife Services at the property boundary has been conducted to minimize the expansion of prairie dog colonies onto adjacent properties. Purposeful management of prairie dogs can help alleviate conflicts associated with prairie dog expansion and impacts to livestock forage. Flexibility in prairie dog management may generate more support from landowners to participate in this program and conserve ferrets. The ability to collaborate to purposefully manage prairie dogs in some areas, while limiting their expansion in other areas, can help build a strong private land conservation model for the ferret.

Shooting of prairie dogs often focuses on the most vulnerable segment of the population, i.e., naïve young of the year (pups). These animals are smaller than adult prairie dogs, and as a result more available to hunting black-footed ferrets. Pup availability to adult female ferrets providing for their young (kits) is an important factor in kit survival at ferret reintroduction sites. Prairie dog shooting on any ferret reintroduction site likely reduces the value of the area for recovery of the ferret. However, this impact may be ameliorated by the size of the ferret reintroduction area and the species of prairie dog present. Shooting of prairie dogs occurs on very large successful reintroduction sites at Aubrey Valley in Arizona, where Gunnison's prairie dogs occur, and at Shirley Basin in Wyoming, where white-tailed prairie dogs occur. At smaller successful ferret reintroduction sites such as Conata Basin, South Dakota, shooting has significantly reduced black-tailed prairie dog populations, with likely disproportionate impacts on pups. Accordingly, shooting has been limited at Conata Basin to better support ferret recovery.

There are several diseases, both native and nonnative, that impact black-footed ferrets. Of particular concern is nonnative sylvatic plague, which can be lethal to ferrets and prairie dogs—their main prey source (Barnes 1993, Gage and Kosoy 2006). Sylvatic plague is caused by the bacterium *Yersinia pestis* and is transmitted via fleas, through consumption of infected animals, or through breathing in tiny droplets containing the bacterium (Godbey et al. 2006). Since 2005, plague has been detected in prairie dogs in all 12 states throughout the historical range of the ferret (Abbott and Rocke 2012). The potential significance of plague on ferret populations underscores the value of establishing multiple reintroduction sites across the widest possible distribution of the species' historical range; more populations can significantly minimize the chances that plague outbreaks will cause widespread decline in the species (Gage and Kosoy 2006, U.S. Fish and Wildlife Service 2008). The establishment and, more importantly, the management of multiple reintroduction sites is a risk management strategy to promote recovery of the species.

The original recovery plan for the black-footed ferret was completed in 1978 and revised in 1988 (U.S. Fish and Wildlife Service 1988). The revised recovery plan identified downlisting criteria that included at least 1,500 adult ferrets in 10 wild populations, with no fewer than 30 breeding adults in any population. The widest possible distribution of those 1,500 adult ferrets across the landscape was encouraged.

Since 1988, knowledge about the black-footed ferret and the threats it faces has grown. Many reviews of the 1988 recovery plan and subsequent recovery progress have been undertaken including reviews by the Conservation Breeding Specialist Group (CBSG) (1992), Hutchins et al. (1996), CBSG (2004), Ray (2006), and U.S. Fish and Wildlife Service (2008). These reviews were used in the preparation of a Draft revised recovery plan that will direct ferret recovery in the future (U.S. Fish and Wildlife Service 2013). The overall strategy to recover this species will rely on engaging multiple partners including States, Tribes, Federal land management agencies, non-governmental organizations, and private landowners. Recovery criteria will provide guidance to establish multiple free-ranging populations in an effort to minimize impacts to the stability of ferret populations from localized stochastic events. Recovery goals define downlisting criteria to include the establishment of at least 1,500 free-ranging breeding adult ferrets in 10 or more populations, with at least 1 population in each of at least 6 of 12 States within the species' historical range. Delisting criteria include the establishment of at least 3,000 free-ranging breeding adult ferrets in 30 or more populations, with at least 1 population in each of at least 9 of 12 States within the historical range of the species, with no fewer than 30 breeding adults in any population and at least 10 populations with 100 or more breeding adults (U.S. Fish and Wildlife Service 2013). The table below identifies the status of reintroduction efforts through 2012 (U.S. Fish and Wildlife Service 2013). Estimates of breeding adults can vary from year to year for a recovery site based on a number of factors including kit production and survival, predation, the presence of plague, the management efforts implemented, and the amount of monitoring conducted. Therefore, we provide a range of estimates.

Table 1. Approximate number of black-footed ferrets released and extant in the wild, 1991-2012, at white-tailed (Wtpd), black-tailed (Btpd), and Gunnison's (Gpd) prairie dog colonies[1].

Site (year initiated)	Prairie dog spp.	Ferrets released	Minimum fall population[1] 2008	Estimated breeding adults[2] 2009	Minimum fall population 2011 (approximate)	Estimated breeding adults[3] 2012	Average estimate of breeding adults
Shirley Basin, WY (1991)	Wtpd	534	196	98	203 (in 2010; partial survey)	102 (in 2011)	100
UL Bend NWR, MT (1994)	Btpd	242	13	7	20	10	9
Badlands NP, SD (1994)	Btpd	225	20	10	33	17	14
Aubrey Valley, AZ (1996)	Gpd	354	66	33	75	123[4]	78
Conata Basin, SD (1996)	Btpd	161	292	146	72	36	91
Ft. Belknap, MT (1997)	Btpd	102	No data	No data	0	0	0
Coyote Basin, UT (1999)	Wtpd	424	25	13	3	1	7
Cheyenne River, SD (2000)	Btpd	351	150	75	25 (partial survey)	>13	44

[1] Source: unpublished data from USFWS National Black-footed Ferret Conservation Center.
[2] Minimum fall population counts are derived from spotlight surveys and trapping efforts except in Shirley Basin, WY, where a model was used to estimate fall population.
[3] Breeding adult figures are estimated to be one-half minimum fall population counts from the previous year.
[4] Actual count.

BLM 40 Complex, MT (2001)	Btpd	95	3	3	No data	No data	0
Wolf Creek, CO (2001)	Wtpd	254	16	8	No data	No data	4
Janos, Mexico (2001)	Btpd	299	13	7	No data	No data	4
Rosebud, SD (2003)	Btpd	162	30	15	No data	No data	8
Lower Brule, SD (2006)	Btpd	107	26	13	12	6	10
Wind Cave NP, SD (2007)	Btpd	61	26	13	46	23	18
Espee Ranch, AZ (2007)	Gpd	77	Recent release	No data	No data	No data	No data
Smoky Hill, KS (2007)	Btpd	125	66	19	38	22	26
N. Cheyenne, MT (2008)	Btpd	88	Recent release	No data	No data	No data	No data
Vermejo Ranch, NM (2008)	Btpd	167	Recent release	8[4]	5	3	2
Grasslands NP, Canada (2009)	Btpd	75	Recent release	No data	12	6	3
Vermejo Ranch, NM (2012)	Gpd	20	Recent release	No data	No data	No data	No data
Total		**3923**	**942**	**468**	**544**	**362**	**418**

Since the last non-reintroduced black-footed ferret population was discovered at Meeteetse, Wyoming in 1981, significant progress has occurred toward the recovery of this species. Early efforts concentrated on immediate survival of the species through the establishment of a captive breeding population by Wyoming Game and Fish Department, the Service, and the Association of Zoos and Aquariums (AZA). These efforts led to the establishment of the Service's recovery program for the species, which coordinates all recovery actions and houses a majority of all captive ferrets. The Service coordinates efforts to breed ferrets for reintroduction in the wild with the AZA and several other partners. With the success of the captive breeding program, recovery efforts now include other tasks such as establishing a wide distribution of reintroduction sites with sufficient quantity and quality of prairie dog habitat as well as addressing the impacts of disease and assuring the adequacy of management actions. The accomplishments to date have involved an active BFFRIT. These efforts demonstrate a long term commitment by the Service to coordinate with the diverse members of the BFFRIT to cooperatively advance recovery of the ferret.

3.0 Authorities

This Agreement has been developed under section 10 the Act, the Service's Safe Harbor Policy (64 FR 32717) and final regulations (64 FR 32706), and revisions to the regulations (69 FR 24084). This Agreement supports the intent of the Parties to follow the procedural and substantive requirements of section 10(a)(1)(A) of the Act. The Safe Harbor Policy was developed to encourage private and other non-federal landowners to voluntarily undertake conservation activities on their properties to enhance restore or maintain habitat to benefit federally listed species.

4.0 Covered Species

Covered species are those federally listed species that are subject to a Safe Harbor Agreement and accompanying 10(a)(1)(A) Enhancement of Survival Permit, as defined in the Service's final Safe Harbor Policy (64 FR 32717). This Agreement's covered species is the black-footed ferret, federally listed as endangered.

5.0 Eligible Lands

The geographical lands eligible for enrollment in this Agreement include non-federal lands (including tribal lands) within the historical range of the black-footed ferret. This includes portions of Arizona, Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming (Appendix A) that have adequate acres of occupied prairie dog habitat to support a population of at least 30 breeding adult ferrets. The acreage necessary to support 30 breeding adults can vary depending on the species of prairie dogs present. Typically, this would be approximately 1,500 acres or more in black-tailed prairie dog habitat or 3,000 acres or more of white-tailed or Gunnison's prairie dog habitat. Eligible land need not be provided by a single Cooperator. Adjacent landowners can collectively enroll lands together under the Agreement such that sufficient acreage to support 30 breeding adult ferrets is enrolled. Potential suitable lands will be evaluated by the Permittee based on available site information and site visits. The number of acres required for enrollment will be determined on a site-specific basis and will be identified in the Reintroduction Plan.

While a minimum of 1,500–3,000 acres of active prairie dog habitat may support 30 breeding adult black-footed ferrets, we would encourage and prioritize larger enrollments to maximize the ability to contribute to the recovery goals of the ferret. Factors such as total size of occupied prairie dog habitat, densities of prairie dogs, documented presence of plague, total size of the grazing/ranching operation, proximity to incompatible land uses such as urban areas, the number of adjacent landowners who have concerns about prairie dog expansion, and the land uses of those neighbors will also be considered in the enrollment of eligible lands. By considering the concerns of the Cooperator and their neighbors, a logistically sound and sustainable ferret reintroduction effort will be possible.

Efforts to distribute black-footed ferret populations throughout their historical range stem from the need to maximize the redundancy of populations, which will minimize the risk of a catastrophic event eliminating the species in the wild. A potential approach would be to distribute ferret populations in proportion to the amount of historical habitat in each State (Appendix C). For example, North Dakota has a much smaller portion of the historical range than Colorado. Consequently, Colorado would be encouraged to enroll more acres occupied by prairie dogs and establish more ferret populations to achieve recovery. Therefore, should enrollment resources become limited, the Service would consider the historical ferret presence along with the above factors for prioritizing enrollments.

6.0 Baseline Determination

Baseline is a measure of the conditions associated with the covered species or its habitat that occur on eligible lands at the time of enrollment in the Agreement. Measuring prairie dog population numbers and spatial extent is time-consuming and expensive. These parameters can also fluctuate greatly over time. Therefore, the most reasonable and practical approach for determining baseline under this Agreement would be the number of black-footed ferrets present at the time of enrollment. Since the last remaining wild ferrets were taken into captivity for captive breeding purposes, extensive efforts to find additional wild ferrets have been unsuccessful (Hanebury and Biggins 2006). Therefore, the baseline on eligible lands for this Agreement will be zero ferrets.

Some black-footed ferret reintroductions onto private lands have already occurred under sections 10(j) and 10(a)(1)(A) of the Act since 1991. Ferrets were reintroduced in seven locations under section 10(j) of the Act in Arizona (1), Montana (1), South Dakota (3), Utah and Colorado (1), and Wyoming (1). Section 10(j) authorizes the Service to designate experimental populations for the purposes of reintroduction of threatened and endangered species. Under section 10(j), non-essential experimental populations are considered threatened for all purposes of the Act other than section 7 (such populations are considered as proposed for listing for the purposes of section 7). The Service may issue special rules that provide flexibility in management of these populations. The 10(j) rulemaking process for each of the designated non-essential experimental populations of ferrets uses that flexibility to ensure the continued existing use of all lands within the defined area, include ranching and associated activities. Although non-federal landowners within these 10(j) areas do not need additional incidental take coverage, they may desire the higher level of regulatory assurances provided under this Agreement. Furthermore, reintroductions in the 10(j) areas did not always include the conservation activities provided by this Agreement that would benefit the species, such as disease management, targeted prairie dog management, and monitoring.

Section 10(a)(1)(A) authorizes the Service to issue permits for research and the enhancement of survival of listed species. Six section 10(a)(1)(A) permits for black-footed ferret reintroductions have been issued in Arizona (1), Kansas (1), New Mexico (1), Montana (1), and South Dakota (2). These permits and the Service's accompanying section 7 biological opinions provided incidental take coverage to the landowners whose lands supported these reintroductions, as well as their neighbors. However, these mechanisms do not provide the same regulatory assurances as the Safe Harbor program that no further restrictions or commitments would be imposed on landowners. Additionally, these permits did not always include conservation activities that would benefit the species, such as disease management, targeted prairie dog management, and monitoring. Finally, these permits did not provide an extended period of coverage or baseline condition to which cooperating landowners could return, as provide by the Safe Harbor policy (62 FR 32178).

There have been 20 reintroduction sites initiated for black-footed ferrets as of 2012. Some neighboring reintroduction sites were covered by one 10(j) rule. The sites in Canada and Mexico are regulated by their respective governments. In both 10(j) and 10(a)(1)(A) reintroductions, landowners have allowed the Service to test the effectiveness of release, management, and monitoring methods, as well as attempt to establish new populations. This participation in reintroduction efforts was the foundation of the development of successful techniques that are allowing the Service to expand reintroduction efforts rangewide through this Agreement. However, these "early adopters" under section 10(a)(1)(A) permits and section 10(j) designations do not enjoy the same level of regulatory assurances as participants in this Agreement would. For these reasons, such non-federal landowners may be eligible to participate in the Agreement and receive Safe Harbor assurances for reintroductions that have already occurred. Furthermore, if this Agreement had existed at the time of those reintroductions, the baseline conditions for those landowners would have been zero ferrets. Therefore, the ferret baseline will be considered zero for all landowners who volunteer to participate in the Agreement.

The goal of the conservation activities in this Agreement is to increase the number of black-footed ferrets on enrolled properties above the baseline to provide a net conservation benefit to the species through establishment of additional populations (see Section 8.0). The Cooperator may opt to return to baseline upon completion of the Reintroduction Plan (Section 7.0 and Appendix B). The Cooperator may also opt to return to baseline prior to completion of the Reintroduction Plan by withdrawing from the Agreement. Incidental take coverage would be retained, provided the Cooperator notifies the Permittee and allows the Service access to recapture ferrets during the following fall, prior to a return to baseline. A Cooperator who returns to baseline without notifying the Permittee and providing access, will not receive coverage for incidental take. A Cooperator who withdraws from the Agreement with proper notification will be regarded as a non-participating landowner and will receive incidental take coverage via the Biological Opinion associated with the Agreement. The landowner will not be held responsible for events beyond their control (e.g., drought, fire, or plague) that may result in a decrease of the number of ferrets.

7.0 Conservation Activities

Conservation activities are those actions that would be implemented on enrolled lands and which are intended to provide a net conservation benefit to black-footed ferrets. Conservation activities that will provide a net conservation benefit on an individual piece of land may vary by location but at a minimum will include the reintroduction of ferrets. Conservation activities are discussed below and will be identified for each site as necessary and defined within a Reintroduction Plan developed for each enrolled property (Appendix B). Within the enrolled lands, a Conservation Zone and/or a Management Zone will be defined.

The Conservation Zone should be a minimum of approximately 1,500 acres of occupied black-tailed prairie dog habitat or a minimum of 3,000 acres of white-tailed or Gunnison

prairie dog habitat in order to provide adequate habitat to support a population of at least 30 adult black-footed ferrets. Conservation activities within the Conservation Zone will include ferret reintroduction and disease management as discussed below. Routine livestock grazing and ranching activities are largely compatible with maintaining occupied prairie dog habitat capable of supporting ferrets. All activities of Cooperators that are compatible with ferret recovery will continue in the Conservation Zone, including but not limited to, routine livestock grazing and ranching activities. Land uses and activities of Cooperators that could reduce prairie dog occupied habitat to a degree that the viability of the ferret population would be impacted would be prohibited. Incompatible activities in the Conservation Zone would include lethal control of prairie dogs and major landscape alterations such as plowing, unless approved by both the Permittee and Cooperator. The Cooperator and/or the Permittee should withdraw enrolled lands from the Agreement if incompatible activities are planned and/or conducted.

Conservation activities within the Management Zone are intended to provide benefits to the black-footed ferret while providing flexibility in prairie dog management to Cooperators, including the option for lethal control. The Management Zone will consist of additional acres adjacent to or in close proximity to the Conservation Zone, and may or may not exceed the number of acres in the Conservation Zone. It may or may not have occupied prairie dog habitat. Conservation activities within the Management Zone may include disease management and/or prairie dog management as discussed below and as defined in the Reintroduction Plan. It is expected that any lawful ownership activities, including but not limited to routine ranching activities, will occur in the Management Zone.

All of the following conservation activities are important in that they support the reintroduction of black-footed ferrets. It will require coordinated efforts of multiple partners to implement these conservation activities. The Permittee and any Cooperators will determine what partners may participate in conservation activities. Likely partners in the implementation of the conservation activities include but are not limited to State Wildlife Agencies, Tribes, U.S. Fish and Wildlife Service Ecological Services Field Offices, Animal Plant Health Inspection Service/Wildlife Services, Natural Resources Conservation Service, U. S. Geological Survey, the National Association of Conservation Districts, and other non-governmental organizations. Partners will vary depending on factors such as the state in which the eligible lands are located, budgets, logistics, and work efficiencies. This Agreement provides a mechanism for the coordinated efforts of multiple partners to contribute to recovery of this species.

7.1 Black-Footed Ferret Reintroduction and Management

Lands enrolled under this Agreement will provide an opportunity to increase the number of wild black-footed ferret populations. Once a Cooperator has a signed Reintroduction Plan and is enrolled under the Agreement, ferrets will be reintroduced to the site as described therein. All ferret reintroduction and management actions will be coordinated and carried out by the Permittee (or designee) and all funding for such actions will be provided by the

Permittee and/or others, to the extent funds are available. State wildlife agencies will be instrumental in these activities.

Typically, a minimum of 20 juvenile black-footed ferrets will be reintroduced during one release event in the fall. Depending on the size of the site and quality of the habitat, additional animals may be released during this timeframe or in subsequent years. In the latter case, the baseline of zero ferrets will remain. Release events typically occur near dusk and involve a minimum of two biologists. Depending on topography, most animals can be distributed across the site via existing roads or on foot, minimizing impact to the landscape. All reintroduction efforts will utilize techniques outlined in Roelle et al. (2006). The Permittee will work with each Cooperator to coordinate these activities to minimize disruptions to the Cooperator's use of land during reintroduction activities.

Once black-footed ferrets are released, efforts will be undertaken as necessary to determine the success of reintroduction activities. These efforts are described in Section 9.0 (Monitoring) of this Agreement and would require access to the property. This monitoring may occur in subsequent years, as necessary, in coordination with the Cooperator, to determine if excess wild kit production on specific enrolled lands could be removed to support other approved reintroduction sites.

7.2 Disease Management

There are a number of diseases that can affect both captive raised and wild black-footed ferrets. However, sylvatic plague presents the greatest threat to wild ferret populations. In order to address this threat, Cooperators enrolled in this Agreement will allow for the treatment of disease, as appropriate and necessary, on their enrolled lands for the protection of ferrets and prairie dogs. Disease management activities will be coordinated and carried out by the Permittee at no cost to the Cooperator.

Currently there is an effective vaccine that will protect black-footed ferrets from plague. All animals at the captive breeding facilities are vaccinated for plague and other diseases as necessary, including those intended for reintroduction. However, if reintroductions are successful and reproduction occurs, it may be necessary to live trap any kits that are produced on a reintroduction site in order to vaccinate them. These efforts would likely occur during the fall concurrent with monitoring efforts, but could occur during the spring in some cases (Section 9.0 of this Agreement).

Fleas are considered a primary vector of plague transmission. Currently, the most effective control of fleas (and thereby plague) is the application of deltamethrin, the active ingredient in the insecticide DeltaDust (dusting). DeltaDust is an unrestricted-use pesticide classified by the Environmental Protection Agency (EPA), and is considered safe for many applications including use in and around homes. Product transport, mixing, application, storage, cleanup, and use of protective gear will be consistent with label instructions. DeltaDust may be applied according to the EPA label requirements once per year, generally between March and August, and would involve placement of approximately 5 grams of DeltaDust

directly into each prairie dog burrow. The insecticide is typically applied by a spray device mounted on ATVs or by hand while walking depending on topography (Seery et al. 2003, Matchett et al. 2010). Applications take several days to two weeks depending on the acreage treated and the size of work crews.

An alternative to the use of insecticides is currently under investigation that involves a sylvatic plague oral bait vaccine for prairie dogs. The vaccine is a genetically modified viral vaccine, using attenuated raccoon pox virus as a vector for orally delivering plague antigens to target animals through the use of baits (Abbott and Rocke 2012). If effective, this vaccine could be used on lands enrolled under this Agreement. The oral bait vaccine would be placed in baits that are distributed from ATVs or aerially onto a prairie dog colony once per year or possibly less often, depending upon research results. Prairie dogs would consume the bait and become vaccinated, thereby limiting plague outbreaks on treated lands. Administration of oral plague vaccine is expected to occur no more than once per year after emergence of prairie dog pups and might occur from late May through October. This plague abatement technique is expected to be less labor intensive than dusting. However, it may require limiting access of livestock to treated areas for a few days after application to avoid livestock consumption of the bait. The bait will not adversely affect livestock, but could decrease the amount available for prairie dogs and therefore decrease the vaccine's effectiveness.

Regardless of the method used, the Permittee (or designee) will work with each Cooperator to coordinate these activities to minimize disruptions to the Cooperator's use of the lands during plague management activities. The science of disease management within wildlife populations is evolving. New techniques and protocol may be considered in the future. Any changes in disease management on lands covered by this Agreement will be agreed to by both Parties prior to implementation.

7.3 Prairie Dog Management

Sustainable black-footed ferret populations are not possible without purposeful management of prairie dog populations to address disease and conflicts with human activities (U.S. Fish and Wildlife Service 2008). Prairie dog management within the Management Zone may include both lethal and non-lethal activities. Lethal activities may include the use of zinc phosphide, shooting, and other activities as approved by the Permittee. Anticoagulant pesticides such as Rozol® and Kaput® will not be allowed on enrolled properties due to the risks of secondary poisoning to other non-target wildlife species that consume prairie dogs, including ferrets, and the resultant impact on the establishment of a ferret population that could contribute to species recovery. Lethal control within the Management Zone will be addressed for each enrolled property and defined in the property's Reintroduction Plan. Responsibility for implementing management of prairie dogs will be defined in the Reintroduction Plan. Lethal prairie dog management may be carried out by Animal Plant Health Inspection Service/Wildlife Services and/or other local entities, such as weed and pest boards, following discussions with these entities regarding management options.

Non-lethal management activities may occur in both the Management and Conservation Zones and include, but are not limited to, barriers and translocation. Lethal prairie dog management will not be allowed within the Conservation Zone of the enrolled lands, except in unusual circumstances agreed to by both the Permittee and Cooperator. The Reintroduction Plan can be modified as necessary to address changing prairie dog management needs with concurrence by both the Permittee and the Cooperator. Non-lethal prairie dog management may be carried out by Animal Plant Health Inspection Service/Wildlife Services, other partners, the Permittee, or the Cooperator as agreed to and identified in the Reintroduction Plan. Management to maintain sufficient quantity and quality of prairie dog habitat on lands covered by the Agreement will be critical to its success.

7.4 Livestock Grazing

Most, if not all, of the private land that supports adequate numbers of prairie dogs essential to maintaining black-footed ferret populations is agricultural in nature and predominantly used for livestock grazing. It is expected that any management decisions regarding grazing practices on enrolled properties will continue to be determined by the Cooperator and will be described in the property's Reintroduction Plan. Grazing practices on lands enrolled under this Agreement should provide habitat for the ferret and be economically viable for the Cooperator. It is understood that certain practices such as, but not limited to, grazing livestock, driving vehicles and equipment to and from the livestock operations, driving vehicles to and between pastures to move and/or feed livestock or administer medical attention to animals, building and maintaining fences and watering facilities, treating invasive plants, prescribed fire, reseeding, fertilization, and brush management, may be necessary to facilitate sustainable grazing. Grazing and related activities will be further described in the Reintroduction Plan. Implementation of all grazing activities will be the responsibility of the Cooperator. It is not the intent of this Agreement to limit any land use that does not materially reduce the viability of any reintroduced ferret population.

8.0 Incidental Take and Net Conservation Benefits

8.1 Incidental Take and Return to Baseline

Implementation of this Agreement and any related Reintroduction Plans could result in the incidental take of black-footed ferrets. The regulatory take assurances provided in the Certificate of Inclusions apply only to ferrets.

Incidental take of black-footed ferrets could occur through reintroduction and monitoring of ferrets while handling or transporting to the reintroduction site. Ferret deaths have occurred while anesthetizing animals for health care purposes. In addition, release sites have experienced occasional ferret deaths during transportation due to heat stress when air conditioning equipment failed; however, less than one half of one percent of more than 2,700 ferrets reintroduced have perished from handling and transportation (Gober pers. comm. 2012b). While equipment failures could occur during ferret reintroductions under

this Agreement, the precautions contained in the protocol for handling and monitoring reintroduced ferrets outlined in Roelle et al. (2006) will minimize this possibility.

Incidental take of black-footed ferrets may also occur in carrying out other conservation activities, including implementing plague management, prairie dog management, and routine ownership interest activities including, but not limited to, livestock grazing and ranching activities. The most likely means of incidental take associated with these activities would occur through vehicle or equipment collisions. While such incidental take has been documented, the risk of vehicle collisions is low due to the nocturnal habits of ferrets. Other than potential collisions with vehicles or equipment, plague management is unlikely to result in incidental take of ferrets.

Incidental take of black-footed ferrets from non-lethal prairie dog management is not expected in either Conservation or Management Zones. Incidental take from lethal prairie dog management authorized in Management Zones could occur if ferrets are present. Such take may occur through accidental shooting or non-target exposure of ferrets to toxicants meant for prairie dogs, or potential collisions with vehicles or equipment. Such take is not expected in Conservation Zones because shooting and the use of toxicants will not occur within Conservation Zones, except in unusual circumstances agreed to by both the Permittee and Cooperator.

The provisions of this Agreement allow any Cooperator to return the enrolled lands back to a baseline of zero black-footed ferrets at any time through any legal means. Such means cannot include deliberate killing of ferrets. A return to baseline may result in incidental take of all ferrets released onto the enrolled lands. Should the Cooperator choose to return to baseline, the most likely means to do so will be through the absence of plague management, through extensive lethal prairie dog control on all enrolled lands including the Conservation Zone to the point where the prairie dog population is no longer adequate to support a ferret population, or through conversion of enrolled lands from grazing lands to other land uses such as cultivated agriculture or intensive energy development. Before carrying out any activities that would result in a return to baseline, Cooperators are required to notify the Service in sufficient time to allow relocation of the ferrets. September and October are the most suitable months for trapping ferrets. Therefore, this Agreement requires that Cooperators notify the Permittee by July 1 of any given year to allow logistical planning for the recapture of ferrets from the enrolled lands during the following months of September and/or October, or as otherwise mutually determined by the Permittee and Cooperator. If the Permittee is not notified and/or access is not granted, the Cooperator would lose coverage for incidental take.

In the absence of plague management, it is likely that a plague event will occur that decreases prairie dog populations to a level that will no longer support black-footed ferrets. While prairie dogs have the reproductive potential to increase their numbers after such an event, it is unlikely that ferret populations would recover without additional reintroductions. Likewise, extensive lethal prairie dog management across all enrolled lands

would likely result in considerable decreases in prairie dog populations such that they would not support ferrets. The reproductive potential of prairie dogs could allow them to return after extensive lethal control, but it is unlikely that ferrets populations would return without additional reintroductions.

While conversion of rangeland to cultivated agriculture in the past resulted in the loss of considerable black-footed ferret habitat, much of the most suitable land has already been converted. Therefore, present and future conversion to cropland is less likely (U.S. Fish and Wildlife Service 2009). However, changes in demands for various crops such as corn for ethanol could influence rate and location of conversion to cropland, which is difficult to predict. Unlike conversion to cropland, energy production does not result in a complete loss of habitat. It reduces the total amount of habitat by converting portions of it to an impermeable surface, i.e., roads and well or turbine pads, but it does not preclude burrows and occupation of prairie dogs and hence ferrets. However, it may increase the potential for incidental take via vehicle collisions during construction and operations and maintenance. Structures associated with energy development may also increase predation by providing additional perches for raptors. The likelihood of the conversion of enrolled lands to energy production is unknown and difficult to predict, but will be influenced by energy prices and energy policy. While suburban and commercial development is also possible, given the rural and relatively remote locations of many of the eligible lands, it is less likely than conversion to cultivated agriculture or energy development.

By whatever means, a change in land use could make the enrolled lands unsuitable for prairie dog habitat or, more likely, impair the quality of prairie dog habitat. Without adequate prairie dogs, sustainable black-footed ferret populations will not be maintained and the enrolled lands will return to their baseline of zero ferrets.

The extent of the incidental take associated with the implementation of conservation activities is difficult to quantify as we do not know how many eligible landowners will enroll. Incidental take associated with the return to baseline is also difficult to anticipate. However, a qualitative review of the Service's Safe Harbor Program indicates that most participants remain committed to these programs and very few choose to return to baseline. Given that livestock grazing and ranching is the primary use for these lands, we anticipate that most Cooperators will not return these lands to baseline.

8.2 Net Conservation Benefits

Net conservation benefits are the cumulative benefits to the black-footed ferret minus the impacts of any incidental take allowed by the Permit. Net conservation benefits must be sufficient to contribute, either directly or indirectly, to recovery of the ferret. The conservation activities identified in this Agreement support recovery efforts identified in the current Recovery Plan by reestablishing the ferret on the enrolled lands and by addressing the most significant threats. The net conservation benefits of each conservation activity are discussed below.

Black-Footed Ferret Reintroduction – The principal conservation benefit provided by this Agreement is the opportunity to establish additional free-ranging populations of ferrets throughout their range on non-federal lands. Recovery efforts to date demonstrate that reintroduction of ferrets can be successful, such as those at Conata Basin, South Dakota; Aubrey Valley, Arizona; Cheyenne River Sioux Tribe, South Dakota; and Shirley Basin, Wyoming. Additional reintroduction sites throughout the species' historical range will provide more ecologically diverse release sites. Release sites that vary in site-specific habitat characteristics will increase options to address uncertainty associated with local stochastic events such as plague, other diseases, and potential effects of climate change. If successful, reproduction at these sites could also contribute surplus, wild born kits to reintroduction sites elsewhere. This could foster better survival on site as well as at future reintroduction sites.

Disease Management – Currently, the most destructive disease impacting black-footed ferrets is sylvatic plague. Plague will be addressed as described in Section 7.2 above and may be managed on all lands enrolled under this Agreement as necessary. Engaging in plague management within the Conservation Zones of enrolled lands will reduce or eliminate this lethal threat to ferrets. Plague management within the Management Zones could also provide a conservation benefit by creating a buffer to plague on adjacent lands. Plague management will also benefit ferrets by limiting large fluctuations in prairie dog numbers, thus stabilizing their prey base.

Prairie Dog Management – Adequate numbers of prairie dogs are essential for black-footed ferret survival and population stability. However, prairie dogs may be in conflict with landowner interests. Since the early 1900s, considerable efforts have been undertaken to poison prairie dogs as a means of reducing competition with domestic livestock for forage (Forrest and Luchsinger 2005). Lands enrolled under this Agreement will be subject to purposeful prairie dog management. This means that prairie dogs will be conserved in any Conservation Zone, as defined in the Reintroduction Plan, but may be actively controlled in any Management Zone as necessary. Overall, this will likely result in a substantial increase in suitable ferret habitat available on non-federal lands throughout the species' historical range inasmuch as control of prairie dogs is not often purposefully limited on any significant area of private lands at present.

Purposeful management of black-footed ferrets and prairie dogs, with different activities supported for different outcomes in the Conservation Zone and Management Zone as defined in this Agreement, will demonstrate how a balance of tolerance and control of prairie dogs can benefit both ferret recovery and Cooperator interests. The benefits of allowing purposeful management of prairie dogs in conjunction with ferret reintroduction is critical to minimize impacts of prairie dog encroachment onto neighboring properties and to create an environment in which landowners will allow the release of ferrets. The positive value of establishing new reintroduction sites will exceed the minor negative impacts of any potential incidental take of ferrets associated with prairie dog management.

Livestock Grazing – Most lands eligible for enrollment under this Agreement will be non-federal grazing lands. As members of grassland/shrub steppe ecosystems, prairie dogs have evolved with grazing. While there is much debate regarding competition between ungulates and prairie dogs, grazing can benefit prairie dogs by reducing vegetation height, which can improve visibility, thereby reducing predation on prairie dogs. Enrollment of these lands will allow for their continued use as grazing lands, as determined by the landowner, during the term of the Reintroduction Plan. It will also help to ensure that there will not be substantial conversion to other uses such as cropland or other development during the term of the Reintroduction Plan.

Conservation activities collectively provide a net conservation benefit at each site by balancing prairie dog habitat with livestock grazing, purposefully managing the prairie dogs present, and controlling the diseases that can devastate both prairie dogs and black-footed ferrets. This approach makes it possible to carry out the primary goal of the Agreement—to establish additional free-ranging populations of ferrets throughout their range on non-federal lands. Long-term benefits include demonstration of the compatibility of livestock grazing and endangered species conservation, which could lead to additional ferret populations on non-federal lands throughout their range beyond the term of this Agreement.

As one of the most highly endangered mammals in North America, the black-footed ferret has made great strides toward recovery. It has gone from being extirpated to approximately 274–448 animals in the wild at 20 sites. This progress has been achieved through the efforts of many people. However, many more people will need to become engaged in order to recover this iconic species. In addition to the conservation activities described above, this Agreement will allow the Service to engage a broad spectrum of conservation partners including additional private landowners, Tribes, States, non-governmental organizations, and others to advance recovery of this species.

9.0 Monitoring

The purposes of this Agreement's monitoring program are to: (1) inform the Service of the status of implementation of the conservation activities, (2) track incidental take of black-footed ferrets, and (3) determine success of ferret reintroductions on enrolled properties. The Permittee will coordinate all monitoring efforts. Cooperators will provide information and participate where appropriate with the Permittee to monitor actions described in each Reintroduction Plan. The monitoring on each enrolled property will vary based on the conservation activities taken and the situation at each site.

In a coordinated effort with the Cooperator, the Permittee will track implementation of conservation activities on the Cooperator's property and provide an annual report to the appropriate Service Regional Offices and to each Cooperator (Appendix D). This report will include the state and county in which the Reintroduction Plan and Certificate of Inclusion were issued, the conservation activities implemented—including the number of acres

treated for plague and/or poisoned, the methods used, the dates of black-footed ferret releases, and any incidental take. The Service's appropriate Regional Offices will review these reports to ensure that the terms of the Permit, conditions of the Agreement, and purposes of the monitoring program are being met. Grazing practices carried out by the Cooperator, as well as incidental take, will be tracked through a self-reporting process in an annual questionnaire completed by the Cooperator and returned to the Permittee (Appendix E).

In addition to the implementation of monitoring described above, the Permittee may use aerial imagery, such as the National Agriculture Imagery Program, to assess presence and expansion or contraction of prairie dog colonies to determine if adequate black-footed ferret habitat exists on enrolled properties. Based on the aerial imagery, as well as the Cooperator survey information, the Permittee may coordinate periodic site visits when necessary to confirm the continued presence of reintroduced ferrets. This may include nocturnal spotlight surveys within a fourteen day period in the fall, preferably around the full moon, carried out in accordance with appropriate notification to the landowner and using methods described in Roelle et al. (2006).

While methods for successful reintroduction of black-footed ferrets to their native habitat are generally well understood and will be described for each enrolled property in the Reintroduction Plan, it is possible that with time and experience in developing Reintroduction Plans in varied landscapes, knowledge and skills will evolve. Therefore, every five years (or more frequently if necessary), the Permittee will consolidate information and reports from all enrolled properties to date for the purposes of assessing the implementation and administration of the Agreement. All Cooperators and additional partners will be invited to discuss and provide input. Any necessary changes identified from the information provided will be addressed pursuant to Section 15.0 (Modifications) of this Agreement.

10.0 Roles and Responsibilities of the Parties

10.1 The Permittee (Black-Footed Ferret Recovery Coordinator)

The Permittee agrees to:

A. Upon consideration of all other applicable legal requirements, obtain and hold a Permit issued by the U.S. Fish and Wildlife Service Region 6, in accordance with section 10(a)(1)(A) of the Act, authorizing incidental take of black-footed ferrets as a result of lawful activities on the enrolled property in accordance with the provision of such Permit. The term of the Permit will be 50 years.
B. Develop and sign Reintroduction Plans in coordination with each Cooperator for lands proposed for enrollment in the Agreement, thereby ensuring consistency with the provisions of this Agreement.

C. Upon signature of a Reintroduction Plan developed in coordination with the Cooperator, issue a Certificate of Inclusion to convey incidental take to the Cooperator pursuant to section 10.1 A hereof.
D. Coordinate all ferret reintroduction efforts with Cooperators and any other appropriate partners.
E. Coordinate all plague management actions with Cooperators and any other appropriate partners.
F. Coordinate all prairie dog management activities as defined in the Reintroduction Plans with Cooperators and any other appropriate partners.
G. Support private landowner enrollment and participation in the Agreement.
H. Provide Cooperators with technical assistance in implementing conservation activities and monitoring to the maximum extent practicable as needed.
I. Ensure that any impacts to cultural and historic resources due to activities to be carried out under this Agreement are avoided or otherwise in compliance with Section 106 of the National Historic Preservation Act.
J. Coordinate monitoring described in the Section 9 of the Agreement and in Reintroduction Plans as applicable.
K. Provide annual monitoring report to the U.S. Fish and Wildlife Service Region 2 and Region 6 offices.
L. Address concerns of non-participating neighboring landowners by providing incidental take authorization equivalent to that provided to Cooperators.

10.2 Cooperator

A Cooperator agrees to:

A. Work cooperatively with the Permittee to develop a Reintroduction Plan acceptable to both Parties that includes all provisions identified in Appendix B.
B. Sign the Reintroduction Plan and Certificate of Inclusion enrolling the identified land under this Agreement and managing the land pursuant to the Reintroduction Plan. This will include cooperating with the reintroduction and management of black-footed ferrets, including disease management as described in the Reintroduction Plan, implementing any grazing activities as described in the Reintroduction Plan, and implementing and/or cooperating with the management of prairie dogs as described in the Reintroduction Plan.
C. Except as identified in 10.2 F and as required by law, allow access to the enrolled property with 30 days notice by the Permittee (or designee) for purposes related to this Agreement and associated Reintroduction Plan including, but not limited, to ferret reintroduction and monitoring, disease management, and prairie dog management, as described in the Reintroduction Plan.
D. Promptly report to the Permittee any dead, injured, or ill specimens of ferrets observed on the enrolled property. Notifications may be by letter, e-mail, or phone.
E. Complete annual questionnaire surveys provided by the Permittee (or designee) for information related to implementation of the Reintroduction Plan.
F. Notify the Permittee of any planned activity that the Cooperator reasonably anticipates may result in take of ferrets on the enrolled lands so that efforts to

recapture any animals can occur in the fall to the extent possible, when trapping success can be maximized.

G. Promptly notify the Permittee of any unexpected incidental take on the enrolled lands. This includes take that may result from conservation activities or other activities such as emergency maintenance. Notifications may be by letter, e-mail, or phone.

H. Notify the Permittee within 30 days of any transfer of ownership so that the Permittee can attempt to contact the new owner, explain the Agreement and related Certificate of Inclusion applicable to the enrolled lands, and invite the new owner to continue the existing Certificate of Inclusion or enter into a new one that would benefit listed species on the enrolled lands (enrollment of lands shall not constitute an encumbrance if the Cooperator sells or transfers these same lands, since the Cooperator may withdraw from the Agreement at any time).

10.3 Additional Partners

Additional partners may be necessary and beneficial to implementing the conservation activities identified in this Agreement. These partners may vary for each Reintroduction Plan developed including, but not limited to, any of the following: State wildlife agencies, Tribes, U.S. Fish and Wildlife Service Ecological Services Field Offices, Animal Plant Health Inspection Service/Wildlife Services, Natural Resources Conservation Service, U. S. Geological Survey, and various non-governmental organizations. The Permittee and Cooperator will mutually agree as to the participation of additional parties.

11.0 Changed Circumstances

Changed circumstances are changes affecting black-footed ferrets within the enrolled lands that can reasonably be anticipated and for which contingency plans can be made. These circumstances include, but are not limited to, drought, fire, disease, land use changes, and new species' listings under the Act within the Agreement plan area. These changes could impact the habitat and prairie dogs necessary for ferrets. Should alterations to the habitat occur, the following actions may be undertaken as necessary as described in Table 2. Should any of these circumstances occur, the Permittee will work with the Cooperator to address any issues that may have resulted in the loss of ferrets.

Table 2. Changed Circumstances

Changed Circumstance	Potential Effect to Black-Footed Ferrets	Proposed Response
Drought	Drought can limit forage quantity available for prairie dogs and livestock. Competition for this forage could limit prairie dog reproduction. Limited prairie dog reproduction could lead to limited food availability for ferrets.	Upon identification of a D2 or higher by the Drought Monitor and declaration by State Authorities, the Permittee will determine if adequate habitat is available on the enrolled lands for ferrets. If not, the Permittee may elect to trap any remaining ferrets for reintroduction elsewhere with adequate habitat. Landowner grazing activities will not be limited by the Permittee. Additional ferrets may be reintroduced to the enrolled lands after drought

		conditions have improved.
Fire	Direct effects of fire to ferrets or prairie dogs are unlikely as they can seek refuge within their burrows. However, fire can have short term impacts to the availability of forage for prairie dogs and therefore ferrets as discussed above.	Should a fire impact a significant portion of the enrolled lands, the Permittee will determine if adequate habitat is available on the enrolled lands for ferrets. If not, the Permittee may elect to trap any remaining ferrets for reintroduction elsewhere with adequate habitat. Additional ferrets may be reintroduced to the enrolled lands after enrolled lands have recovered from the fire.
Disease	There are a number of native and non-native diseases that can impact ferrets. Impacts occur both directly (death of ferret) or indirectly through the loss of their food source, prairie dogs.	In the case where disease other than plague is suspected to have impacted ferrets, the Permittee will coordinate efforts to identify the disease with U.S. Geological Survey's National Wildlife Health Lab and the appropriate State Agency that oversees wildlife disease outbreaks. Potential response to the disease could include trapping and relocating ferrets if adequate habitat exists elsewhere. If disease causes loss of all ferrets at a reintroduction site, additional ferrets may be reintroduced, if adequate habitat exists that is not impacted by disease.
Additional Land Uses	Changes in land use include, but are not limited to utility development (e.g., waterlines, power lines), energy development, and associated infrastructure. These changes could result in the incidental take of ferrets through vehicle collision and/or decreased availability of prairie dog habitat and prairie dogs for ferrets.	Any additional land uses proposed within the enrolled lands during the term of the Reintroduction Plan will be identified and reviewed by the parties to determine if the proposed use will decrease prairie dogs or ferret habitat. Any significant decreases in prairie dog habitat could be offset by adding prairie dog habitat contiguous with the Conservation Zone to achieve no net loss of adequate prairie dog habitat. If sufficient additional habitat does not exist, the Permittee may elect to trap any remaining ferrets for reintroduction elsewhere with adequate habitat.
Changed Circumstance	**Potential Effect to Black-Footed Ferrets**	**Proposed Response**
New Species Listings on Enrolled Lands	Conservation activities to benefit the black-footed ferret may have potential impacts to the newly listed species.	If a non-covered species that occurs within the Agreement area becomes a federally listed species, the Service will assess whether the implementation of the Agreement may affect such species. If implementation may result in incidental take of such species, the Service will work with the enrolled landowners to determine appropriate modifications to the Agreement's conservation activities to either avoid or minimize incidental take. If take cannot be avoided, the Service will determine whether amending the Agreement and permit would be necessary to cover such additional species through the Section 7 process. If the landowner wishes to conserve the species and receive assurances for that species, the Service and landowner would mutually amend the Reintroduction Plan to document the baseline conditions for the species; potentially modify or add conservation measures; and the Service would amend the Agreement, Biological Opinion, and any relevant National Environmental Policy Act documents while providing for required public comment. Any Cooperator may withdraw for the Agreement at any time.
Change in Ownership Interest	Withdrawal of Cooperator from Agreement and termination of Reintroduction Plan may result in loss of site, if the new landowner elects not to enroll in the Agreement	Coverage for incidental take for a new non-participating landowner will be maintained via the Biological Opinion, provided the former Cooperator notifies the Permittee and allows access to trap any remaining ferrets for reintroduction elsewhere.

12.0 Agreement Duration

The duration of this Agreement must be of sufficient time to realize a net conservation benefit to the black-footed ferret. As identified above, the principal conservation benefit of this Agreement will be the establishment of additional free-ranging ferret populations throughout their historical range. Successful reintroduction of ferrets can vary based on a number of factors that are not fully understood. Sometimes it may take several ferret releases over multiple years for a site to be considered successful such as occurred at Shirley Basin, Wyoming and Aubrey Valley, Arizona. Experience from past reintroduction efforts suggests that 10 years is sufficient time to accommodate several ferret releases, if necessary, as well as document reproduction and recruitment. Additional time beyond 10 years will extend these benefits by providing additional ferret generations exposure to wild conditions. In the event that offspring from these animals are translocated to other sites, it could increase the probability of survival of several separate populations. It will also provide additional protection against catastrophic events elsewhere throughout the range. We view a single release as a net conservation benefit inasmuch as history demonstrates that Parties to previous reintroduction sites have continued with their recovery efforts for several years after the initial reintroduction effort, and the presence of additional reintroduction sites throughout the range of the ferret provides redundancy and additional opportunities for the translocation of wild-born individuals to other suitable sites.

This Agreement and the Permit, described in section 10.0 A of this Agreement, become effective for 50 years from the date of signature of the Agreement by all relevant Parties and permit issuance by the Service. Reintroduction Plans developed pursuant to the Agreement will be for a term of at least 10 years and up to 40 years within the 50-year term of the Permit. A Certificate of Inclusion issued by the Permittee will extend incidental take coverage and assurances to the Cooperator for as long as the terms of the Agreement and Cooperator's Reintroduction Plan are upheld. Upon full implementation of the Reintroduction Plan, the Reintroduction Plan and Certificate of Inclusion may be extended or renewed with agreement by both Parties while maintaining the original agreed upon baseline. Non-participating landowners receive permanent incidental take coverage via the Biological Opinion developed in conjunction with issuance of the Permit. Cooperators become non-participating landowners if they withdraw from the Agreement.

13.0 Assurances to a Cooperator

Through each Certificate of Inclusion, the Service provides Cooperators with assurances that no additional conservation measures or restrictions on land, water, or resource use, beyond those agreed to in the Agreement and Reintroduction Plan, will be required of the Cooperator for the black-footed ferret. These assurances apply only where the Agreement and associated Certificate of Inclusion and Reintroduction Plan are being properly implemented. If additional conservation and mitigation measures are deemed necessary, the Service may request additional measures of the Cooperator, as applicable, but only if such measures are limited to modifications within the Conservation and Management Zones, if

any, for the ferret and maintain the original terms of the Agreement. However, where additional conservation measures might need to be implemented by Cooperators, the parties to this Agreement also recognize, in the spirit of the Agreement, that any such measures would be developed jointly and cooperatively by the Cooperator and the Service. Additional conservation measures will not involve the commitment of additional land, water, or financial compensation or additional restrictions on the use of land, water, or other natural resources otherwise available for development or use under the original terms of the Agreement without the consent of Cooperators, as applicable.

Each Certificate of Inclusion will convey authorization of incidental take of black-footed ferrets consistent with maintaining the baseline condition of zero ferrets as described in Section 6.0 and identified in a Reintroduction Plan with the following conditions:

A. When a Cooperator is implementing the conservation activities identified in Section 7.0 hereof and further defined in a Reintroduction Plan.
B. When a Cooperator is carrying out any legal activity, including but not limited to routine ranching and grazing, on or adjacent to the enrolled lands in concert with conservation activities identified in section 7.0 hereof and further defined in a Reintroduction Plan.
C. When a Cooperator is making any lawful use of Cooperator-owned non-enrolled lands that are adjacent to or in proximity of enrolled lands.
D. When a Cooperator is returning the lands to baseline at any time through otherwise lawful means.

14.0 Non-participating Neighboring Landowners

The Service recognizes that some landowners may be reluctant to participate in the Agreement due to concerns regarding non-participating neighbors' fear of liability under the Act should black-footed ferrets disperse onto their lands. Therefore, Safe Harbor Policy (64 FR 32717) provides for incidental take assurances to neighbors, whether or not they choose to participate in the Agreement. For the purposes of this Agreement, non-participating neighboring landowners are defined as any landowner, or any landowner interest (severed mineral estates associated with a Cooperator interest), within the vicinity of enrolled lands upon whose land ferrets may disperse and/or occupy as a result of ferret reintroductions. The Service will not enter into an Agreement with a willing landowner as a Cooperator without first considering the concerns of non-participating neighboring landowners.

Voluntary enrollment of Cooperators in the Agreement and implementation of conservation activities will result in the establishment of additional black-footed ferret populations on non-federal lands. Reintroduction of ferrets and subsequent successful breeding of reintroduced ferrets on the enrolled lands may result in an increase of these populations that would exceed the carrying capacity of the enrolled lands. As a result, ferrets could disperse onto non-participating neighboring properties in search of appropriate habitat. Because landowners of non-participating properties likely would not be implementing the conservation activities, particularly disease management, sufficient suitable habitat to

support ferrets may not be available; in which case, ferrets are unlikely to persist and establish additional populations on such lands. Therefore, loss of such individuals through incidental take would not result in adverse effects to any existing or reintroduced populations of the ferret.

Flexible regulatory assurances for non-participating neighboring landowners could contribute to increased enrollment by other landowners and ultimately increased conservation for the black-footed ferret by helping to maintain good relations with neighbors and by demonstrating that ferret reintroductions will not limit land use, except as agreed to by Cooperators. The Biological Opinion, pursuant to the intra-Service section 7 consultation under the Act on the issuance of the 10(a)(1)(A) Enhancement of Survival permit under this Agreement, will provide incidental take coverage to non-participating landowners should ferrets disperse to their lands. Non-participating neighboring landowners will not be subject to any land use restrictions. Except as authorized through a separate Enhancement of Survival permit or section 7 Biological Opinion for other activities with a Federal nexus, deliberate take of ferrets not related to an otherwise lawful activity would be prohibited.

15.0 Modifications

15.1 Modifications of the Agreement or Reintroduction Plans

Any party to this Agreement or associated Reintroduction Plans may propose modifications by providing written notice to the other parties explaining the proposed modification and the reasons for the modification. Approval of a modification will require the written consent of the Permittee and Cooperator and must be consistent with the assurances described in Section 13.0 of the Agreement. Any proposed modification to the Agreement or associated Reintroduction Plan will be considered effective as of the date that all affected Parties have agreed in writing to the modification.

15.2 Amendment of the Permit or Certificate of Inclusion

The 10(a)(1)(A) Enhancement of Survival Permit or any Certificate of Inclusion may be amended in accordance with all applicable legal requirements in force at the time of the amendment, including, but not limited to, the Act, National Environmental Policy Act, and Service permit regulations (50 CFR, Parts 13 and 17). A request for an amendment of the Permit or Certificate of Inclusion would require, at a minimum: a written explanation of why the amendment is needed; and an explanation of what, if any, effects the amendment would have on the black-footed ferret. An amendment to the Permit would require the Service to publish a notice in the *Federal Register* of a 30-day public comment period for the proposed amendment.

15.3 Early Termination of the Agreement

As provided for in Part 12 of the Service's Safe Harbor Policy (64 FR 32717), the Permittee may terminate the Agreement or an associated Reintroduction Plan, prior to its expiration date. In such circumstances, the Cooperator may return the enrolled lands to baseline

conditions even if the conservation activities identified in the Reintroduction Plan for the enrolled lands have not been fully implemented. Similarly, the Cooperator may terminate the Reintroduction Plan early. A Cooperator who withdraws from the Agreement would subsequently be regarded as a non-participating landowner interest who receives incidental take via the associated Biological Opinion, provided the Cooperator notifies the Permittee and allows the Service access to recapture ferrets during the following fall, prior to carrying out any otherwise lawful activity that may result in take of ferrets on enrolled lands, including a return to baseline. If a Cooperator fails to notify the Permittee regarding possible take or fails to provide access, coverage for incidental take will not be granted.

16.0 Permit Suspension or Revocation

The Service may suspend the privileges of exercising some or all of the permit authority at any time if the Permittee is not in compliance with the conditions of the permit, or with any applicable laws or regulations governing the conduct of the permitted activity. Such suspension shall remain in effect until the issuing officer determines that the Permittee has corrected the deficiencies.

The Service may not revoke the permit except as follows:

- The Service may revoke the permit for any reason set forth in 50 CFR 13.28(a)(1) through (4). This regulation authorizes revocation if:

  (1) the Permittee willfully violates any Federal or State statute or regulation, or any Indian tribal law or regulation, or any law or regulation of any foreign country, which involves a violation of the conditions of the permit or of the laws or regulations governing the permitted activity; or
  (2) the Permittee fails within 60 days to correct deficiencies that were the cause of a permit suspension; or
  (3) the Permittee becomes disqualified; or
  (4) a change occurs in the statute or regulation authorizing the permit that prohibits the continuation of a permit issued by the Service.

- The Service may also revoke the permit if continuation of the permitted activity would either:

  (1) appreciably reduce the likelihood of survival and recovery in the wild of any listed species; or
  (2) directly or indirectly alter designated critical habitat of any listed species such that it appreciably diminishes the value of that critical habitat for both the survival and recovery of that listed species. Critical habitat has not been designated for the black-footed ferret.

Before revoking a permit for either of the last two reasons, the Service, in coordination with the Permittee, will pursue all appropriate options to avoid permit revocation. These options may include, but are not limited to: extending or modifying the existing Permit, capturing and relocating the species, or in unusual cases compensating the landowner to forgo the activity, purchasing an easement or fee simple interest in the property, or arranging for a third party acquisition of an interest in the property.

17.0 Other Measures

A. Remedies. No party shall be liable in monetary damages for any breach of this Agreement, any performance or failure to perform an obligation under this Agreement, or any other cause of action arising from this Agreement.

B. Dispute Resolution. The Parties agree to work together in good faith to resolve any disputes using dispute resolution procedures agreed upon by all Parties.

C. Succession and Transfer. As provided in 50 CFR 13.25, if a Cooperator transfers his or her interest in the enrolled lands to another non-federal entity, the new owner has the option to accept the original Cooperator's responsibilities and assurances. If the new owner chooses to accept the original Cooperator's responsibilities and assurances, the Service will regard the new owner or manager as having the same rights and responsibilities with respect to the enrolled lands as the original Cooperator for the remainder of the term of the Agreement. If the new owner chooses not to participate in the Agreement and the activities described in the property's Reintroduction Plan, he or she will retain authorization for incidental take due to otherwise lawful activities via the Biological Opinion as a non-participating landowner, provided the Service is given an opportunity to trap ferrets currently on the property.

D. Availability of Funds. Implementation of this Agreement is subject to the requirement of the Anti-Deficiency Act and the availability of appropriated funds. Nothing in this Agreement will be construed by any Party to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury. The Parties acknowledge that the Service will not be required under the Agreement to expend any Federal agency's appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

E. No Third-Party Beneficiaries. This Agreement does not create any new right or interest in any member of the public as third-party beneficiary, nor shall it authorize anyone not a party to this Agreement to maintain a suit for personal injuries or damages pursuant to the provisions of this Agreement. The duties, obligations, and responsibilities of the Parties to this Agreement with respect to any third-Party shall remain as imposed under existing law.

F. Notices and Reports

Any notices and reports, including monitoring and annual reports required by this Agreement shall be delivered to the persons listed below, as appropriate:

Black-footed Recovery Coordinator
U.S. Fish and Wildlife Service
P.O. Box 190
Wellington, CO 80549
(970) 897-2730

Regional Director, Region 6
U.S. Fish and Wildlife Service
134 Union Blvd
Lakewood, Colorado 80228

Regional Director, Region 2
U.S. Fish and Wildlife Service
PO Box 1306
Albuquerque, New Mexico 87103-1306

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19.0 Signatures

In witness whereof, the Service hereto has executed this Safe Harbor Agreement to be in effect as of the date that the permit referenced in 8.0 above is issued.

10/23/13

Assistant Regional Director, Ecological Services **DATE**
Region 6, Denver
U.S. Fish and Wildlife Service

10/23/2013

Black-Footed Ferret Recovery Coordinator, **DATE**
U.S. Fish and Wildlife Service

Certificate of Inclusion
Black-footed Ferret Programmatic Safe Harbor Agreement
 # [ ]

This certifies that the lands described as follows [description of enrolled lands covered by the Safe Harbor permit] owned by [name of Cooperator] is included within the scope of Permit Number [TE000000], held by the U.S. Fish and Wildlife Service, Black-Footed Ferret Recovery Coordinator (Permittee), issued on [date] and expiring on [date] under the authority of section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended, 16 U.S.C. 1539(a)(1)(A). The Permit authorizes incidental take of black-footed ferrets from all lawful activities by participating landowners (Cooperators) as part of the Black-footed Ferret Programmatic Safe Harbor Agreement (Agreement) to reintroduce and establish new populations of the black-footed ferret. Pursuant to the Permit, this Certificate of Inclusion authorizes incidental take of the black-footed ferret that may result from any otherwise lawful activity on the above described lands, subject to the terms and conditions of the Permit, the Reintroduction Plan, and the Agreement. This Certificate of Inclusion becomes binding upon the Cooperator upon the date of the last signature below and continues for as long as the terms of this Agreement and the Reintroduction Plan are met. The attached Reintroduction Plan is incorporated as part of this Certificate of Inclusion for the enrolled lands.

It is understood that any ownership interest in these lands that is not addressed via an appropriate signature below (e.g., mineral interest) is not constrained by this agreement and will not be limited in any way from the exercise of such interests, except when related to the deliberate take of a listed species and any already extant legal obligations.

_____

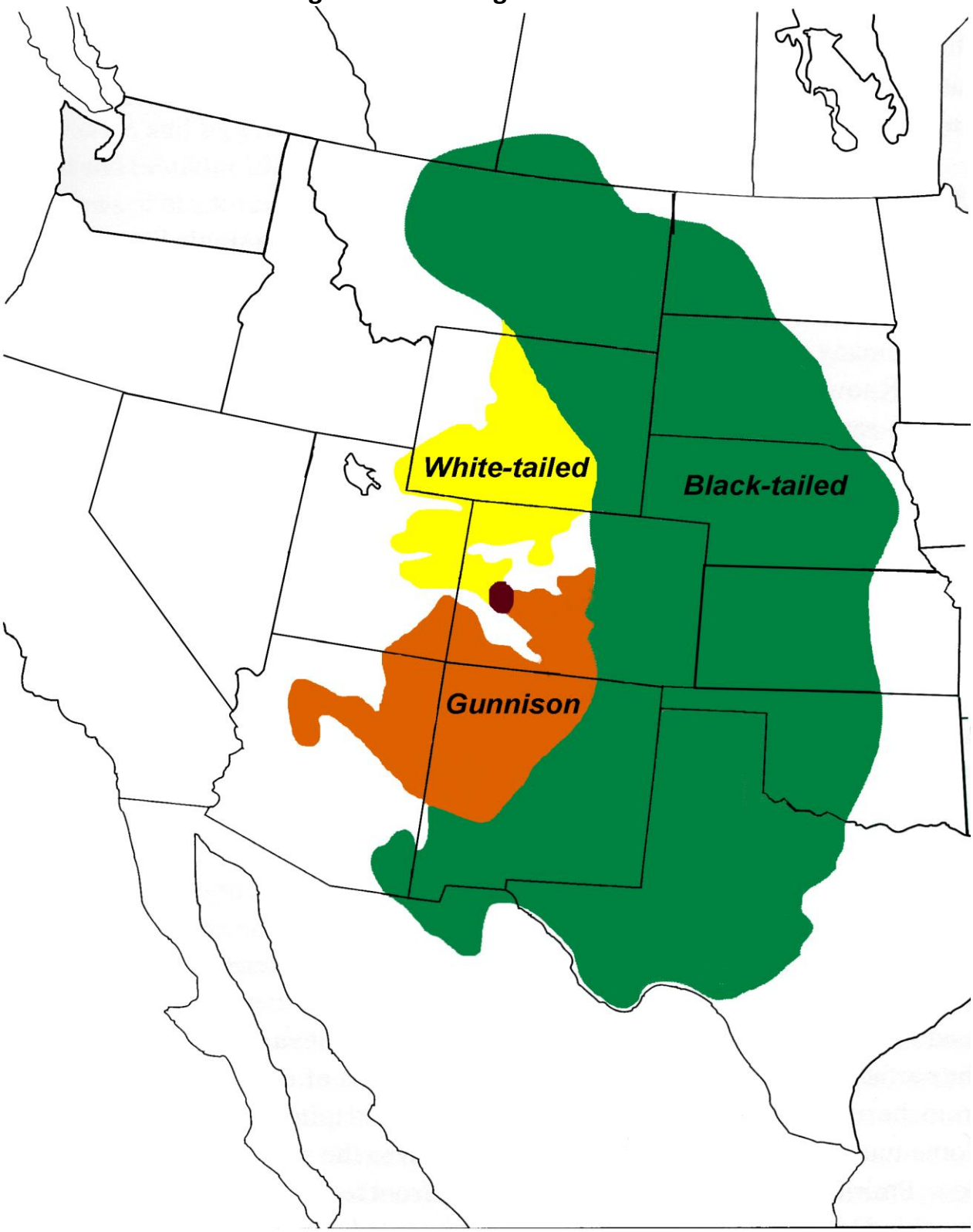
COOPERATOR **DATE**

_____

BLACK-FOOTED FERRET RECOVERY COORDINATOR **DATE**

APPENDIX A

Historical Range of Prairie Dogs and Black-footed Ferrets



APPENDIX B
Black-footed Ferret
Site-Specific Reintroduction Plan
TEMPLATE

Cooperators Name:

Insert Cooperator Name

Certificate of Inclusion (COI)#:

Insert COI #

1.0 Legal description and map of enrolled lands: *Include a written legal description and a map showing the Conservation Zone and the Management Zone as discussed in section 7.0 of the Safe Harbor Agreement.*

2.0 Baseline for the Covered Species: *Include the number of black-footed ferrets on the lands at time of enrollment (for the purposes of regulatory assurances, baseline is considered to be zero).*

3.0 Current land use: *Include a description of current grazing practices on the land such as what types of livestock, approximate stocking rates, and timing of grazing.*

4.0 Conservation Activities:

A. Black-footed Ferret Reintroduction and Management: Upon signature by all Parties, the enrolled lands will be eligible to receive black-footed ferrets. Reintroduction and management activities will be carried out by the Permittee (Black-footed Ferret Recovery Coordinator) or designee. Approximately 20 ferrets may be released annually within the Conservation Zone identified on the enrolled lands in the fall. This process will be undertaken over the course of 3 days. ***[Include additional specific information as necessary]*** You will be notified 30 days prior to release activities.*

B. Disease Management: Upon signature by all Parties, the enrolled lands will be eligible for disease management activities. These activities will be carried out by the Permittee or designee. Disease management activities may include applying approximately 5 grams of DeltaDust™ (MSDS attached) into prairie dog burrows within the Conservation Zone and the Management Zone. Dust is typically applied using ATVs or by foot depending on topography. Applications can take several days to several weeks depending on acreage treated and size of work crews. Alternatively, oral vaccine baits could be distributed from ATVs or possibly aerially onto a prairie dog colony no more than once per year after emergence of the young. ***[Include additional specific information as necessary]*** The Cooperator will be notified 30 day prior to any disease management activities.*

C. Prairie Dog Management: Upon signature by all Parties, the enrolled lands may be eligible to receive assistance in prairie dog management. This will be facilitated by the Permittee or designee and carried out by Wildlife Services or other designated party. Prairie dog management may include lethal control of prairie dogs only outside of the Conservation Zone where identified on the Reintroduction Plan map to keep specific lands free of prairie dogs. ***[Include additional specific information as necessary]*** The Cooperator will be notified 30 days prior to any prairie dog management activities.*

**All conservation activities will be coordinated with the Cooperator. Every effort will be made to minimize conflicts with Cooperator's use of the lands. Only in emergency situations will the Permittee request access in less than 30 days.*

5.0 Monitoring: Each Cooperator will be expected to respond to a questionnaire (Appendix E of the Agreement) provided to them by the Permittee on an annual basis regarding status of ferrets on the enrolled land and ongoing routine grazing and ranching activities. Spotlight surveys for black-footed ferrets will be coordinated by the Permittee (or designee) to determine the success of the ferret reintroduction. ***[Include a description of anticipated surveys to be conducted]***

6.0 Changed Circumstances:

Changed Circumstance	Potential Effect to Black-Footed Ferrets	Proposed Response
Drought	Drought can limit forage quantity available for prairie dogs and livestock. Competition for this forage could limit prairie dog reproduction. Limited prairie dog reproduction could lead to limited food availability for ferrets.	Upon identification of a D2 or higher by the Drought Monitor and declaration by State Authorities, the Permittee will determine if adequate habitat is available on the enrolled lands for ferrets. If not, the Permittee may elect to trap any remaining ferrets for reintroduction elsewhere with adequate habitat. Landowner grazing activities will not be limited by the Permittee. Additional ferrets may be reintroduced to the enrolled lands after drought conditions have improved.
Fire	Direct effects of fire to ferrets or prairie dogs are unlikely as they can seek refuge within their burrows. However, fire can have short term impacts to the availability of forage for prairie dogs and therefore ferrets as discussed above.	Should a fire impact greater than 50% of the enrolled lands, the Permittee will determine if adequate habitat is available on the enrolled lands for ferrets. If not, the Permittee may elect to trap any remaining ferrets for reintroduction elsewhere with adequate habitat. Additional ferrets may be reintroduced to the enrolled lands after enrolled lands have recovered from the fire.
Disease	There are a number of native and non-native diseases that can impact ferrets. Impacts occur both directly (death of ferret) or indirectly through the loss of their food source, prairie dogs.	In the case where disease other than plague is suspected to have impacted ferrets, the Permittee will coordinate efforts to identify the disease with U.S. Geological Survey's National Wildlife Health Lab and the appropriate State Agency that oversee wildlife disease outbreaks. Potential response to the disease could include trapping and relocating ferrets if adequate habitat exists elsewhere. If disease causes loss of all ferrets at a reintroduction site, additional ferrets may be reintroduced if adequate habitat exists that is not impacted by disease.
Additional Land Uses	Changes in land use include, but are not limited to utility development (e.g., waterlines, power lines), energy development, and associated infrastructure. These changes could result in the incidental take ferrets through vehicle collision and/or decrease available prairie dog habitat and prairie dogs available for ferrets.	Any additional land uses proposed within the enrolled lands during the term of the Reintroduction Plan will be identified and reviewed by the parties to determine if the proposed use will decrease prairie dogs or ferret habitat. Any significant decreases in prairie dog habitat could be offset by including additional prairie dog habitat contiguous with the Conservation Zone resulting in no net loss of adequate prairie dog habitat. If sufficient additional habitat does not exist, the Permittee may elect to trap any remaining ferrets for reintroduction elsewhere with adequate habitat.
New Species Listing on Enrolled Lands	Conservation activities to benefit the black-footed ferret may have potential impacts to the new species.	If a non-covered species that occurs within the Agreement area becomes a federally listed species, the Service will assess whether the implementation of the Agreement may affect such species. If implementation may result in incidental take of such species, the Service will work with the enrolled landowners to determine appropriate modifications to the Agreement's conservation activities to either avoid or minimize incidental take. If take cannot be avoided, the Service will determine whether amending the Agreement and permit would be necessary to cover such

		additional species through the Section 7 process. If the landowner wishes to conserve the species and receive assurances for that species, the Service and landowner would mutually amend the Reintroduction Plan to document the baseline conditions for the species; potentially modify or add conservation measures; and the Service would amend the Agreement, Biological Opinion, and any relevant National Environmental Policy Act documents while providing for required public comment. Any Cooperator may withdraw for the Agreement at any time.
Change in Ownership Interest	Withdrawal of Cooperator from Agreement and termination of Reintroduction Plan may result in loss of site.	Coverage for incidental take will be maintained via the Biological Opinion, provided the former Cooperator notifies the Permittee and allows access to trap any remaining ferrets for reintroduction elsewhere.

7.0 Reintroduction Plan Duration: The duration of this plan will be **[number]** years from the date of signature. The Certificate of Inclusion will be in effect for as long as the terms of this Agreement and the Reintroduction Plan are met.

8.0 Assurances to the Cooperator:

Provided that the Cooperator complies with the provisions outlined in the Reintroduction Plan developed for the enrolled lands, the Service assures that it will not impose conservation measures and restrictions for the ferret on the use of the Cooperator's land, water, or resources additional to those already agreed upon in the Safe Harbor Agreement and the Reintroduction Plan throughout the term of the Certificate of Inclusion. Furthermore, the Certificate of Inclusion will provide the Cooperator with incidental take coverage of the ferret consistent with maintaining the baseline conditions as described in Section 2.0 of this Reintroduction Plan with the following conditions:

A. When a Cooperator is implementing the conservation activities identified in Section 4.0 of this Reintroduction Plan.
B. When a Cooperator is carrying out any legal activity, including routine ranching and grazing, on or adjacent to the enrolled lands in concert with conservation activities identified in section 4.0 of this Reintroduction Plan.
C. When a Cooperator is making any lawful use of Cooperator-owned non-enrolled lands that are adjacent to or in proximity of enrolled lands.
D. When a Cooperator is returning the enrolled lands to baseline at any time through otherwise lawful means.

9.0 Modifications:

a. Reintroduction Plan: Any party to this Reintroduction Plan may propose modifications by providing written notice to the other parties explaining the proposed modification and the reasons for the modification. Approval of a modification will require the written consent of the Permittee and Cooperator and must be consistent with the assurances described in Section 8.0 of the

Reintroduction Plan. Any proposed modification to the Reintroduction Plan will be considered effective as of the date that all affected parties have agreed in writing to the modification.

b. Certificate of Inclusion: The Certificate of Inclusion may be amended by the Cooperator and/or the Permittee in accordance with all applicable legal requirements in force at the time of the amendment, including, but not limited to, the Act, National Environmental Policy Act, and Service permit regulations (50 CFR, Parts 13 and 17). A request for an amendment of the Permit or Certificate of Inclusion would require, at a minimum: a written explanation of why the amendment is needed; and an explanation of what, if any, effects the amendment would have on the black-footed ferret. An amendment to the Permit would require the Service to publish a notice in the *Federal Register* of a 30-day public comment period for the proposed amendment.

c. Early Termination of the Reintroduction Plan: As provided for in Part 12 of the Service's Safe Harbor Policy (64 FR 32717), the Permittee may terminate the Reintroduction Plan prior to the expiration date. In such circumstances, the Cooperator may return the enrolled lands to baseline conditions even if the conservation activities identified in the Reintroduction Plan for the enrolled lands have not been fully implemented. Similarly, the Cooperator may terminate the Reintroduction Plan early. A Cooperator who withdraws from the Agreement would subsequently be regarded as a non-participating landowner interest who receives incidental take via the associated Biological Opinion, provided the Cooperator notifies the Permittee and allows the Service access to recapture ferrets during the following fall, prior to carrying out any otherwise lawful activity that may result in take of ferrets on enrolled lands, including a return to baseline. If a Cooperator fails to notify the Permittee regarding possible take or fails to provide access, coverage for incidental take will not be granted.

10.0 Other Measures:

A. Remedies. No party shall be liable in monetary damages for any breach of this Reintroduction Plan (Plan), any performance or failure to perform an obligation under this Reintroduction Plan or any other cause of action arising from this Plan.

B. Dispute Resolution. The Parties agree to work together in good faith to resolve any disputes using dispute resolution procedures agreed upon by all Parties.

C. Succession and Transfer. As provided in 50 CFR 13.25, if a Cooperator transfers his or her interest in the enrolled lands to another non-federal entity, the new owner has the option to accept the original Cooperators responsibilities and assurances. If the new owner chooses to accept the original Cooperator's responsibilities and assurances, the Service will regard the new owner or manager as having the same rights and responsibilities with respect to the enrolled lands as the original

Cooperator for the remainder of the term of the agreement. If the new owner chooses not to participate in the Agreement and the activities described in the Reintroduction Plan, he or she will retain authorization for incidental take due to otherwise lawful activities via the Biological Opinion, provided the Service is given an opportunity to trap ferrets currently on the property.

D. Availability of Funds. Implementation of this Plan is subject to the requirement of the Anti-Deficiency Act and the availability of appropriated funds. Nothing in this Plan will be construed by the Parties to require the obligation, appropriation, or expenditure of any funds from the U.S. Treasury. The Parties acknowledge that the Service will not be required under the Plan to expend any federal agency's appropriated funds unless and until an authorized official of that agency affirmatively acts to commit to such expenditures as evidenced in writing.

E. No Third-Party Beneficiaries. This Plan does not create any new right or interest in any member of the public as third-party beneficiary, nor shall it authorize anyone not a party to this Plan to maintain a suit for personal injuries or damages pursuant to the provisions of this Plan. The duties, obligations, and responsibilities of the parties to this Plan with respect to any third-party shall remain as imposed under existing law.

F. Notices and Reports
Any notices and reports, including monitoring and annual reports required by this Agreement shall be delivered to the persons listed below, as appropriate:

Black-footed Recovery Coordinator
U.S. Fish and Wildlife Service
P.O. Box 190
Wellington, CO 80549
(970) 897-2730

11.0 Signatures:

_____

COOPERATOR **DATE**

_____

BLACK-FOOTED FERRET RECOVERY COORDINATOR **DATE**

APPENDIX C

Black-footed Ferret Recovery Guidelines by State (U.S. Fish and Wildlife Service 2013)

State	# Breeding adults established to date	# Adults/# acres to downlist	# Adults/# acres to delist
Arizona	33-38	74 adults/17,000 ac	148 adults/34,000 ac
Colorado	8	149 adults/29,000 ac	288 adults/58,000 ac
Kansas	7-19	123 adults/18,500 ac	246 adults/37,000 ac
Montana	7-10	147 adults/22,000 ac	294 adults/44,000 ac
Nebraska	0	134 adults/20,000 ac	268 adults/44,000 ac
New Mexico	3	220 adults/39,000 ac	440 adults/78,000 ac
North Dakota	0	38 adults/6,000 ac	76 adults/12,000 ac
Oklahoma	0	70 adults/10,500 ac	140 adults/21,000 ac
South Dakota	110-272	102 adults/15,000 ac	204 adults/30,000 ac
Texas	0	254 adults/38,000 ac	508 adults/76,000 ac
Utah	1-13	25 adults/6,000 ac	50 adults/12,000 ac
Wyoming	98-102	171 adults/35,000 ac	341 adults/70,000 ac
TOTAL	274-488	1,507 adults/256,000 ac	3,004 adults/512,000 ac

APPENDIX D

Annual Report to Cooperator by Permittee

Certificate of Inclusion #:	
Name:	
State:	
County:	
Date (covering past year):	

Conservation Activities

Date:	# Released		Black-footed Ferret Reintroductions *

Date:	# Acres Treated	Method	Disease Management

Date:	# Acres Treated	Method	Prairie Dog Management

***Note number of animals released and pertinent conditions at release**

APPENDIX E

Annual Report to Permittee by Cooperator

Questionnaire

Certificate of Inclusion #:	
Name:	
State:	
County:	
Date (covering past year):	
Ferrets	
1.	Have you seen ferrets or any sign of live ferrets? If so, give approximate location.
2.	Have you seen any dead ferrets? If so, how many? Please provide approximate location.
3.	Please describe what circumstances resulted in the dead ferret, if known.
Prairie Dogs	
4.	What changes have you noticed in prairie dog densities? Die-offs? If any, describe the extent of the die-off.
Grazing	
5.	Are you actively grazing the enrolled lands?
6.	Please describe any changes in your grazing practices in the past 12 months.
General	
7.	Has the reintroduction of ferrets caused any hardship to your operation? If so, please describe.
8.	Other comments or suggestions

APPENDIX F

Black-footed Ferret Recovery Implementation Team – Executive Committee as of 2012.	
Position	**Agency**
Chair	Texas Parks and Wildlife Department
Vice Chair	U.S. Fish and Wildlife Service
Past Chair	Wyoming Game and Fish Department
Coordinator	U.S. Fish and Wildlife Service
Member – State	Arizona Game and Fish Department
Member – State	Colorado Parks and Wildlife Department
Member – State	Kansas Department of Wildlife, Parks, and Tourism
Member – State	Montana Department of Fish, Wildlife and Parks
Member – State	Nebraska Game and Parks Commission
Member – State	New Mexico Department of Game and Fish
Member – State	North Dakota Game and Fish Department
Member – State	Oklahoma Department of Wildlife Conservation
Member – State	South Dakota Department of Game Fish & Parks
Member – State	Utah Division of Wildlife Resources
Member – Federal	U.S. APHIS - WS
Member – Federal	U.S. Bureau of Indian Affairs
Member – Federal	U.S. Bureau of Land Management
Member – Federal	U.S. Forest Service
Member – Federal	U.S. Geological Survey
Member – Federal	National Park Service
Member – Federal	Natural Resources Conservation Service
Member – Tribe	Cheyenne River Sioux Tribe
Member – Tribe	Gros Ventre & Assiniboine Tribe
Member – Tribe	Lower Brule Sioux Tribe
Member – Tribe	Northern Cheyenne Tribe
Member – Tribe	Rosebud Sioux Tribe
Member – Tribe	Navajo Nation
Member – International	Grasslands National Park of Canada
Member – International	Universidad Autonoma Matropolitana Mexico
Member – NGO	Audubon of Kansas
Member – NGO	American Zoo & Aquarium Association

Position	Agency
Member – NGO	Defenders of Wildlife
Member – NGO	National Wildlife Federation
Member – NGO	Prairie Wildlife Research
Member – NGO	The Nature Conservancy
Member – NGO	Turner Endangered Species Fund
Member – NGO	World Wildlife Fund
Member – NGO	National Fish and Wildlife Foundation

Attachment C

Logan County, Kansas

Black-Tailed Prairie Dog Health, Safety
and
Management Plan.

February 5, 2021

Black-Tailed Prairie Dog
Health, Safety and Management Plan

Prepared for:
Logan Board of County Commissioners
Logan County, Kansas
710 W. 2nd
Oakley, KS 67748

"Complex Problems Solved Well"

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January, 2021

Logan County, Kansas
Black-Tailed Prairie Dog Health, Safety, and Management Plan

I. Introduction; Authorities -

Kansas statutes and administrative rules delegate to county commissions and township trustees (responsible local governments, (RLG)) the authority to effect control of black-tailed prairie dog (BTPD) colonies and other nuisance wildlife populations on public and private lands. Uncontrolled BTPD populations can pose hazards to infrastructure and livestock, damage rangeland, and are susceptible to plague, which can be transmitted to humans through host animals containing the bacteria *Yersinia pestis*. Recent, peer reviewed government publications document the potential for *Yersinia pestis* to be transmitted to humans through contact from fleas propagating from host animals such as BTPDs and Black-footed ferrets[1] (Attachment B).

Should a landowner be unable or unwilling to comply with the statutory BTPD population control mandate, RLGs have the delegated authority to enter the landowner's property and control nuisance BTPD populations. The range of RLG authority includes the ability to regulate control methodology and toxicants; to assess costs for management of BTPD populations; and, to effect property liens upon individual landholders who do not fulfill their responsibilities to eradicate propagating or nuisance BTPD and wildlife populations.

While most landowners fulfill their responsibilities, Logan County recognizes there may be occasions when a landowner is unable or unwilling to perform the BTPD management tasks. When this situation occurs, Kansas statutes provide that the RLG may render notification and enter a property for purposes of conducting the necessary BTPD control actions.

Recognizing the importance of control activities, and with deference to federal and state law and affected landholder prerogatives, this Black-Tailed Prairie Dog Health, Safety, and Management Plan (HSMP) provides standards, protocols, and notification requirements to effect control of BTPDs on public and private property.

Federal agencies and RLGs have identified the effectiveness and safety of Rozol® Prairie Dog Bait in controlling BTPD populations while protecting the human and natural environments and non-target wildlife. Statutes, regulations, and government documents that were reviewed or incorporated in this HSMP include:

- *Final Biological Opinion for Rozol Use on Black-tailed Prairie Dogs Registered Under Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act*. US Fish and Wildlife Service (FWS). Michael Thabault, Assistant Regional Director. April 9, 2012.[2,3]

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[1] Abbot, R.C., and Rocke, T.E. 2012, *Plague: U.S. Geological Survey Circular 1372*, 79 p.

[2] *Final Biological Opinion for Rozol Use on Black-tailed Prairie Dogs Registered Under Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act*.

[3] *Federal Insecticide, Fungicide and Rodenticide Act, Section 3, codified as 7 U.S.C. §136a Registration of Pesticides*.

- *Chlorophacinone - Human Health and Ecological Risk Assessment - Final Report.*[4] Prepared by Syracuse Environmental Research Associates, Inc. for the U.S. Forest Service (USFS) Forest Health Technology Enterprise Team dated July 31, 2015.
- K.S.A. 19 § 212 et seq. *Powers of County Commissioners*.
- K.S.A. 80 §1201 et seq. *Destruction of prairie dogs, moles and gophers.*[5]
- K.A.R. § 115-16-2 *Prairie dog control permit; application and requirements.*[6]
- Rozol® Prairie Dog Bait (EPA Registration Number 7173-286, EPA Establishment Number 7173-WI-1) product label.[7]
- Rozol® Prairie Dog Bait safety data sheet for hazardous ingredient chlorophacinone (CAS Registry Number 3691-35-8) 0.005%.[8]
- EPA *Carcass Search & Recovery Guidelines for Black Tailed Prairie Dogs.*[9]

II. Purpose; Reasonable and Prudent Measures; Scope -

The Logan County HSMP guides the activities of RLGs for controlling or eradicating BTPD populations through the performance of reasonable and prudent measures (RPMs) and best management practices (BMPs). This plan is consistent with or exceeds the regulatory requirements and practices found in the 2012 FWS Biological Opinion; EPA requirements and guidance; the Rozol product label; the product material safety data sheet; and, Kansas law.

Because Rozol® is an effective and safe toxicant for use in managing BTPD populations, it is the preferred and approved chemical for use in Logan County. This HSMP is specific to the use of Rozol® Prairie Dog Bait. The federal and state public record indicates that when Rozol® is applied under controlled conditions and RPM/BMP are employed, it is an effective and safe toxicant that poses - according to federal agencies - minimal risk to applicators, non-target wildlife, and the natural environment.

In the USFWS Biological Opinion, there are three (3) listed species of concern regarding incidental take. Those species are the Black-footed ferret, the Gray Wolf, and the Northern Aplomado Falcon. Kansas is outside their critical habitat areas for either the falcon or the wolf, so incidental take of either species within the state appears unlikely. An experimental Black-footed ferret introduction site does occur in Logan County, and this HSMP provides adequate and sufficient considerations to ensure ongoing protection for introduced or naturally occurring Black-footed ferrets within the management and control areas at that site.

With respect to the Black-footed ferrets, the USFWS Biological Opinion states in the *"effect of take"* section that:

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4 *Chlorophacinone - Human Health and Ecological Risk Assessment - Final Report*.

5 K.S.A. 80-1201 et seq. *Destruction of prairie dogs, moles and gophers; expense from general fund.*

6 K.A.R. § 115-16-2 *Prairie dog control permit; application and requirements*.

7 Rozol® Prairie Dog Bait (EPA Registration Number 7173-286, EPA Establishment Number 7173-WI-1) product label.

8 Rozol® Prairie Dog Bait safety data sheet for hazardous ingredient chlorophacinone (CAS Registry Number 3691-35-8) 0.005%.

9 EPA *Carcass Search & Recovery Guidelines for Black Tailed Prairie Dogs*.

> "*Rozol® use is not likely to jeopardize the continued existence of the species or materially affect black-footed ferret recovery because individuals dispersing from reintroduction sites are not known to regularly return and contribute further to ferret recovery*.[10]"

And,

> *"Because the expected mortalities are likely to be dispersing black-footed ferrets that are unlikely to contribute to the success of the reintroduction sites, such losses are not anticipated to compromise the survival and recovery of the black-footed ferret.*[11]*"*

Currently, there are two Pesticide Use Limitation Areas (PULAs) within Logan County associated with introduced populations of Black-footed ferrets. BTPD populations within the PULA areas will not be treated by Logan County with Rozol,® or any unapproved toxicants or methods. PULAs are mapped and are documented by the area's monthly Endangered Species Protection Bulletin.[12] These bulletins are generated using the online EPA *Endangered Species Bulletins Live! Two* interactive system and must be obtained as part of the application process.[13] Attachment C contains an example of a recent PULA bulletin.

For purposes of this HSMP, Logan County has chosen not to conduct BTPD control activities along county roads, ditches, rights-of-way or similar areas under its jurisdiction that are incorporated within EPA-designated PULAs. Logan county reserves the right to amend this HSMP to incorporate roads or rights-of-way within PULAs areas at any time.

In fulfilling their responsibility to control BTPD populations, including propagation or impact to neighboring properties, landholders may investigate and use other demonstrated BTPD toxicants or control methods such as zinc phosphide, diphacinone, or poison gases (fumigants). In Logan County, the use of alternative toxicants requires submission of a site-specific, BTPD Control and Monitoring Plan (CMP) for RLG approval, and may require additional permits, training, state or federal certification(s), personal protection equipment (PPE), and/or special handling of prairie dog carcasses to prevent harm to non-target species, human health, or other adverse environmental consequences.

The use of alternate BTPD control methods such as trapping, physical barriers, or similar unproven BTPD control methods also requires submission of a BTPD CMP for RLG review and approval. The proposed CMP must contain a **control equivalency demonstration** that the proposed BTPD control method will achieve a similar or greater level of effectiveness to the use of Rozol. The CMP must include peer reviewed scientific article(s), a site-specific, baseline study and map of BTPD infestations, a schedule of compliance, and a BTPD quality assurance, quality control (QA/QC) plan to effect eradication.

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[10] *Final Biological Opinion for Rozol Use on Black-tailed Prairie Dogs Registered Under Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act, Effect of Take* Page 89.

[11] Ibid.

[12] Sample *Endangered Species Protection Bulletin* for the month of February 2021.

[13] EPA *Endangered Species Live! Two* online interactive *Endangered Species Protection Bulletin* generation system.

III. Logan County Black-Tailed Prairie Dog Health, Safety, and Management Plan -

Kansas law[14] requires that landowners control populations of prairie dogs on their property. The statute was enacted in 1909, replacing L. 1903, chapter 378 § 1 at a time when county-wide travel was challenging, and primary responsibility for BTPD control was assigned to trustees of sub jurisdictions within the county.

Key mandates and provisions of the statute include:[15]

- Enforcement of the K.S.A. 80 § 1202 is not discretionary on the part of RLGs. K.S.A. 80 §1208[16] provides that RLGs failing to perform duties imposed under the act may be guilty of a misdemeanor and the individual commissioners or trustees fined accordingly.[17]
- The RLGs are authorized to purchase poison and such appliances and material as is necessary to control BTPD populations.
- The RLGs may offer or provide materials for controlling BTPDs to landowners who are licensed applicators for the purpose of controlling BTPD populations on their properties.
- The RLG will provide written notice reminding non-compliant landowners of their BTPD control obligations under the statute, affording them an opportunity to obtain chemicals and comply prior to the date stated in the notice. Should landowners fail to take measures to effect control of BTPD populations on their property, the RLG will enter their property after 15 days from the notice to perform BTPD control measures.
- After the RLG conducts and monitors the BTPD control activities, the landowner will be sent an itemized statement of the associated costs, with payment due no later than 30 days after the date of the notice. Unless the amount is paid within 30 days from the date of the notice, the invoiced amount will become a lien on the property. If the invoice is not paid in full within another 30 days, invoiced amount will be assessed against the property, and the clerk will certify the costs of the BTPD control at the time of certifying other taxes.

Visual identification and monitoring of infested properties.

During their travels through the county, RLG employees should, without entering private properties, visually identify those private and public property parcels that demonstrate BTPD infestation. This information should be forwarded to the RLG who is responsible for BTPD control.

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14 K.S.A. 80-1202 *Eradication of prairie dogs; duties of township trustee; entry upon land, exception; assessment of costs*.

15 Substitute "county" for "township" for any township having MOA with the County to conduct prairie dog control on its behalf.

16 K.S.A. 80-1208 *Same; penalty for failure to perform duties*.

17 The fine is mandated in K.S.A. § 80-1208, and was added to the chapter in 1923 in the amount of not less than $50.00 nor exceeding $100.00 for each offense, substantial amounts for the time. (The U.S. Bureau of Labor Statistics CPI Inflation Calculator sets the current value of the 1923 $50.00 at $775.22 and the 1923 $100.00 at $1,550.44 as of December 2020.)

Procurement of prairie dog population control materials.

Counties should procure prairie dog population control materials in sufficient quantity to adequately perform control of the populations within the county. BTPD materials should be ordered so that they will be inventoried and stocked at least one month prior to the October 1 - March 15 BTPD control window.

BTPD control materials should be stored in their original containers in an entry-controlled storage area that allows limited and/or controlled access. Chemical should be stored in a cool, dry area out of reach of children, pets, and other domestic animals. Do not contaminate chemicals with water, food, or feed. Keep containers tightly closed. Do not remove or destroy product labels.

Prior notice published in the county newspaper of record.

Annual notification of landowner BTPD control obligations under Kansas law should be considered by the county at the beginning of the BTPD management season. Because Rozol® Prairie Dog Bait is Logan County's adopted chemical of choice for BTPD control, this notice could take place in early-to-mid September for the October 1 to March 15 treatment window. Upon publication the county's landowners are presumed to have been informed of their obligations under the statute.

Controlled properties. Controlled properties are those where landowners effect control of BTPD populations located on their properties within the timeframe associated with the control measures being used. The information in this section is for applicators, landowners, and RLG officials.

Uncontrolled properties. Uncontrolled properties are those where landowners are either unable or unwilling to provide effective control of BTPD populations on their properties.

Notification of non-compliant landowners.

Identification of non-compliant properties should be complete before the end of November of each year.

The fifteen (15) day, written notification should be made to non-compliant landowners by certified mail or service by the county Sheriff during or before the first week of December, with compliance requested by December 31. The notification should contain specific parcel information and remind landholders of their responsibility to comply with BTPD control statutes, the availability and location of chemicals, and this HSMP.

Failure to accept, receive or comply with the first notification could result in a second, courtesy notice at the discretion of the RLG. The courtesy notice could include a statement indicating that failure to comply with the statutory mandates will result in entry upon the property by the RLG, to take place on a specific date or time frame.

The fifteen-day notification should include a statement of risks posed to children, pets and livestock during the Rozol treatment and post-treatment period, and a statement that if animals or livestock are present upon arrival the RLG or county sheriff has the authority to obtain a court order, remove and impound the livestock, and levy the charges against the parcel and landowner.

The notice should include a statement that, according to federal law, the landowners should not introduce livestock or other domestic animals upon a Rozol treated parcel for a period of not less than fourteen (14) days following the last day of which control treatment has taken place - and to do so could jeopardize the livestock or violate federal law.

Information to be understood before Rozol® Prairie Dog Bait application-

Rozol® Prairie Dog Bait is a restricted use pesticide due to potential hazards to non-target species. Rozol® is offered for retail sale to and for use by certified applicators or persons under their direct supervision, and only for those uses covered by the certified applicator's certification. It is a violation of federal law to use Rozol® in a manner inconsistent with its labeling.

Applicators must understand the label before use and follow all use directions and precautions.

Rozol® Prairie Dog Bait consists of solid particles, green in color, with a raw grain odor. Its active ingredient is an anticoagulant, chlorophacinone 0.005% (CAS registry no. 3691-35-8). The product is 99.995% inert ingredients. It is an approved toxicant for use on an control of BTPD populations.

- *Hazard identification:*
  - **Hazard class:** Specific Target Organ Toxicity (Single exposure), Category 2; Specific Target Organ Toxicity (Repeated exposure), Category 2.
  - **Warning**: May cause damage to blood and reduce the clotting ability of blood if swallowed, inhaled or absorbed through the skin. Do not breathe dust. Do not eat, drink, or smoke when using the product. Wash hands thoroughly after handling. If exposed or if you feel unwell, call a poison control center or doctor. Dispose of container and contents according to instructions on the product label. Store locked up.
  - Keep away from children, domestic animals and pets. Do not get in eyes, on skin or on clothing.
- *Exposure controls:*
  - **Precautions for safe handling***:* Read the entire product label before using Rozol® Prairie Dog Bait.
  - **Conditions for safe storage:** Store in original container in a cool, dry area out of reach of children, pets, and domestic animals. Do not contaminate water, food, or feed. Keep container tightly closed. Do not remove or destroy the product label.

- *PPE requirement:*
  - **Clothing:** All handlers (including applicators) must wear shoes, socks, and gloves. Any person who retrieves carcasses or unused bait following application of the product must wear gloves.
  - **User safety requirements**: Remove PPE immediately after handling the product. Wash the outside of gloves before removing. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco, or using the toilet and change into clean clothing.
- *Emergency response measures:*[18]
  - **Fire-fighting measures:**
    - *Extinguishing media:* Use media suitable for the surrounding fire.
    - *Specific fire or explosion hazards:* None known.
    - *Special cautions for firefighters:* Wear self-contained breathing apparatus (full facepiece) and full protective clothing. Contain runoff to prevent pollution.
  - **Accidental release measures:**
    - *Precautions, PPE, and procedures:* Wearing PPE as specified above, isolate and contain spill. Limit access to spill area to necessary personnel. Do not allow spilled material to enter sewers, streams, or other waters.
    - *Methods and materials:* Scoop up spilled material and place in a closed, labeled container for use according to label instructions or disposal.
  - **Toxicological information:**
    - *Likely routes of exposure:* Ingestion, skin absorption.
    - *Symptoms of toxicity:* Lethargy, loss of appetite, reduced clotting ability of blood, and bleeding.
  - **First aid measures:** Have label available when obtaining treatment advice.
    - *If swallowed:* Call a poison control center at **(800) 222-1222** or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.

[18] Rozol® Prairie Dog Bait safety data sheet for hazardous ingredient chlorophacinone (CAS Registry Number 3691-35-8) 0.005%.

- *If on skin:* Take off contaminated clothing. Rinse skin with plenty of cool water for 15 to 20 minutes. Call a poison control center **(800) 222-1222** or doctor for treatment advice.
- *Note to physician:* Contains chlorophacinone, an anticoagulant. If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. For humans that have ingested this product and/or have obvious poisoning symptoms (bleeding or prolonged prothrombin times), give Vitamin K_1 intramuscularly or orally.

- **Treatment for livestock or pet poisoning:**
  - If animal eats bait, call veterinarian at once.
  - *Note to veterinarian:* contains chlorophacinone, an anticoagulant. If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. For animals that have ingested this product and/or have obvious poisoning symptoms (bleeding or prolonged prothrombin times), give Vitamin K_1 intramuscularly or orally.

- *Non-target Wildlife Protection:*
  - **Ecological hazards**: Rozol® is toxic to fish and wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they consume whole animals that have eaten the bait. Do not apply directly to water, or to areas where surface water is present. Do not contaminate water when cleaning equipment or disposing of wastes. Runoff may be hazardous to aquatic organisms and water adjacent to treated areas.
  - **Endangered species:** It is a federal offense to use any pesticide in a manner that results in the death of an endangered species. Use of Rozol® may pose a hazard to endangered or threatened species. When using the product, users are to obtain and follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. To obtain bulletins no more than six months before using this product consult http://www.epa.gov/espp/ or call **(844) 447-3813**. Applicators must use the bulletin valid for the location and the month in which Rozol® will be applied and an example is found in Attachment C.

- *Preventing non-target wildlife exposure to Rozol®:*
  - The use of Rozol® is prohibited within current black-footed ferret introduction sites and where a previously unknown population is found. See map in Appendix A.
  - If an applicator becomes aware that a black-footed ferret is known to occupy a BTPD colony outside of an introduction area, Rozol® Prairie Dog Bait cannot be used on that colony until the individual or individuals have been relocated.

- Post-treatment removal of all BTPD carcasses and impaired or moribund prairie dogs is required per label instructions.

- If live black-footed ferrets are found outside introduction sites, before, during or after Rozol® Prairie Dog Bait application, the Black-footed Ferret Coordinator must be contacted immediately, and sufficient time must be allowed for the FWS to capture and relocate the black-footed ferret(s) before Rozol® Prairie Dog Bait application.

Application -

- Prior to application, carefully read ***all*** instructions on the product label. When using Rozol® Prairie Dog Bait, carefully adhere to all precautions and instructions on the label.
- For use only for BTPD control whole.
- *Do not allow non-applicators, livestock, or other domestic animals in the area where Rozol® is being applied.*
  - Remove any livestock or other domestic animals from the prior to the scheduled treatment.
- *Treatment period* - Apply between October 1 and March 15 of the following year when animals will most readily take the grain bait.
- *Application method* -
  - Ensure no non-applicator individuals, livestock, or other domestic animals are present in the immediate area to be treated, prior to application.
  - Before applying Rozol®, identify BTPD burrows by visual observation. The openings of active burrows should generally be free of leaves, seeds, other debris, or spiderwebs, will show freshly turned earth, and have prairie dog feces nearby.
  - **Apply 1/4 cup (53 grams or nearly 2 ounces) of bait at least 6 inches** down active prairie dog burrows.
  - Ensure bait is not left on the soil surface at the time of application.
  - Applicator must retrieve and dispose of any bait that is spilled above ground or placed less than 6 inches down the burrow entrance.
- Do not use other rodenticides containing anticoagulants on BTPD towns during the Rozol® treatment period.

Following application, immediately remove PPE -

- Wash the outside of gloves before removing.
- Remove PPE and change into clean clothing.

- Place the used PPE in a bag and keep separate from other clothing.
- Wash and dry PPE separately from other laundry. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water.

Post-application grazing restriction -

- Do not allow livestock to graze on treated areas for a minimum of 14 days after treatment and when no bait is found above ground.

Post-application follow-up requirements -

Prairie dogs that have consumed Rozol® will begin to die 4 to 5 days after they eat a lethal amount.

- Applicators must return to the site within four days of treatment and at 1–2-day intervals to collect and dispose of dead or dying prairie dogs found on the surface.
    - Carcass searches must be performed using a line-transect method that completely covers the baited area.[19]
    - Transect centerlines must be not more than 200 feet (about 60 meters) apart and should be considerably less if searches are conducted on more densely vegetated sites.
    - Transect lines may be traveled on foot or by vehicle at a rate not to exceed 4 mph.
    - All carcasses found above ground must be collected and disposed of properly.
    - Continue to collect and dispose of dead or dying prairie dogs and search for non-target animals for at least two weeks, but longer if carcasses are still being found at that time.
    - Carcass collection should occur in late afternoon, near sundown, to reduce the potential of nocturnal animals finding carcasses and dying animals.
    - Bury carcasses on site in holes dug at least 18 inches deep or in inactive burrows (no longer being used by prairie dogs or other species) to avoid non-target animal scavenging. Burial includes covering and packing the hole or burrow with soil.
    - If burial is not practical (due to frozen ground, etc.) and other disposal methods are allowed by state and local authorities, collected carcasses may be disposed of by other methods to ensure that the carcasses are inaccessible to scavengers.

[19] *Carcass Search & Recovery Guidelines for Black Tailed Prairie Dogs* U.S. Environmental Protection Agency, Updated June 15, 2017.

Reporting inadvertent non-target wildlife impacts -

- All dead or dying non-target animals must be reported to the National Pesticide Information Center **(800) 858-7378** as soon as practicable.
- Any apparently injured or sick federally listed species must also be immediately reported by calling (**303) 236-7540** or (**505) 248-7889**.
  - Upon locating dead, injured, or sick federally listed species, the animal must be left in place, photographed if possible, and immediately reported to one of the FWS numbers provided on the product label.
  - Sick or injured animals **must be picked up and transported only by authorized individuals** to a permitted local wildlife rehabilitation or veterinary facility for treatment.
- If Black-footed ferrets are found during carcass searches, the Black-footed Ferret Coordinator must be contacted at **(970) 897-2730, extension 224**.

Reapplication -

- If BTPD activity persists several weeks or months after application, a second application may be made. Follow all site assessment, application and follow-up requirements and use restrictions as printed on the label.

Certification, documentation, and record-keeping.

All applicators must carry evidence of their certification for the application of Rozol® Prairie Dog Bait for control of BTPD populations on their persons during all activities related to use of the toxicant for that purpose.

All activities related to the control of BTPD populations in Logan County must be documented in sufficient detail to provide a complete record of all activities related to the control of BTPD within the county.

RLG shall keep all records related to activities and materials related to BTPD control in Logan County for such periods required or recommended by RLG, state, and federal authorities.

Use of Alternative BTPD Control Measures; Submission of a CMP.

The use of alternate BTPD control methods such as trapping, physical barriers, or similar unproven BTPD control methods requires submission of a BTPD **Control and Monitoring Plan** (CMP) for RLG review and approval. The proposed CMP must contain a **control equivalency demonstration** that the proposed BTPD control method will achieve a similar or greater level of effectiveness to the use of Rozol. The CMP must include peer reviewed scientific article(s), a site-specific, baseline study and map of BTPD infestations, a schedule of compliance, and a BTPD quality assurance, quality control (QA/QC) plan to effect eradication.

If the CMP indicates the intent to use poison gas or smoke for the purpose of controlling the BTPD population, the proposing landowner shall apply and be approved for the permit required by K.S.A. § 115-16-2[20] to use such materials.

If the RLG determines that the CMP will achieve the BTPD control equivalency demonstration and fulfill the intent of this plan, the RLG may approve the site-specific CMP.

Regulatory information:

- **TSCA:** All components of this product are listed on the TSCA inventory.
- **SARA section 313:** Contains no reportable components.
- **CA Proposition 65:** Contains no substances subject to Prop 65 requirements.
- **FIFRA:** This product is registered as a pesticide with the U.S. Environmental Protection Agency. The label requirements under Federal pesticide law differ from the classification criteria and hazard information required by OSHA on the safety data sheet. Read and follow all cautions, directions and use restrictions on the product label on the container.

[20] K.A.R. § 115-16-2 *Prairie dog control permit; application and requirements*.

Attachment A

(In pertinent part)

Biological Opinion for Rozol Use on Black-tailed Prairie Dogs Registered Under Section 3 of the Federal Insecticide, Fungicide and Rodenticide Act.
US Fish and Wildlife Service (FWS). Michael Thabault, Assistant Regional Director.
April 9, 2012.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

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APR 09 2012

Ms. Anita Pease
U.S. Environmental Protection Agency
Office of Pesticide Programs, Ariel Rios Bldg.
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

Dear Ms. Pease:

This document transmits the U.S. Fish and Wildlife Service's (FWS') final Biological Opinion (BO) for the proposed use of Rozol® Prairie Dog Bait, a product registered under the Federal Insecticide, Fungicide and Rodenticide Act of 1947, as amended (7 U.S.C. §136 et seq.).

The Environmental Protection Agency (EPA) determined that 21 federally listed could be adversely affected by the proposed action and initiated formal Section 7 consultation with the Service (EPA 2010b). The formal consultation process revealed that adverse effects for numerous federally listed species are not anticipated and adverse impacts to other listed species have been minimized or eliminated as a result of the EPA's adoption of conservation measures.

Incidental take is anticipated to occur as a result of the proposed action for the black-footed ferret, gray wolf, and northern aplomado falcon and is addressed in the Incidental Take Statements (ITS). The ITS contains nondiscretionary Reasonable and Prudent Measures (RPMs) with implementing Terms and Conditions (TCs) designed to reduce the potential for take of the black-footed ferret, gray wolf, and northern aplomado falcon. Among the RPMs and TCs are monitoring and reporting requirements necessary to determine if the RPMs and TCs are functioning as intended, whether take is exceeded, or if unanticipated take of other listed species occurs. Please see the Reinitiation Notice near the end of the document for additional information about reinitiation.

The Service and other conservation organizations have previously expressed many concerns to the EPA regarding use of anticoagulant prairie dog rodenticides and the subsequent exposure and adverse effects to wildlife (Nebraska Game and Parks Commission 2006; Koch 2008; Lanka 2009; Lloyd 2009; Mann 2009a, 2009b; Service 2006a, 2006e, 2007c, 2009h). The Service and States, as natural resource trustees, are directed to protect wildlife, as is the EPA under their authorities for pesticide use and registration. This BO identifies measures and actions that can reduce and mitigate potentially harmful exposures to species federally listed under the Endangered Species Act (Act).

The current Rozol label and registration requirements are inadequate for addressing Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act bird deaths that have previously occurred from Rozol use on prairie dogs and that are expected to continue under the proposed action. The registration of Rozol should be accompanied with detailed monitoring and field studies to abate Rozol secondary exposure and effects to raptors and other non-target animals. The Service requests that our agencies work together to identify and implement measures to address these non-ESA concerns that involve secondary poisoning of raptors from exposure to anticoagulant prairie dog rodenticides.

This BO is based on the EPA's Biological Assessment posted online by the EPA, items identified in the "References Cited" section herein, various conference calls and meetings regarding this action, and other sources of information. A complete record of this consultation is on file at the Service's South Dakota Ecological Services Office in Pierre, South Dakota. If any questions arise regarding this BO, please contact Scott Larson of the Service's South Dakota Ecological Services Office at (605) 224-8693, Extension 224, or at 420 South Garfield Avenue, Suite 400, Pierre, South Dakota 57501.

Sincerely,

Michael Thabault
Assistant Regional Director
Ecological Services

Final Biological Opinion
For Rozol Use on Black-tailed Prairie Dogs
Registered Under Section 3 of the
Federal Insecticide, Fungicide and Rodenticide Act

Photo Credit: U.S. Fish and Wildlife Service

Prepared by:

U.S. Fish and Wildlife Service
Ecological Services Region 6 and Region 2

April 9, 2012

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objectives for the black-footed ferret have not been finalized, it is likely that 500,000 acres of managed prairie dogs distributed between the three prairie dogs species would be sufficient to support delisting recovery objectives for the black-footed ferret (FWS 1988).

Another important factor affecting prairie dog populations and therefore black-footed ferret recovery is sylvatic plaque and the ongoing outbreaks which can result in widespread prairie dog die offs or, in some cases, more subtle deaths (Cully et al. 2010, Matchett et al. 2010). This exotic disease can directly kill black-footed ferrets that consume infected prairie dogs or eliminate black-footed ferret habitat among the three prairie dog species (Gage and Kosoy 2006, Godbey et al. 2006). At this time, the Service does not have information that Rozol use on BTPDs, in combination with other rodenticides and sylvatic plague, will prevent black-footed ferret recovery, but, in order to make informed decisions in the future, it will be important to have an understanding of the extent of Rozol use in each state.

d. Conclusion Regarding Jeopardy

After reviewing the current status of the black-footed ferret, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the use of Rozol as a BTPD rodenticide, which includes the black-footed ferret conservation measures, is not likely to jeopardize the continued existence of the black-footed ferret. No critical habitat for the black-footed ferret has been designated; therefore none will be affected. At this time, the Service believes that Rozol use on BTPDs, as modified through the agreed upon conservation measures will not preclude the conservation and recovery of the black-footed ferret even when combined with the use of other currently available legal rodenticides and our understanding of sylvatic plague.

In summary, this conclusion is based on the following:

- The modifications to the project description via the black-footed ferret conservation measures included in the EPA's letter of December 13, 2011 (EPA 2011c) and additional agreed upon conservation measures in April 2012, which ensure that:
    - Rozol use is prohibited in current and future black-footed ferret reintroduction sites; thus, we anticipate that survival of the species in the wild will not be compromised by this product.
    - Rozol use is prohibited in an area if an unknown wild black-footed ferret population is discovered.
    - Rozol restrictions on properties adjacent to reintroductions are minimized which lessens opposition to black-footed ferret reintroductions.
    - Rozol production quantities and distribution to locations within states will be provided to the Service which will allow an assessment whether the level of use could preclude recovery of the black-footed ferret.
- Sufficient prairie dog acreage exists among the three species of prairie dogs to support current Black-footed Ferret Recovery Plan downlisting objectives and likely future delisting objectives when those become finalized in the revised Recovery Plan.

II. AMOUNT OR EXTENT OF TAKE ANTICIPATED

A. Black-footed ferret

The Service has developed this ITS based on the premise that the EPA and Liphatech will implement the label measures that include black-footed ferret conservation measures as previously described. The conservation measures prohibit application of Rozol within current black-footed ferret reintroduction sites (12 sites in the 10 states) and future reintroduction areas to reduce the level of impact to the black-footed ferret. This information is to be located in the EPA's *Bulletin Live!* database. Changes to this database take approximately 8 months to enact; therefore, the Service will provide information to the EPA accordingly.

Take of black-footed ferrets is expected in the form of mortality when individuals disperse from a reintroduction area and encounter a BTPD colony that has been poisoned with Rozol within the previous 2 months, or if the black-footed ferret is residing on a colony when Rozol is applied. While black-footed ferrets can leave reintroduction sites, those departures are unlikely to be documented, and the Service is unable to accurately predict the number of black-footed ferrets that may encounter Rozol-poisoned BTPD colonies. Most black-footed ferrets that leave a reintroduction area are likely to die because of natural causes (predation/starvation) or other activities (vehicle collisions) unrelated to Rozol. Further, due to black-footed ferrets' nocturnal behavior and tendency to spend much of their time underground in prairie dog burrows, it is unlikely that many, if any, black-footed ferret mortalities due to Rozol will be reported to further inform this issue. Therefore, while dispersing black-footed ferrets may die from consuming Rozol-poisoned prairie dogs, this number is not anticipated to be large and will rarely be detected.

At previous black-footed ferret reintroduction sites, there are very few reports of dispersing animals outside the reintroduction site, and the reports received are typically associated with mortalities such as vehicle collisions or possible sightings that are followed up with concerted nighttime surveys (Hanebury and Biggins 2006). Black-footed ferret reintroduction site managers are authorized to retrieve dispersing black-footed ferrets if that information is available and if the landowner wants the black-footed ferrets removed from their property. Requests to relocate black-footed ferrets that have left a reintroduction area are very rare.

The Service anticipates that take of dispersing black-footed ferrets that leave a reintroduction area and encounter a Rozol poisoned BTPD colony will result in two or fewer black-footed ferret mortalities per year because the number of dispersing individuals is not believed to be high and most dispersing black-footed ferrets are expected to die of natural causes or other forms of incidental take. Black-footed ferrets that are captured alive from an area proposed for Rozol use and relocated to suitable habitat where Rozol will not be applied will not be counted against the lethal take of two black-footed ferrets per calendar year. The relocation of live black-footed ferrets from proposed Rozol use areas, while considered take, is authorized under each reintroduction sites' existing management plan and through a Service issued permit to the recovery partners at that site. That permit authorizes activities including black-footed ferret relocation, if needed, at each of the reintroduction sites through coordination with the Black-footed Ferret Recovery Coordinator. Therefore, this Rozol ITS is not intended to cover

III. EFFECT OF TAKE

A. Black-footed ferret

The Service has determined that two mortalities per year of dispersing black-footed ferrets due to Rozol use is not likely to jeopardize the continued existence of the species or materially affect black-footed ferret recovery because individuals dispersing from reintroduction sites are not known to regularly return and contribute further to ferret recovery. It is acknowledged that if a Rozol-caused black-footed ferret mortality that is reported, there could be multiple black-footed ferret mortalities not found or reported. Because the expected mortalities are likely to be dispersing black-footed ferrets that are unlikely to contribute to the success of the reintroduction site, such losses are not anticipated to compromise the survival and recovery of the black-footed ferret.

B. Gray wolf

The Service determines that the level of anticipated take is not likely to result in jeopardy to the species or destruction or adverse modification of critical habitat. Gray wolf critical habitat does not occur within the action area. Few gray wolves are anticipated to disperse into the action area from established populations. The BTPD habitat is generally not preferred habitat for this species. Take is expected to be relatively low and not anticipated to have any population-level effects to recovered source populations of gray wolves that disperse into the action area. The low number of Mexican wolves (one over 15-year timeframe) that may be taken is not currently a threat to its recovery. Rozol use on BTPD towns, and any resulting take of gray wolves will likely not substantially change the mortality rates of long-distance dispersing wolves, as these individuals are already at high risk of encountering other known factors of wolf mortality during their travels. Rozol poisoning is likely a compensatory form of mortality (whereby any individuals lost to Rozol poisoning would have been likely to succumb to another form of mortality in the absence of Rozol) not resulting in an overall increase in total mortality of gray wolves.

C. Northern aplomado falcon

The Service has determined that two northern aplomado falcons, in the form of one mortality and one harassment per 5 years in the 15-year timeframe, due to Rozol use are not likely to jeopardize the continued existence of the northern aplomado falcon. This amount of take is not likely to result in population level effects to the species nor reduce its chances for recovery. This is due to the fact that the core of the northern aplomado falcon population is expected to persist at current or greater levels in southern Texas, outside the action area of this project. In addition, reintroduction of captively bred northern aplomado falcons is expected to continue within the range of the species during some years of this project.

IV. REASONABLE AND PRUDENT MEASURES

The Service believes the following RPMs are necessary and appropriate to minimize the impacts of incidental take of black-footed ferrets, gray wolves, and/or northern aplomado falcons resulting from the proposed action. The RPMs below apply to all three species unless specified otherwise within the RPM.

RPM 1:

- The EPA shall ensure that proper information regarding listed species and secondary poisoning risks is provided to Rozol users.

RPM 2:

- The EPA shall ensure that the best available information is applied to the Rozol label in the future.

RPM 3:

- The EPA, in cooperation with Liphatech, Inc. shall develop and maintain a system to track Rozol used for BTPD control and report to the Service the amounts distributed in each of the 10 States.

RPM 4:

- If an applicator or the EPA becomes aware that a black-footed ferret is known to occupy a BTPD colony outside of a reintroduction area, Rozol cannot be used on that colony until the individual or individuals have been relocated. The EPA will ensure that if a previously unknown wild black-footed ferret population is discovered, Rozol use will not be used on that population.

RPM 5:

- Within the range of the northern aplomado falcon, the EPA shall maintain its County Bulletin (*Bulletins Live!*) website so that a current listing of counties with habitat for northern aplomado falcons is available to the public for educational purposes. We are aware that an 8-month timeframe exists for incorporating any new information into *Bulletins Live!*.

RPM 6:

- Within the range of the northern aplomado falcon, the EPA shall inform public users about the risks of Rozol to non-target organisms and how risks can be minimized.

  The EPA has adopted Conservation Measures intended to reduce the adverse impacts of Rozol use on federally listed species via prohibition of Rozol use in some areas and/or timing restrictions; new Rozol label language requiring systematic search protocols to improve above-ground detection and disposal of above-ground target and non-target animals, reporting of federally listed species as well as reporting of any non-targets; and new education, training, and outreach efforts intended to improve applicator compliance with the Rozol label. The above RPMs with their implementing terms and conditions below include additional items not addressed by EPA's Conservation Measures. Some aspects of the education, training and outreach Conservation Measure requires additional coordination with

the Service to ensure content meets the intended purpose. Information regarding the most appropriate search protocol is currently lacking at this time, thus in the event improved methods are developed in the future, it is appropriate for EPA to consider that information and adjust the Rozol label accordingly to lower the risk of take. Information regarding the amount of Rozol produced, used, and sold is not currently available to the Service and constraints exist to obtaining it; thus gross production data will be evaluated over time as to whether it provides useful information relative to species' recovery prospects. Relocation of black-footed ferrets that have moved beyond reintroduction site boundaries and protection of currently unknown wild ferret population are appropriate steps to reduce take to that species. Education and outreach are deemed valuable to reduce the risk of take to northern aplomado falcons, particularly with the current level of ongoing coordination with private landowners.

V. TERMS AND CONDITIONS

Compliance with the following terms and conditions must be achieved in order to be exempt from the prohibitions of section 9 of the ESA. These terms and conditions implement the RPMs described above. These terms and conditions are nondiscretionary.

To implement RPM 1:

- The EPA shall submit to the Service, for review and approval prior to their use, materials to be used relative to the Conservation Measure for the EPA's additional training during annual pesticide applicator recertification programs and Liphatech's Rozol Prairie Dog Bait Product Stewardship Program. At a minimum, the training materials shall include (in addition to the information provided by EPA as a conservation measure) a description of the listed species and their habitats; the general provisions of the Endangered Species Act; the necessity for adhering to the provisions of the Act; the penalties associated with violating the provisions of the Act; the specific measures that are being implemented to use Rozol in a manner compatible with the conservation of listed species; and the boundaries in which Rozol can be lawfully applied.

- The EPA and Liphatech shall provide the Service with the opportunity to attend and participate in any education, outreach, and training sessions conducted as part of the EPA's efforts relative to the annual pesticide applicator recertification program and Liphatech's Rozol Prairie Dog Bait Product Stewardship Program**.**

To implement RPM 2:

- If information becomes available on more effective methods for search and removal protocols than the line-transect protocol specified on the label (as described in the Conservation Measures portion of the Description of the Proposed Action section above), the EPA shall incorporate the best available information on the Rozol label to reduce the availability of Rozol-poisoned target and non-target animals on the surface after coordinating with the Service.

Attachment B

USGS Plague Bulletin
National Wildlife Health Center
Circular 1372
Reston, Virginia
2012

Protect yourself from plague

What is plague?

Plague occurs naturally in the western United States, particularly Arizona, California, Colorado, and New Mexico. The plague bacterium (*Yersinia pestis*) is transmitted by fleas and cycles naturally among wild rodents. Plague can also infect humans and their pets.

How do people get plague?

- Bites of infected fleas
- Touching or skinning infected animals (such as prairie dogs, squirrels, rats, and rabbits)
- Inhaling droplets from the cough of an infected person or animal (especially sick cats)

Common forms of plague

Bubonic plague is the most common form of plague. It usually occurs after the bite of an infected flea. The key feature of bubonic plague is a swollen, painful lymph node, usually in the groin, armpit or neck. Other symptoms include fever, chills, headache, and extreme exhaustion. A person usually becomes ill with bubonic plague 1 to 6 days after being infected. If not treated early, the bacteria can spread to other parts of the body and cause septicemic or pneumonic plague.

Septicemic plague occurs when plague bacteria multiply in the bloodstream. Symptoms include high fever, exhaustion, light-headedness, and abdominal pain. Septicemic plague can quickly cause shock and organ failure.

Pneumonic plague occurs when plague bacteria infect the lungs. Symptoms include high fever, chills, cough, difficulty breathing, and coughing up bloody mucus. Pneumonic plague is almost always fatal if not treated rapidly.

If you develop symptoms of plague, see a health care provider immediately.

Plague can be treated successfully with antibiotics, but an infected person must be treated promptly to avoid serious complications or death.

Protect yourself if you live in an area where plague occurs:

Protect you and your family

1. Eliminate nesting places for rodents around homes, sheds, garages, and recreation areas by removing brush, rock piles, trash, and excess firewood.
2. Avoid picking up or touching dead animals.
3. Wear gloves if you must handle sick or dead animals.
4. Report sick or dead animals to the local health department or law enforcement officials.
5. Do not let pets sleep in the bed with you. This has been shown to increase your risk of getting plague.
6. Use insect repellent that contains DEET to prevent flea bites.

Protect your pets

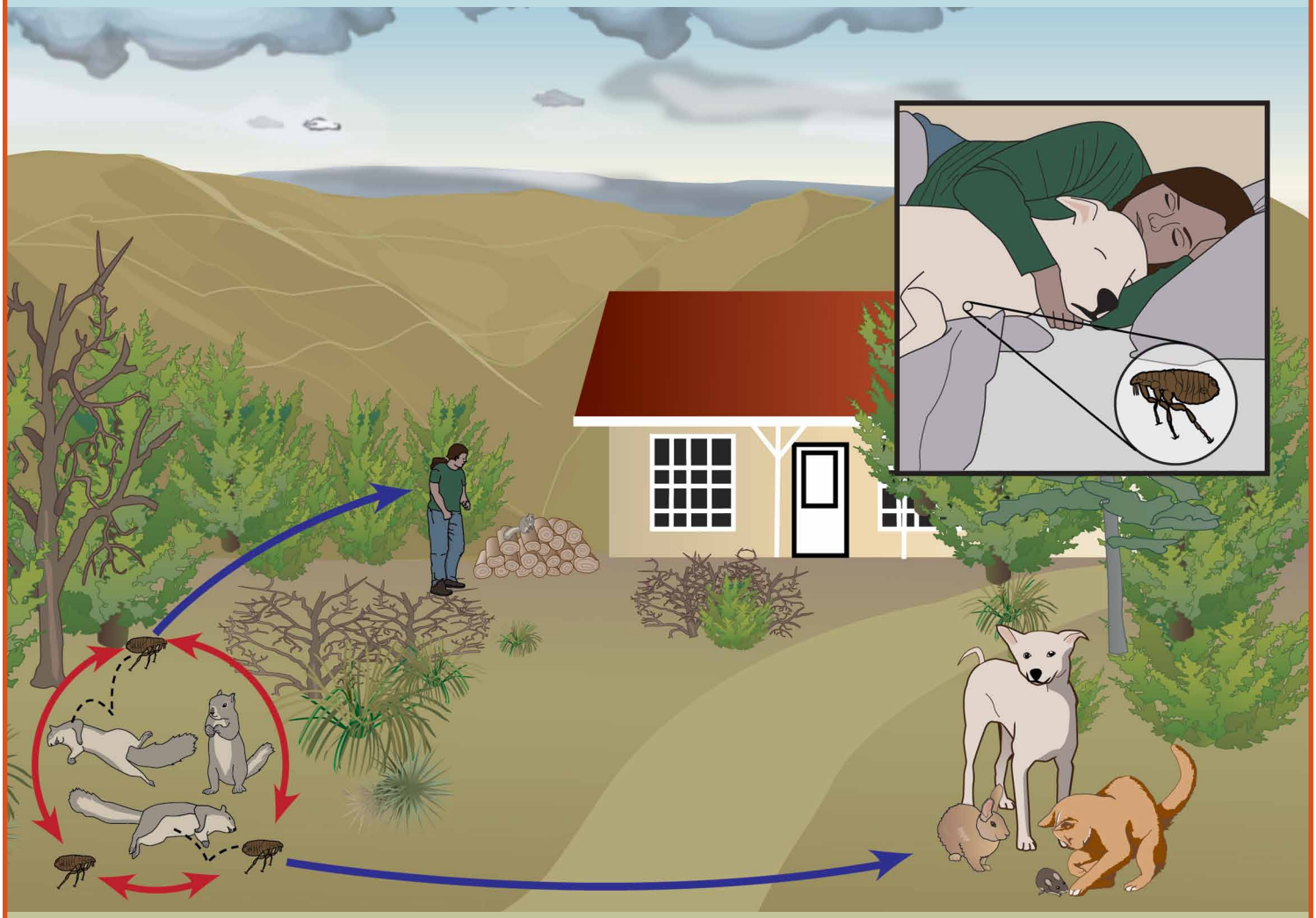
1. Treat dogs and cats for fleas regularly.
2. Keep pet food in rodent-proof containers.
3. Take sick pets to the veterinarian promptly.
4. Do not allow pets to hunt or roam in rodent habitat, such as prairie dog colonies.

National Center for Emerging and Zoonotic Infectious Diseases
Division of Vector-Borne Diseases | Bacterial Diseases Branch

CS235098-A

Plague in Humans

Human plague is often preceded by an outbreak or "epizootic" in which large numbers of susceptible rodents die. When this happens, hungry infected fleas leave the dead rodents and seek blood from other hosts, including humans and domestic pets. Studies suggest that in the southwestern U.S. epizootics are more likely to occur during cooler summers that follow wet winters.



Humans and domestic animals that are bitten by fleas from dead animals are at risk for contracting plague, especially during an epizootic. Cats usually become very ill from plague and can directly infect humans when they cough infectious droplets into the air. Dogs are less likely to be ill, but they can still bring plague-infected fleas into the home. In addition to flea bites, people can be exposed while handling skins or flesh of infected animals.

For more information, please contact:

Centers for Disease Control and Prevention
3156 Rampart Road, Fort Collins, CO 80521
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
Web: www.cdc.gov

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National Wildlife Health Center

Plague

Circular 1372

U.S. Department of the Interior
U.S. Geological Survey

Plague

By Rachel C. Abbott and Tonie E. Rocke

National Wildlife Health Center

Circular 1372

U.S. Department of the Interior
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U.S. Department of the Interior
KEN SALAZAR, Secretary

U.S. Geological Survey
Marcia K. McNutt, Director

U.S. Geological Survey, Reston, Virginia: 2012

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Foreword

Plague has been described as "… one of the major calamities of history, not excluding wars, earthquakes, floods, barbarian invasions, the Crusades, and the last war [World War I]" (Zinsser, 1934). Despite this stark statement, there are many who consider plague to be a disease of the past. Still others, including many that reside in, or frequent, plague endemic areas have minimal concerns about plague. Contrasts in the number of human fatalities associated with modern plague outbreaks and those of the historic plague pandemics and advances in modern medicine for treatment of this disease are likely factors that influence current perspectives. Nevertheless, plague remains a serious global threat for modern society because of (1) its current stature as a naturally emerging infectious disease and (2) the potential for plague to be exploited for nefarious purposes. The latter situation was first attempted during the siege of Caffa in 1345 when plague-infected human corpses were catapulted into the city (see Box 1, this publication). Today, the catapult used may be a long-range ballistic missile or some other "advance" of modern technology. Further, plague poses a significant challenge for the long-term sustainability of some North American fauna, most notably the black-footed ferret.

Plague's "durability" over the ages as an infectious disease of major consequence for society stands in testimony to the ability of *Yersinia pestis* to convert changes within its established, time-specific, host-agent-environment relations into opportunities that favor agent perpetuation through disease persistence and geographic expansion. Clearly, the ecology of plague is highly complex, a factor that contributes to various aspects of its ecology not yet being fully understood. The authors of this publication have admirably addressed this complexity within the context of an extraordinarily rich, well-illustrated, easily read and highly insightful synopsis for one of the classic and intriguing diseases of humanity. There is much to be contemplated here, taken into consideration, and acted upon, especially as the further urbanization of society continues to enhance opportunities for sylvatic plague. This situation involves both the movement of animals into "metropolis" and the extension of "metropolis" into free-ranging animal habitats.

Advances in our knowledge of plague also provide insights for infectious diseases in general. These insights are important, as noted by Zinsser in his classic treatise on typhus fever:

> *"Infectious disease is one of the great tragedies of living things—the struggle for existence between different forms of life. … Incessantly, the pitiless war goes on, without quarter or armistice—a nationalism of species against species."*
>
> *(Zinsser, 1934, p. 7)*

Plague exemplifies the many facets of this battleground.

Milton Friend
September 11, 2011

[1]Zinsser, H., 1934, Rats, lice, and history: Boston, Massachusetts, Little, Brown and Company, 301 p.

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Plague

By Rachel C. Abbott and Tonie E. Rocke

"Plague is not an extinct medieval monster, and epidemics still happen frequently." (Krasnov and others, 2006)

Synonyms

Black Death, bubonic plague, pneumonic plague, septicemic plague, pestis minor, peste, pestilential fever, pest

Overview

Plague is an **acute** infectious **zoonotic disease** caused by the highly virulent **bacteria** *Yersinia pestis*. **Infections** in humans most often result from the bites of **fleas** that feed on infected **rodents**, although person-to-person **transmission** can occur if the bacteria are inhaled. When someone is infected by *Y. pestis* and shows symptoms, the disease takes three main forms: bubonic, septicemic, and **pneumonic**. Without prompt antibiotic treatment, the **mortality rate** from **bubonic plague** can be as high as 60 percent, and the pneumonic form is nearly 100 percent lethal. Plague is broadly distributed around the world and is maintained by wild rodents and their fleas in natural **foci** or localized areas of infection. Outbreaks of plague develop periodically among **susceptible** rodents and can have severe impacts on the survival of threatened **species** of wild animals. **Epidemics** of plague continue among humans even in regions that have been unaffected for extended periods of time, prompting the World Health Organization (WHO) to identify plague as an **emerging disease**.

Background

Although the causative agent of plague, *Yersinia pestis*, was not identified until 1894, the disease is ancient, and the first descriptions of it may be found in the Bible. Passages in the book of Samuel describe a Philistine city in the 11th century afflicted by dying mice and numerous deaths of its residents who suffered swellings in the groin and thighs (Zietz and Dunkelberg, 2004). In the first century A.D., an outbreak of plague causing **buboes** and a high death rate may have occurred in Libya, Syria, and Egypt as described by Rufus of Ephesus (Zietz and Dunkelberg, 2004). Although it is difficult to definitively attribute plague as the cause of these early epidemics, it is generally accepted that there have been three **pandemics** of plague, the most infamous being the Black Death (Box 1).

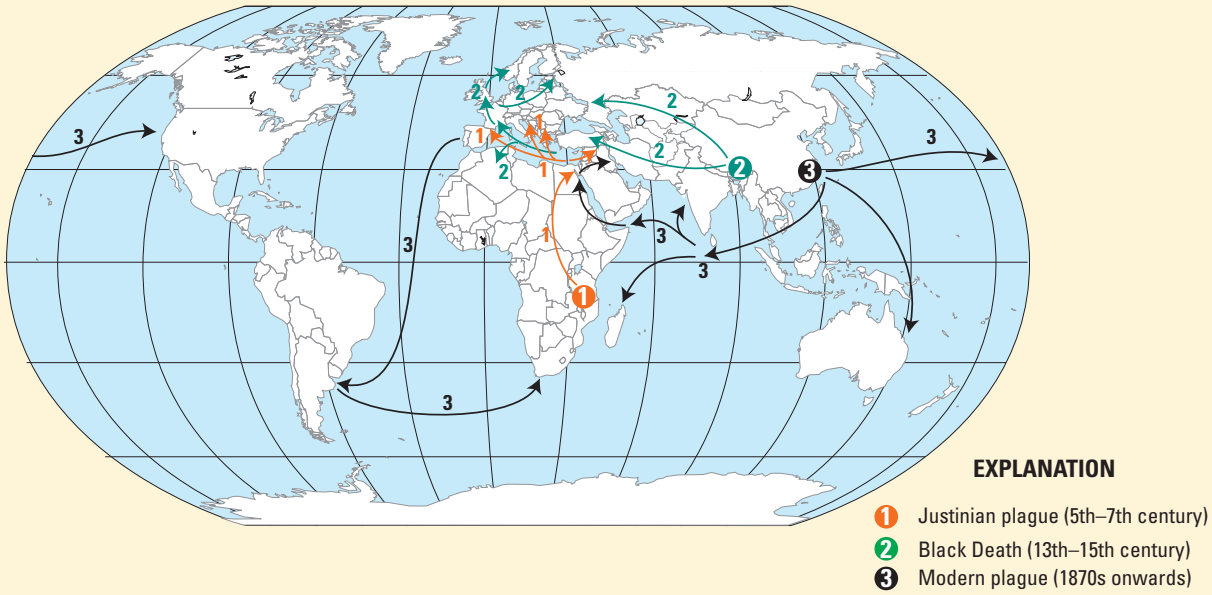
The 1894 discovery of the causative agent of plague at the onset of the plague epidemic in Hong Kong facilitated thorough research on this disease and resulted in rapid progress in the elucidation of the **epidemiology** of plague (table 1). Although the true cause of the Black Death and other ancient plagues may never be unequivocally determined, plague remains a real threat to both human and animal health. **Epizootics** of plague among threatened species of wildlife, epidemics causing numerous deaths and panic, and the threat of **bioterrorism** using the plague **bacillus** make *Y. pestis* not just a historical curiosity but a current menace.

Causative Agent

Plague is caused by *Yersinia pestis*, an oval-shaped bacteria that is unable to move on its own ("nonmotile") and that is shaped between the coccus, or spherical, and the bacillus, or rod-shaped, forms, thus making it a "coccobacillus" bacteria. Scientists can sometimes distinguish one kind of bacteria from another by applying a purple stain, the Gram stain, to samples that contain bacteria; another chemical that removes the Gram stain from some kinds of bacteria is applied to the sample, and those bacteria that retain the purple stain are "Gram positive" while those that do not retain the stain are "Gram negative." *Y. pestis* is Gram negative. A Wayson or Wright's stain can be used to diagnose plague, and when it is applied to a sample that contains *Y. pestis*, it tends to collect in either end of the *Y. pestis* structure, revealing the characteristic "safety pin" appearance of the bacterium (fig. 1).

Box 1 The Three Plague Pandemics

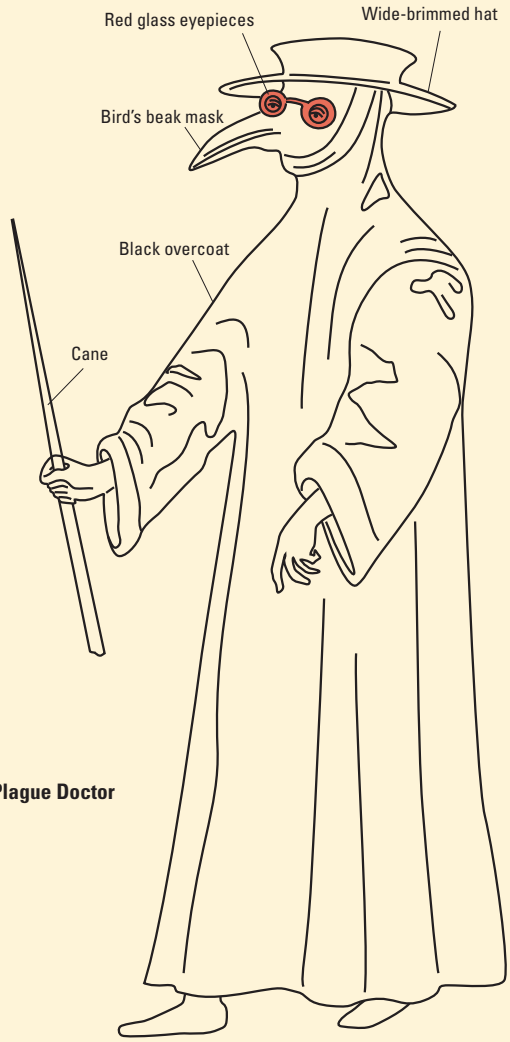
The first plague pandemic struck in the sixth century A.D., around the year 540 in the Byzantine Empire, and is known as the Plague of Justinian, after the reigning emperor. The pandemic probably originated in Ethiopia or Egypt and spread to Constantinople when ships loaded with grain also carried rats and their fleas. Primarily of the bubonic form, the disease spread through the Mediterranean region into Europe, Central and Southern Asia, and Arabia (see map). It has been estimated that 50–60 percent of the population in the region died between the years 541–700 (Perry and Fetherston, 1997; Gasper and Watson, 2001).



Routes followed by the three plague pandemic waves, labeled 1, 2, and 3. Circled numbers indicate the regions thought to be the origins of these pandemic waves. (Achtman and others, 1999)

The second pandemic is perhaps the most notorious. Known as the Black Death, the Great Pestilence, or the Great Plague, it arose in the 14th century and was responsible for killing one-quarter to one-third of Europe's population (Perry and Fetherston, 1997; Poland and others, 1994; Butler, 1998; Gage, 1998; Gasper and Watson, 2001). This pandemic probably began in Central Asia and spread through trade routes into the Crimea. It arrived in the port city of Caffa, in present day Ukraine, on the Black Sea in 1346. Caffa was an Italian walled city established by Genoa as a port for its merchant ships. In 1345, Mongol troops besieged the city, but they were severely hampered in their attack by an epidemic of plague. A witness described soldiers dying "as soon as the signs of disease appeared on their bodies: swellings in the armpit or groin caused by coagulating humors, followed by a putrid fever;" almost all soldiers "fell victim to sudden death after contracting this pestilential disease, as if struck by a lethal arrow which raised a tumor on their bodies." (Wheelis, 2002)
In an example of biological warfare, the survivors catapulted the corpses into the city of Caffa, thereby infecting the inhabitants of the city, whether by direct contact with infectious material or flea bites (Wheelis, 2002). The plague spread from Caffa and the Crimea into the Mediterranean region on rat-infested ships, and subsequently throughout Europe by land travel.

Outbreaks of plague, involving both the bubonic and pneumonic forms, continued sporadically throughout Europe for the next 300 years. One of the last major outbreaks was the Great Plague of London in 1665. Despite lack of knowledge about the cause and mode of transmission of plague, preventive measures were instituted to control these outbreaks and limit the spread of the disease. Forty-day restrictions on travel were imposed to decrease the spread of the disease, giving rise to the term "quarantine." Special protective clothing was developed for doctors to limit transmission. Because of its high mortality rate, plague had a lasting impact on European society. With the deaths of one-quarter to one-third of the population, most of who were peasants, the



The Plague Doctor

1. **The wide-brimmed black hat identified the wearer as a doctor and may have acted as a shield from infection.**
2. **Plague doctors wore bird's beak masks to draw plague, which was believed to be spread by birds at the time, away from the patient. The beak of the mask was filled with fragrant herbs to overcome the foul air associated with the spread of plague, as well as to mask the stenches of corpses and ruptured buboes.**
3. **Red glass eyepieces were attached to the mask to protect the wearer from evil.**
4. **Plague doctors wore a long black overcoat tucked around the mask to avoid exposing any skin. It was often coated with suet or wax to make it resistant to sputum and other bodily fluids.**
5. **A wooden cane was used to direct other people nearby to move patients or themselves. It may also have been used to examine the patient.**
6. **Leather breeches were worn under the overcoat to protect the legs and groin from infection.**

social structure changed dramatically, weakening the feudal system (Gage, 1998; Gasper and Watson, 2001). Culture, art, religion, and politics also changed because of plague (Stenseth and others, 2008).

The third pandemic, also known as the Modern Pandemic (Gage, 1998), began in China in 1855 in the south-central province of Yunnan and spread to Hong Kong and Canton by 1894, aided by movements of troops and refugees from a rebellion (Pollitzer, 1954; Perry and Fetherston, 1997). Steamships and trains spread the disease worldwide, reaching Bombay, India in 1896 and San Francisco in 1901 (see map). Many cities in Africa, Australia, Europe, Asia, North and South America were affected. *Y. pestis* disappeared from some areas, including Australia, after failing to become successfully established in maintenance cycles involving local fleas and animals (Poland and others, 1994).

Recently, the role of *Yersinia pestis* as the cause of the Black Death has been disputed (Duncan and Scott, 2005; Cohn, 2002; Twigg, 1984; Gilbert and others, 2004). Opponents believe other agents, such as anthrax (Twigg, 1984), a virus (Duncan and Scott, 2005), or typhus (Shrewsbury, 1970), were responsible for the pandemic based on what they see as significant inconsistencies in the epidemiology of the Black Death and present-day plague. They argue that the speed with which the disease spread across Europe, the lack of suitable rat species to spread the disease, the extremely high mortality, the long incubation period as evidenced by the successful 40-day quarantine period, and the directly infectious nature of the disease suggest the cause was an infectious agent other than *Y. pestis* (Duncan and Scott, 2005; Twigg, 1995). Others have pointed out that plague caused by *Y. pestis* can have different symptoms and that the organism may have evolved since the Black Death in such a way that current epidemics do not exactly replicate what was recorded during the Middle Ages (Wood and others, 2003; Stenseth and others, 2008; Raoult and Drancourt, 2002). Vectors other than fleas, such as lice, may have had a more prominent role in the transmission of ancient outbreaks of plague than is seen today (Drancourt and others, 2006; Houhamdi and others, 2006). In addition, the deoxyribonucleic acid (DNA) of *Y. pestis* has been identified by polymerase chain reaction (PCR) in the teeth of victims of the Black Death, leading researchers to conclude that these people suffered from septicemic plague, which probably caused their deaths (Drancourt and others, 1998; Raoult and others, 2000; Drancourt and Raoult, 2002). The anthrax bacillus was not found (Raoult and others, 2000). *Y. pestis* DNA has also been detected in the teeth (Drancourt and others, 2007; Drancourt and others, 2004) and skeletons (Wiechmann and Grupe, 2005) of victims of the Plague of Justinian. Subsequent testing of some of these bone and teeth samples by the use of a rapid diagnostic test (see Obtaining a Diagnosis) confirmed the presence of *Y. pestis* in skeletal remains (Bianucci and others, 2008; 2009).

Table 1. Timeline of important early events since the discovery of *Y. pestis.*

[Sources: Zietz and Dunkelberg, 2004; Gage, 1998; Butler, 1998; Olsen, 1981]

Year	Event
1894	Alexandre Yersin and Shibasaburo Kitasato independently find the plague bacterium in samples from humans and rats during the Hong Kong epidemic. Yersin is later credited with the discovery, because he correctly identified it as being Gram negative, whereas Kitasato described it as Gram positive. The organism is named *Bacterium pestis*.
1895	Wild rodents are confirmed as hosts of plague when wild marmots in Mongolia and Russia are found infected.
1896	Waldemar Haffkine develops a partially effective heat-killed vaccine and uses it during an outbreak in Bombay.
1897	Yersin proposes a link between rats and plague.
1897	Masanori Ogata in Taiwan suggests transmission of plague by flea bites.
1898	Paul-Louis Simond proposes the role of the flea in transmission of plague.
1900	The causative agent is renamed *Bacillus pestis*.
1900	The first human case in San Francisco occurs.
1902	The bacterium is found in commensal rats in the United States.
1905	William Glenn Liston provides proof of fleas as the vector of plague.
1908	Infected California ground squirrels are found in California.
1914	Charles James Martin and William Bacot describe transmission of *Y. pestis* by rat fleas, *Xenopsylla cheopis*, with blocked foreguts.
1923	The causative agent is renamed *Pasteurella pestis*.
1927	Ricardo Jorge identified wild living rodents as the reservoir of sylvatic plague.
1934	Ground squirrels and wood rats in United States are found to be infected in area outside of original focus. The first human case in the United States outside of California occurs and is associated with wild rodents.
1945	Insecticides (DDT) are used for first time to control an outbreak in Peru.
1946	Streptomycin is used for first time to treat cases of human plague and is shown to reduce the number of deaths caused by plague dramatically.
1963	Pierre Mollaret demonstrates experimental infection of animals in contact with contaminated soil.
1966–72	Killed vaccine used in soldiers in Vietnam is effective in preventing the bubonic form.
1970	The causative agent is renamed *Yersinia pestis*.

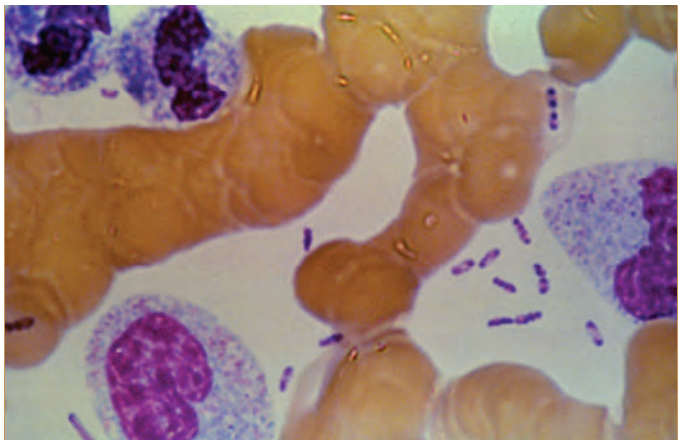


Figure 1. Wright's stain of *Y. pestis* in a blood smear showing its characteristic bipolar "safety pin" appearance. (Photo courtesy of the Centers for Disease Control and Prevention.)

Originally classified in the family Pasteurellaceae, *Y. pestis* is now considered to be a member of the family Enterobacteriaceae, based on similarities to *Escherichia coli* bacteria determined by studies of hereditary information contained in deoxyribonucleic acids (**DNA)** (table 2). The Enterobacteriacae are a large family of bacteria, and the Greek word "enteron" for "intestine," used in the family name, indicates the location in the body where some of the bacteria in the family are found. Although the **genus** *Yersinia* has 11 species, only 3 are **pathogenic** to humans: *Y. pestis*, *Y. pseudotuberculosis*, and *Y. enterocolitica* (table 3). Another species, *Y. ruckeri*, causes **enteric redmouth disease** in fish. Unlike *Y. pseudotuberculosis*, *Y. enterocolictica,* and other enterobacteria such as *Salmonella typhi* and *E. coli*, which are transmitted when feces are ingested in contaminated food and water (the **fecal-oral route**), *Y. pestis* has evolved the capability of transmission by **arthropods**, and it establishes infections in blood and **lymphoid tissues**.

Table 2. Taxonomy of *Yersinia* species

Kingdom	Eubacteria
Phylum	Proteobacteria
Class	Gammaproteobacteria
Order	Enterobacteriales
Family	Enterobacteriaceae
Genus	*Yersinia*
Species	*pestis, enterocolitica, pseudotuberculosis, frederiksenii, kristensenii, ruckeri, mollaretii, bercovieri, rohdei, aldovae, intermedia*

Table 3. *Yersinia* species pathogenic to humans.

Y. pestis	Plague	Flea bites, direct contact, airborne.
Y. enterocolitica	Yersiniosis	Foodborne.
Y. pseudotuberculosis	Pseudoappendicitis	Foodborne.

Genetic analysis has determined that *Y. pestis* is very closely related to *Y. pseudotuberculosis*, a bacterium that can cause symptoms similar to those of tuberculosis in animals but mimics appendicitis in humans. The two kinds of bacteria have identical **16S rRNAs** (Trebesius and others, 1998); they probably became separate species at least 12,000 years ago (Achtman and others, 1999, 2004; Achtman and Wagner, 2008). *Y. pestis* differs from *Y. pseudotuberculosis* by having two unique **plasmids**, pFra and pPla, that contain **genes** enabling *Y. pestis* to infect and spread within mammalian **hosts** and produce a transmissible infection in fleas (table 4). Different genes are expressed in the corresponding host, often according to the body temperature of the host, 98.6°F in **mammals** and 82.4°F or lower in fleas. The products of these genes enable the bacteria to survive and multiply in both mammals and fleas, thereby completing its life cycle. In particular, several genes located on the *Y. pestis* plasmids enable the bacteria to evade the host immune response as it establishes infection (Box 2).

Although fleas were considered to play a key role in the transmission of *Y. pestis* early in the history of plague (Simond, 1898), a mechanism was only first described in 1914, and it involved formation of a blockage in the flea's **foregut** (fig. 2) that would lead to **regurgitation** of infectious bacteria and transmission to the host (Bacot and Martin, 1914). Foregut blockage is reported to occur readily in the Oriental rat flea (*Xenopsylla cheopis*), considered the primary vector of plague in Asia and Africa (Poland and Barnes, 1979). However, not all species of fleas develop foregut blockage from *Y. pestis*, yet many are still able to transmit *Y. pestis* (Box 3). Some species, such as one of the ground squirrel fleas (*Oropsylla montana*), rarely develop foregut blockage, although they act as the primary vectors of *Y. pestis* to humans and certain **ground squirrels** in North America (Craven and others, 1993).

An alternative mechanism, called early-phase transmission (Eisen and others, 2006), does not involve blockage of the flea foregut. Although earlier studies had also documented transmission by fleas without foregut blockage, this mechanism was not initially considered important (Burroughs, 1947). Upon laboratory infection, a ground squirrel flea, *O. montana*, was able to immediately transmit the bacteria after becoming infected in the absence of blockage formation (Eisen and others, 2006). This early transmission of the bacteria, within 1–4 days of infection, by *O. montana* is in sharp contrast to fleas that transmit plague only after the formation of foregut blockage, which does not typically occur until at least 5 days after infection. The rat flea, *X. cheopis,* typically develops foregut blockage even later, 12–16 days after infection. In early-phase transmission, the **bacterial loads** decline over time, thus leading to decreased **transmission efficiency**, the rate at which a vector is able to transmit an infection to a host, expressed as the number of infections per the number of attempts. Subsequent blood meals on infected hosts, however, can boost the levels of bacteria in the fleas, such as the ground squirrel flea *O. montana*, to allow potential transmission after each subsequent infectious blood meal. Fleas with foregut blockage, on the other hand, will starve and generally die within 5 days of becoming blocked, limiting the period of transmission. Early-phase transmission by fleas without foregut blockage may explain the rapid spread of plague during epizootics in prairie dogs or other rodents (Eisen and others, 2006). Early-phase transmission by the human flea (*Pulex irritans*), which rarely develops foregut blockage, could also explain the rapid spread of plague in the Middle Ages in areas of Europe where the rat flea *X. cheopis* was rare (Eisen and others, 2006). Subsequent work revealed that the rat flea *X. cheopis* can transmit *Y. pestis* as early as 1 day after infection without foregut blockage, and it transmits *Y. pestis* in the early phase with the efficiency of blocked fleas (Eisen, Wilder, and others, 2007). In addition, the rat flea *X. cheopis* maintains a constant transmission efficiency until the formation of foregut blockage (Eisen, Wilder, and others, 2007).

Y. pestis has historically been classified into three **biovars** or **subspecies**, Antiqua, Mediaevalis, and Orientalis, according to biochemical characteristics (Devignat, 1951). Recently, a fourth biovar, Microtus, has been proposed (Zhou and others, 2004). **Strains** of *Y. pestis*, traditionally classified in the Mediaevalis biovar and obtained from plague foci associated with voles, rodents of the genus *Microtus*, in China, have been shown to have biochemical characteristics that distinguish them from other Mediaevalis strains (table 5). In addition, strains of *Y. pestis* within the Microtus biovar, although they are lethal to voles and other rodents, are not virulent in larger mammals including humans (Zhou and others, 2004). Other atypical strains of *Y. pestis* have been designated as Pestoides, and they differ from the other biovars biochemically (Anisimov and others, 2004). Molecular analyses of *Y. pestis* strains from around

Table 4. Virulence determinants of *Y. pestis*.

[DNA, deoxyribonucleic acid. Temperatures are in degrees Celsius. Information obtained from Perry and Fetherston, 1997; Hinnebusch, 2005]

Genes specifically required to infect the vertebrate host:	
F1 capsular antigen (F1 or Caf1)	At 37°C, *Y. pestis* bacteria form large gel-like capsules to resist becoming engulfed and digested by the host's white blood cells. This reaction does not develop in fleas.
Plasminogen activator (Pla protease)	At 37°C, destruction of blood clots acting to trap the bacteria enables *Y. pestis* to spread from the site of the fleabite systemically.
Yersinia outer proteins (Yops)	Activities that kill host cells and prevent host white blood cells from attacking the bacteria are required for virulence and growth within the liver and spleen. Suppression of the host's immune system permits survival of *Y. pestis* within naïve host white blood cells during early infection.
V antigen (LcrV)	Immunosuppressive activity stimulates host production of IL–10, a potent anti-inflammatory protein that leads to prevention of the formation of a mass of immune cells to surround the bacteria and allows *Y. pestis* to maintain growth in visceral organs.
Yersiniabactin siderophore system (Ybt)	Part of the iron uptake system, it enables *Y. pestis* to acquire iron in blood, where availability is limited by the host's iron-binding molecules.
pH 6 antigen	Its fibrillar structure may facilitate entry of *Y. pestis* into naïve white blood cells and the delivery of Yops proteins into other white blood cells. These proteins help to prevent the host from developing an inflammatory response to infection.
Rough lipopolysaccharides (LPS)	A major component of the outer membrane of *Y. pestis*, they enable the bacteria to resist being destroyed by proteins found in the host's blood.
Endotoxin	A structural component of the bacteria that is released mainly when the bacteria are broken down; it causes signs and symptoms associated with septic shock.
Genes required to produce a transmissible infection in the flea:	
Murine toxin (ymt)	When first discovered, it was associated with the ability of the bacteria to cause disease in mammals, particularly mice (Ajl and others, 1955). Later, it was shown to enhance survival of *Y. pestis*, and other Gram-negative bacteria, in the flea midgut. It is not required for morbidity or mortality in mammals.
Pigmentation locus (Pgm)	Named for the appearance of densely pigmented colonies of *Y. pestis* grown at 28°C on media containing hemin or Congo red dye, which was correlated with virulence. This region of DNA contains genes required for the formation of blockage in the flea proventriculus and the genes involved in iron uptake.
Hemin storage locus (Hms)	It enables *Y. pestis* to synthesize a biofilm facilitating infection of the surface of spines in the proventriculus of the flea. This colonization allows *Y. pestis* to resist being swept into the midgut by the pumping action of the proventriculus and eventually block the proventriculus, thus permitting fleaborne transmission.

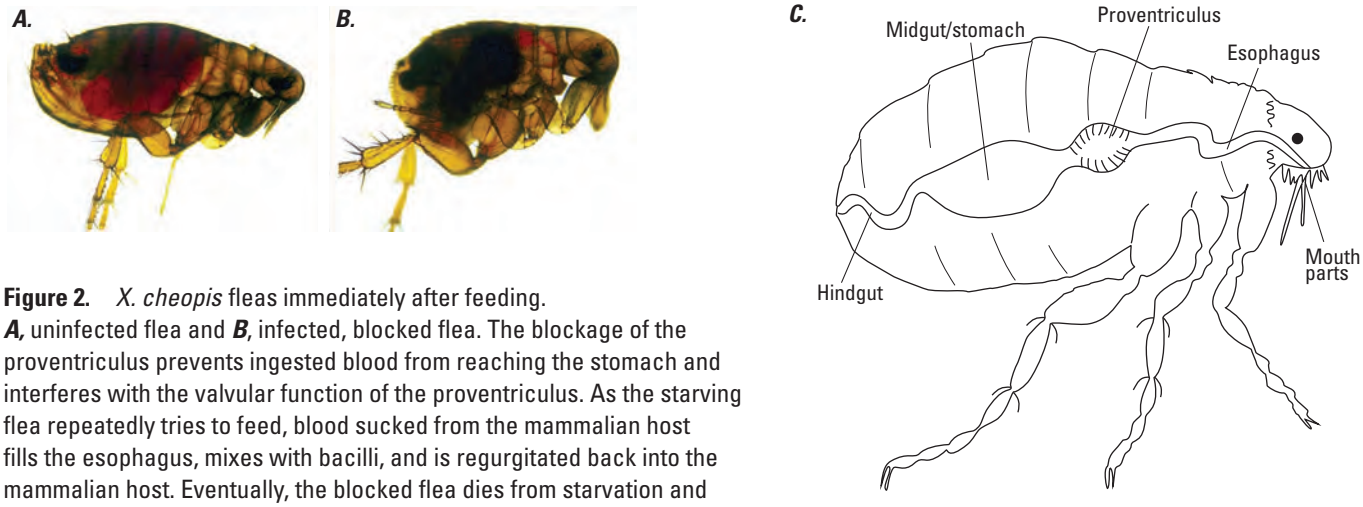


Figure 2. *X. cheopis* fleas immediately after feeding. ***A,*** uninfected flea and ***B***, infected, blocked flea. The blockage of the proventriculus prevents ingested blood from reaching the stomach and interferes with the valvular function of the proventriculus. As the starving flea repeatedly tries to feed, blood sucked from the mammalian host fills the esophagus, mixes with bacilli, and is regurgitated back into the mammalian host. Eventually, the blocked flea dies from starvation and dehydration. (Photos by permission; Hinnebusch, 2010) ***C,*** diagram of the digestive tract of the flea.

Box 2

Stealth and Deception by *Yersinia pestis*

"…the symptoms of plague…reflect the combination of stealth and deception effects, which cause the host to ignore the mortal danger of ongoing systemic invasion." (Brubaker, 2006)

Unlike other pathogens that do not kill their hosts to ensure transmission, *Y. pestis* is a highly virulent organism that can rapidly cause lethal disease in susceptible mammals. *Y. pestis* must reach high levels of bacteremia in the host, as much as 10 to 100 million organisms per milliliter of blood, for biting fleas to become infected (Hinnebusch, 2005). At the same time, *Y. pestis* must evade the host immune response to achieve these levels. Specific virulence factors (proteins which enable the bacteria to invade the host, elude the host immune response, and cause disease) allow *Y. pestis* to do just that.

As infected fleas feed, *Y. pestis* bacteria are deposited into the skin of the host. As few as 10 organisms can infect a susceptible host (Perry and Fetherston, 1997). The bacteria invade the lymphatic system and travel to regional lymph nodes, where severe inflammation results in the formation of buboes. This inflammatory response by the host may delay spread and multiplication of *Y. pestis*, but it generally does not block the disease process (Brubaker, 2006).

The bacteria then invade other host tissues. One virulence factor (Pla protease) facilitates the spread of *Y. pestis* from the site of the fleabite by breaking down components of blood clots that act to trap the bacteria (Sodeinde and others, 1992), while another (F1 protein) blocks phagocytosis (the ingestion and destruction) of bacteria by white blood cells during the initial spread of bacteria through host tissues (Friedlander and others, 1995). With this increased tissue invasiveness, the bacteria spread systemically and colonize visceral organs, especially the liver and spleen. Within these organs, other virulence factors act to prevent the host immune system from responding to the infection.

A major contributor to the stealth of *Y. pestis* is its use of several other virulence factors that inhibit or prevent the host from mounting a defense against disease. *Y. pestis* uses a needlelike appendage to target a host's white blood cells (Gendrin and others, 2010; Marketon and others, 2005). Using the needlelike appendage, *Y. pestis* injects proteins (Yops) directly into the host white blood cells. These proteins act to destroy immune functions of the host and prevent it from developing an inflammatory response that would inhibit or prevent further growth of the bacteria (Brubaker, 2006; Perry and Fetherston, 1997). *Y. pestis* can also inject into the host a different protein (V protein) that prevents the host from producing two of its own proteins that would be used to stimulate the formation of a mass of immune cells to surround the bacteria and prevent its growth (Nedialkov and others, 1997). In the case of plague, the host cells get a false message that tissue damage is under control, when, in fact, *Y. pestis* bacteria are rapidly taking over visceral organs, particularly the liver and spleen, leading to loss of function.

Eventually, as organs are destroyed, *Y. pestis* bacteria spill out into the bloodstream, causing septicemia. The structure of the outer membrane of *Y. pestis* confers some protection to the bacteria. The rough outer membrane allows the bacteria to resist destruction by proteins found in the host's blood (Porat and others, 1995). After the eventual death of the host from septicemia, infected fleas leave the carcass in search of new hosts for feeding. In this manner, the transmission cycle of *Y. pestis* is completed when these new hosts become infected.

Box 3 Fleaborne Transmission of *Y. pestis*

Day 0: Infection of the Flea

Fleas become infected by ingesting *Y. pestis* when they feed on a host mammal with at least 1 million bacteria per milliliter of blood (Engelthaler and others, 2000; Lorange and others, 2005).

Days 1–4: Early-Phase Transmission from Flea to Mammal

- Some species of fleas are able to transmit *Y. pestis* to a new mammal host as soon as 3 hours after becoming infected by what is now termed "early-phase transmission" (Eisen and others, 2006; Burroughs, 1947). Although the mechanism of this form of transmission is currently undetermined, mechanical transmission—that is, the bacteria do not invade the tissues of the flea or multiply—is unlikely because *Y. pestis* is unable to survive on the mouthparts of fleas for longer than 3 hours (Bibikova, 1977).

- The location of the bacteria within the flea's digestive tract is associated with the ability of the flea to transmit the infection to a host; esophageal infections are more readily transmitted than hindgut infections (Eisen and others, 2009; Eisen, Enscore, and others, 2007; Wilder, Eisen, Bearden, Montenieri, Gage, and Antolin, 2008; Wilder, Eisen, Bearden, Montenieri, and others, 2008).

- Early-phase transmission of *Y. pestis* to mammals continues in some fleas up to 4 days after they become infected (Eisen and others, 2006; Eisen, Wilder, and others, 2007; Eisen, Lowell, and others, 2007; Eisen, Holmes, and others, 2008; Eisen, Borchert, and others, 2008; Wilder, Eisen, Bearden, Montenieri, Gage, and Antolin, 2008; Wilder, Eisen, Bearden, Montenieri, and others, 2008). During this time, if the flea feeds on an uninfected host, the bacteria within the flea's digestive tract may be pushed further into its gut, leading to decreased infection transmission efficiency (Eisen, Lowell, and others 2007; Wilder, Eisen, Bearden, Montenieri, Gage, and Antolin, 2008; Wilder, Eisen, Bearden, Montenieri, and others, 2008).

- Some flea species, such as the cat flea (*Ctenocephalides felis*), rapidly eliminate *Y. pestis* in their feces making them poor transmitters (Eisen, Borchert, and others, 2008). In other fleas, *Y. pestis* multiplies within the digestive tract of the flea and forms dense clumps that are too big to pass into the hindgut.

Day 5 and Later: Transmission from Fleas with Blocked Foreguts to Mammals

- In some flea species, clusters of *Y. pestis* accumulate in the midgut and gradually extend into the proventriculus. The bacteria produce a biofilm to adhere to the surface of the spines lining the proventriculus, thus enabling them to resist being pumped into the midgut by the proventriculus (Jarrett, 2004; Hinnebusch and others, 2008).

- Between 3 and 9 days after the flea feeds on an infected host, the flea's proventriculus becomes blocked by the mass of bacilli that may extend into the esophagus. This blockage prevents ingested blood from reaching the flea's stomach and interferes with the valvular function of the proventriculus. Complete blockage of the proventriculus is not necessary for transmission of the bacteria from fleas to mammals; fleas with only partial obstruction can still transmit the bacteria.

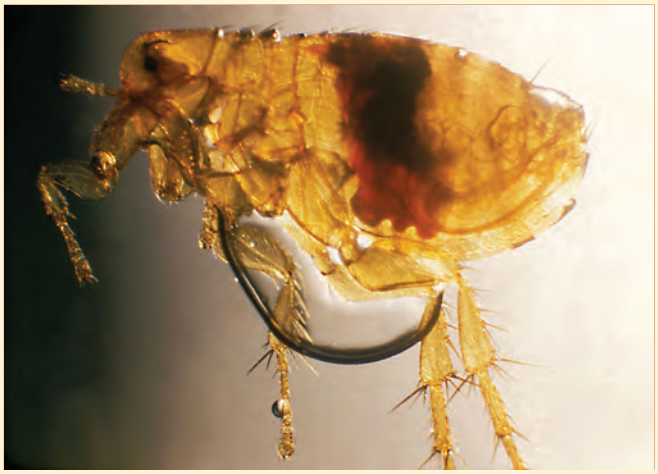
- As the starving flea repeatedly tries to feed, blood sucked from the mammalian host fills the esophagus, mixes with bacilli, and is regurgitated back into the mammalian host. As many as 11,000 to 24,000 bacilli may be regurgitated by the flea (Burroughs, 1947). Eventually, the blocked flea dies from starvation and dehydration, usually within 5 days (Burroughs, 1947).

Flea species that rarely develop foregut blockage, such as the ground squirrel flea *O. montana*, may continue to transmit the bacteria for long periods of time, especially after ingesting blood from additional infected hosts (Eisen, Lowell, and others, 2007).

For the rat flea *X. cheopis*, which can transmit *Y. pestis* both in the early-phase and after becoming blocked with equal efficiency, the period of potential transmission may be more than 1 month (Eisen, Wilder, and others, 2007; Engelthaler and others, 2000). Biofilm-induced blockages, or partial blockages, in fleas could be important for the maintenance of *Y. pestis* infections in fleas, allowing fleas to act as reservoirs of infection between transmission seasons (Gage and Kosoy, 2005; Vetter and others, 2010).

Transmission from Mammals to Fleas

- In a mammal, *Y. pestis* bacilli travel from the site of the flea bite to the regional lymph nodes, where they multiply rapidly and cause the formation of a bubo (swollen lymph node).
- The infection spreads into the bloodstream, and bacilli spread to the liver, spleen, and other organs, where they continue to multiply. The infection may progress to septicemic and pneumonic plague.
- High levels of bacilli in the blood increase the chances of infecting fleas that feed on the infected mammal. When the mammal dies, resident fleas depart to search for other hosts, including humans, thereby spreading the disease.



Plague infected male flea 28 days after feeding on an inoculated mouse. Photo from the Centers for Disease Control and Prevention (CDC).

the world have further subdivided the biovars and Pestoides into eight **populations** of *Y. pestis* (Achtman and others, 2004). However, these molecular groupings do not directly correspond to the biochemical characteristics associated with biovars, and different strains within a molecular grouping may have different biochemical characteristics. Historically, the original three biovars have been linked to the three plague pandemics. Recent evidence based on **genotyping** of strains indicates that the Orientalis biovar was involved in all three pandemics (Drancourt and others, 2004; Drancourt and others, 2007). Analysis of **rRNA gene restriction** patterns has divided strains of *Y. pestis* into 16 **ribotypes** (Guiyoule and others, 1994). Ribotypes B and O made up the majority of the strains studied and were associated with the biovars responsible for the three pandemics.

Geographic Distribution

Plague probably originated in Central Asia and has since spread worldwide. Natural foci of plague, "geographical areas in which **reservoir** and vector species coexist and in which the infection is common" (Biggins and Kosoy, 2001), occur on all inhabited continents, except Australia, in areas where populations of suitable rodent reservoirs and flea vectors are found (fig. 3). Appropriate climatic and landscape conditions must be present. In general, natural foci of plague occur between parallels 55°N and 40°S in **tropical** and **subtropical** regions as well as warmer parts of **temperate latitudes**. Tropical foci tend to be in cooler, relatively dry upland areas, for example, the central highlands in Vietnam and Madagascar and mountains of Tanzania. Areas such as **semideserts**, **steppes**, **savannas**, and **prairies** have low annual precipitation or prolonged dry seasons that limit the growth of thick woody vegetation, and plague is found in these areas because they are suitable habitat for rodents and their fleas. Plague is not found in **desert** areas, which have few or no rodents and are excessively hot and dry, or in large forested areas. Natural foci of plague in animals are found in North and South America, Africa, Asia, and limited areas of southeastern Europe, and they cover only 6–7 percent of Earth's dry land (Anisimov and others, 2004). In the United States, **sylvatic** plague is **enzootic** west of the 100th meridian (Cully and others, 2000), the historical boundary between the humid east and the dry west, where irrigation is required for successful agriculture (fig. 4). It is unclear why plague is nearly absent east of this line, because susceptible rodent species and flea vectors are present east of the line as well as west (Cully and Williams, 2001; Cully and others, 2006). Plague is most **prevalent** in the southwest (New Mexico, Arizona, Colorado, Utah) and the Pacific region (California, Oregon, Nevada). Species of rodents, and their fleas, within these foci vary according to geographic region (table 6).

During the period 1954–2003, plague in humans was reported from 39 countries (Tikhomirov, 1999; World Health Organization, 2004). In the 1970s, most cases of plague in humans were reported from Asia, particularly Vietnam. However, more recently most cases occur in African countries (fig. 5), especially Madagascar. In the United States, human cases are most frequent in the Southwest (New Mexico, Arizona, Colorado, Utah) and the Pacific regions (California, Oregon, Nevada).

Table 5. Classification systems of *Y. pestis* strains.

[In the classification of bacteria, strains with sufficiently distinct characteristics (for example, chemical or molecular) are biovars, or considered a subspecies of a taxonomic species (Devignat, 1951). A ribotype is a grouping of bacteria within a species based on similarities in ribosomal ribonucleic acid (rRNA) (Guiyoule and others, 1994). Blank cells indicate there is no corresponding biovar or ribotype for the molecular grouping.]

Molecular grouping[1]	Biochemical characteristics		Biovar	Biochemical characteristics			Corresponding ribotypes
	Ability to reduce nitrate	Ability to ferment glycerol		Ability to reduce nitrate	Ability to ferment glycerol	Ability to ferment arabinose[2]	
1.ANT	Yes	Yes	Antiqua	Yes	Yes	Yes	F to O
2.ANT	Varies	Yes	Antiqua	Yes	Yes	Yes	F to O
2.MED	No	Varies	Mediaevalis	No	Yes	Yes	O and P
1.ORI	Yes	Varies	Orientalis	Yes	No	Yes	A to G
0.PE4	No	Yes	Microtus[3]	No	Yes	No	
0.PE1	No	Yes					
0.PE2	Yes	Yes					
0.PE3	Yes	Yes					

[1]Achtman and others, 2004.

[2, 3] Zhou and others, 2004

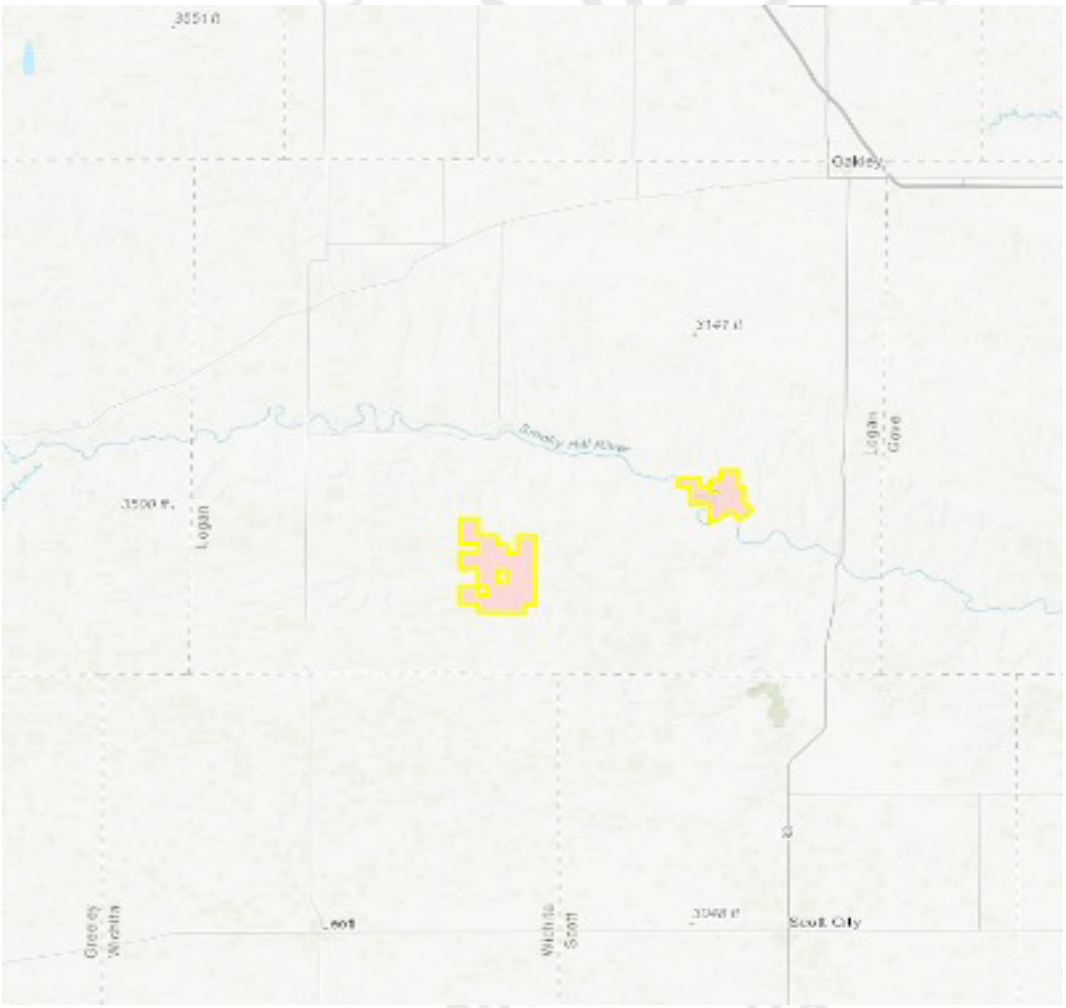
Attachment C

ESA Protection Bulletin
Environmental Protection Agency

Endangered Species Protection Bulletin

Valid For: February 2021

1 Areas where pesticide use must be limited are identified on the map. A legend is located below the map to help pinpoint these locations.



Limitation Area

2 Look below at the Pesticide Use Limitation Summary Table. This table lists the user selected Active Ingredient(s) (ALs) or Product(s) with pesticide use limitations on the printed map. Locate the Active Ingredient (AI) or Product you intend to apply in this table and identify the code in the last column. This code indicates the specific limitation associated with that AI or Product. A limitation description for each code can be found below in the Codes and Limitations Table. If multiple Pesticide Use Limitation Areas (PULAs) are visible on the map, these tables provide information for the highlighted PULA.

If you are applying a pesticide that contains more than one Active Ingredient, or multiple Products, then multiple codes may apply. Follow the limitations for all codes when using this pesticide.

This document contains legal requirements for the use of certain pesticides.
Do not modify any text, graphics or coloration or otherwise alter this document.
ESPP Contact: ESPP@epa.gov Phone: 1-844-447-3813

Pesticide Use Limitation Summary Table

AI/Product	Use	App Method	Formulation	Code
ROZOL PRAIRIE DOG BAIT [7173-286]	Black-tailed Prairie Dog	Bait (loose)	Bait	R1

Codes and Limitations Table

Code	Limitation
R1	Rozol Prairie Dog Bait use is prohibited in this area.

This document contains legal requirements for the use of certain pesticides.
Do not modify any text, graphics or coloration or otherwise alter this document.
ESPP Contact: ESPP@epa.gov Phone: 1-844-447-3813

Attachment D

<u>KSA References</u>

K.S.A. 80 §1201 - *Destruction of prairie dogs, moles and gophers*

K.S.A. 80-1202 *Eradication of prairie dogs; duties of township trustee; entry upon land, exception; assessment of costs*

K.S.A. 80-1208 - *Same; penalty for failure to perform duties*

K.A.R. § 115-16-2 - *Prairie dog control permit; application and requirements*

80-1201. **Destruction of prairie dogs, moles and gophers; expense from general fund.** The township board of any township in this state, at any regular or special meeting, is hereby authorized to purchase material and to employ one or more suitable persons to destroy prairie dogs, moles and gophers within the limits of such township, any material so purchased and compensation for such services to be paid out of the general fund of such township.

History: L. 1901, ch. 273, § 1; R.S. 1923, 80-1201; L. 1965, ch. 548, § 1; June 30.

fastcase
Smarter legal research.

80-1202. **Eradication of prairie dogs; duties of township trustees; entry upon land, exceptions; assessment of costs.** In addition to the duties now prescribed by law for township trustees, in counties infested by prairie dogs, they may do and perform the following services: That the township trustees of the several townships in this state infested by prairie dogs may enter upon the lands so infested in their respective townships and make diligent efforts to exterminate all prairie dogs thereon. For the purpose of enabling them to carry into effect the provisions of this act, the trustees are authorized and empowered to employ all such assistance and to purchase the poison or such appliances and material as they may deem necessary to exterminate such dogs. The work of such extermination shall all be done under the supervision and direction of the trustees: Provided, That in any county having a population of more than four thousand (4,000) and less than five thousand two hundred (5,200) which contains no city of the second class and not more than two (2) cities of the third class, the trustees shall before entering upon the lands give written notice to any landowner who shall fail or refuse to make use of the materials offered or provided, that unless he or she endeavors to control such prairie dogs according to the methods prescribed by the board of trustees will, within fifteen (15) days after the date specified in the notice enter upon his or her land and use the necessary materials to eradicate the prairie dogs thereon; and the trustees or their agents, may thereafter enter upon the land and proceed to eradicate such prairie dogs.

After eradication of such prairie dogs, the trustees shall immediately notify the landowner or landowners with an itemized statement of the costs thereof, and stating that unless such amount is paid within thirty (30) days from the date of the notice, that the amount shall become a lien upon their real estate. If such costs are not paid within thirty (30) days they shall be assessed against the property of the landowner and the township clerk shall, at the time of certifying other township taxes to the county clerk, certify the costs of such eradication and the county clerk shall extend the same on the tax roll of the township against such property and said costs shall be collected by the county treasurer and paid to the township as other township taxes are collected and paid.

History: L. 1909, ch. 181, § 1; L. 1919, ch. 315, § 1; R.S. 1923, 80-1202; L. 1965, ch. 548, § 2; L. 1969, ch. 472, § 1; L. 1972, ch. 384, § 1; March 20.

Source or Prior Law:

L. 1903, ch. 378, § 1.

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80-1208. **Same; penalty for failure to perform duties.** Any township trustee or board of county commissioners failing to perform any of the duties imposed upon them by this act shall be deemed guilty of a misdemeanor, and upon conviction thereof be subject to a fine of not less than fifty dollars nor exceeding one hundred dollars for each offense thus committed.

History: L. 1909, ch. 181, § 7; April 3; R.S. 1923, 80-1208.

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Smarter legal research.

115-16-2. Prairie dog control permit; application and requirements. (a) A prairie dog control permit shall be required to use any poisonous gas or smoke to control prairie dogs, except toxicants labeled and registered for above ground use for prairie dog control shall not require a prairie dog permit.
(b) Any person may apply to the secretary for a prairie dog control permit. The application shall be on forms provided by the department and each applicant shall provide the following information:
(1) the name of the applicant;
(2) the address of the applicant;
(3) the telephone number of the applicant;
(4) the legal description of land where the poisonous gas or smoke will be used;
(5) a description of the problem requiring prairie dog control;
(6) the type of control method to be used;
(7) written approval from the extension specialist in wildlife damage control; and
(8) other information as required by the secretary.
(c) Issuance of a permit may be denied by the secretary if:
(1) the permit application is unclear or incomplete;
(2) the need for prairie dog control has not been established; or
(3) use of poisonous gas or smoke would pose inordinate risk to the public, non-target wildlife or the environment.
(d) The permit shall be valid only for the time period specified on the permit, but shall not exceed 120 days.
(e) The permit shall be valid only for the locations specified in the permit.
(f) In addition to other penalties as prescribed by law, a prairie dog control permit may be revoked by the secretary if:
(1) the permit was secured through false representation; or
(2) the permittee fails to meet permit requirements or violates permit conditions.
(g) All prairie dog control performed under the permit shall be subject to all federal and state laws and rules and regulations. (Authorized by K.S.A. 1989 Supp. 32-807 and K.S.A. 1989 Supp. 32-955; implementing K.S.A. 1989 Supp. 32-955, K.S.A. 1989 Supp. 32-1002 and K.S.A. 1989 Supp. 32-1003; effective Sept. 10, 1990.)

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Attachment E

Rozol Label

PRECAUTIONARY STATEMENTS

Hazard to Humans and Domestic Animals

CAUTION: Harmful if swallowed or absorbed through the skin because it may reduce the clotting ability of blood and cause bleeding. Keep away from children, domestic animals and pets. Do not get in eyes on skin or on clothing. All handlers (including applicators) must wear shoes plus socks, and gloves. Any person who retrieves carcasses or unused bait following application of this product must wear gloves.

USER SAFETY REQUIREMENTS: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash hands thoroughly after applying bait and before eating, drinking, chewing gum, using tobacco or using the toilet and change into clean clothing.

FIRST AID: Have label when obtaining treatment advice.

If swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor.

If on skin: Take off contaminated clothing. Rinse skin with plenty of cool water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

TREATMENT FOR PET POISONING: If animal eats bait, call veterinarian at once.

NOTE TO PHYSICIAN OR VETERINARIAN: Contains chlorophacinone, an anticoagulant. If swallowed, this material may reduce the clotting ability of the blood and cause bleeding. For humans or dogs that have ingested this product and/or have obvious poisoning symptoms (bleeding or prolonged prothrombin times), give Vitamin K_1 intramuscularly or orally.

ENVIRONMENTAL HAZARDS: This product is toxic to fish and wildlife. Dogs and other predatory and scavenging mammals and birds might be poisoned if they feed upon animals that have eaten this bait. Do not apply directly to water, or to areas where surface water is present. Do not contaminate water by cleaning of equipment or disposal of wastes. Runoff also may be hazardous to aquatic organisms in water adjacent to treated areas.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in original container in a cool, dry place inaccessible to children and pets.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of in trash or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. Completely empty container, then offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill.

WARRANTY: To the extent consistent with applicable law, seller makes no warranty, expressed or implied, concerning use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of product when such use and/or handling is contrary to label instructions.

EPA Reg. No. 7173-286
EPA Est. No. 7173-WI-1

RESTRICTED USE PESTICIDE

DUE TO HAZARD TO NONTARGET ORGANISMS

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's Certification.

rozol®

PRAIRIE DOG BAIT

Active Ingredient: chlorophacinone	0.005%
inert Ingredients	99.995%
Total	100.000%

EPA Reg. No. 7173-286 EPA Est. No. 7173-WI-1

KEEP OUT OF REACH OF CHILDREN

CAUTION: See side panel for additional precautionary statements.

LIPHATECH®

Liphatech, Inc.
3600 W. Elm Street
Milwaukee, WI 53209
(800) 351-1476

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

READ THIS LABEL and follow all use directions and precautions. Only use for sites, pests, and application methods specified on this label.

IMPORTANT: Do not expose children, pets, or other nontarget animals to rodenticides. To help prevent accidents:

1. Store product not in use in a location out of reach of children and pets.
2. Dispose of product container, unused, spoiled and unconsumed bait as specified on this label.

Use restrictions: This product may only be used as follows:

1. Sites/Pests: Black-Tailed Prairie Dogs (Cynomys ludovicianus) on rangeland and adjacent noncrop areas.

2. States: Colorado, Kansas, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas and Wyoming. **Do not apply this product within the exterior boundaries of the Crow Reservation or the Blackfeet Reservation in Montana.**

3. Application Method: Apply bait by hand scoop or a mechanical bait application machine that is designed, constructed and operated in a manner that ensures that bait is properly placed at least 6 inches down the prairie dog burrows. This product may only be used in underground applications. Do not apply bait on or above ground level. Treat only active burrows.

4. Treatment Period: Apply between October 1 and March 15 of the following year, when animals will most readily take the grain bait.

5. Non-Applicators: Do not allow children, pets, domestic animals or persons not involved in the application to be in the area where the product is being applied.

6. Grazing Restriction: Do not allow livestock to graze in treated areas for 14 days after treatment and when no bait is found above ground.

7. Do not use any other rodenticides containing anticoagulants (diphacinone) in prairie dog towns during the treatment period allowed on this label.

Endangered Species: It is a Federal offense to use any pesticide in a manner that results in the death of an endangered species. Use of this product may pose a hazard to endangered or threatened species. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the area in which you are applying the product. To obtain Bulletins, no more than six months before using this product, consult http://www.epa.gov/espp/ or call 844-447-3813. You must use the Bulletin valid for the month in which you will apply the product.

Site Assessment: Before applying this product, identify active prairie dog burrows by visual observation. The openings of active burrows will generally be free of leaves, seeds, other debris or spider webs, and will show freshly turned earth, and have prairie dog feces nearby.

Application: Apply 1/4 cup (53 grams or nearly 2 ounces) of bait at least 6 inches down active prairie dog burrows. Make sure no bait is left on the soil surface at the time of application. Applicator must retrieve and dispose of any bait that is spilled above ground or placed less than 6 inches down the burrow entrance.

Follow-up: Prairie dogs that have eaten this bait will begin to die off 4 to 5 days after they eat a lethal amount. The applicator must return to the site within 4 days after bait application, and at 1 to 2 day intervals, to collect and properly dispose of any bait or dead or dying prairie dogs found on the surface. Carcass searches must be performed using a line-transect method that completely covers the baited area. Transect center lines must be not more than 200 feet (about 60 meters) apart, and should be considerably less if searches are conducted in more densely vegetated sites. Transect lines may be traveled on foot or by vehicle at a rate not to exceed 4 mph. All carcasses found above ground must be collected and disposed of properly. Continue to collect and dispose of dead or dying prairie dogs and search for non-target animals for at least two weeks, but longer if carcasses are still being found at that time. Carcass collection should occur in late afternoon, near sundown, to reduce the potential of nocturnal animals finding carcasses and dying animals. Bury carcasses on site in holes dug at least 18 inches deep or in inactive burrows (no longer being used by prairie dogs or other species) to avoid non-target animal scavenging. Burial includes covering and packing the hole or burrow with soil. If burial is not practical (due to frozen ground, etc.) and other disposal methods are allowed by state and local authorities, collected carcasses may be disposed of by other methods to insure that the carcasses are inaccessible to scavengers.

All dead or dying non-target animals must be reported to the National Pesticide Information Center 1-800-858-7378 as soon as possible. Any apparently injured or sick Federally listed species must also be immediately reported by calling 303-236-7540 (if located in Kansas, Nebraska, the Dakotas, Montana, Colorado or Wyoming) or 505-248-7889 (if located in Texas, New Mexico or Oklahoma). The Black-footed Ferret Coordinator must also be contacted if ferrets are found during Rozol Prairie Dog Bait applications or carcass searches at 970-897-2730 x224. If live black footed ferrets are found outside reintroduction sites, before, during or after Rozol Prairie Dog Bait application, the Black-footed Ferret Coordinator must be contacted immediately and sufficient time must be allowed for the FWS to capture and relocate the black-footed ferret(s) before Rozol Prairie Dog Bait application.

Reapplication: If prairie dog activity persists several weeks or months after the bait was applied, a second application may be made, by treating burrows in the same manner, time period and procedure as the first application. Follow all application, site assessment and follow-up directions and use restrictions as found above. (011717)

SPECIMEN

Attachment D

Finding of Fact and Conclusions of Law
The Kansas Natural Resource Coalition

In Re: The Advisability of Listing The Lesser Prairie Chicken as a Threatened Species under the Endangered Species Act.

January 29, 2014

FINDINGS OF FACT
AND
CONCLUSIONS OF LAW

of

The Kansas Natural Resource Coalition

In Re:
The Advisability Of Listing The Lesser Prairie Chicken
as a
Threatened Species Under The Endangered Species Act

January 29, 2014

Ken J. Klemm
President
Commissioner, Sherman County

Mahlon Tuttle
Vice President
Commissioner, Gove County

Teresa Harder
Commissioner, Morton County

J. R. Carlson
Executive Director

Nikki Schwerdferger
Commissioner, Hamilton County

Fred Kelly Grant
Hearing Officer

In Re:
The Advisability of Listing the Lesser Prairie Chicken as a Threatened Species under the Endangered Species Act

Hearing Date:	November 7 and 8, 2013
Hearing Location:	Clarion Hotel 1911 East Kansas Avenue, Garden City, KS 67846
Hearing Officer:	Fred Kelly Grant
Hearing Council:	Ken J. Klemm Mahlon Tuttle Teresa Harder Nikki Schwerdferger
Court Reporter:	Lee Ann Bates, CSR, RPR, CRR Advanced Court Reporting Services PO Box 1872 Hutchinson, KS 67504-1872

The Hearing Council of the Kansas Natural Resource Coalition examined if the public record, expert testimony, science, information, studies and the Listing Proposal by the United States Fish and Wildlife Service itself contain sufficient evidence to conclude listing the Lesser Prairie Chicken (*Tumpanuchus pallidicicutus*) as a Threatened Species under the Endangered Species Act (ESA) is advisable and necessary for its continued existence, viability and preservation.

Because ESA in not a stand-alone mandate, preservation of the Lesser Prairie Chicken must take place in the context of and with reasonable consideration for human environments, economic systems and local culture.

For reasons presented in this report, the Hearing Council concludes the USFWS Listing Proposal does not present science supportive of the listing of the Lesser Prairie Chicken as a Threatened Species under ESA, and existing state, federal and local programs are more than adequate to ensure survival, preservation and viability of the species.

The Hearing Council further concludes minimum standards that evaluate economic impacts, ensure social cohesiveness, protect public safety, consider cultural sensitivity, protect underprivileged citizens, ensure local voice and guard against private property takes have not been met.

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PUBLIC HEARING PARTICIPANTS

Carl Uhrich	Logan County Commissioner
Sheila Ellis	Research Analyst, Landholder
Keith Edwards	Farmer, Rancher adjacent to ferret release site in Logan County
Kyle Hoffman	Kansas State House of Representatives, Vice Chair House Agricultural Natural Resource Committee
Cameron Edwards	Farmer, Rancher adjacent to ferret release site in Logan County
James Carlson	KNRC Executive Director; Engineer; Environmental Policy and Technical Expert
Keith Sexson	Assistant Secretary, Kansas Department of Wildlife, Parks and Tourism; State Director, Western Area Fish and Wildlife Association
Jim Pitman	Vice Chair Western Area Fish and Wildlife Association; Small Game Coordinator, Kansas Department of Wildlife, Parks and Tourism;
Mike Lewis	Hamilton County Commissioner
Bruce Graham	CEO, Kansas Electric Cooperatives, Inc.
Don Hineman	Kansas State Representative, District 118
Nikki Schwerdfeger	Hamilton County Commissioner
Clint Pearson	Farm Manager, Banker, Rancher
Jillane Hixson	Rancher, Farmer, Conservation Easement Holder
Val Emick	Rancher, Farmer, Conservation Easement Holder
Lynn Freese	Director of Member Services - Wheatland Electric Cooperative
Kirk Thompson	General Manager - CMS Electric Cooperative, Inc.
Ken Klemm	Sherman County Commissioner
Paul Reynolds	Manager of Environment - Sunflower Electric Power Corp.
Nicole Dick	Professor of Mathematics and Statistics - Garden City Community College
Robert Zink, PhD	Breckenridge Chair in Ornithology, Bell Museum; Professor of Ecology, Evolution, and Behavior, University of Minnesota
Norman MacLeod	Land, Water & Endangered Species Consultant; Former Executive Director at Environmental Sciences Independent Peer Review Institute
Ralph Ostmeyer	Kansas State Senator - District 40
Larry Powell	Kansas State Senator - District 39

GENERAL

1. On December 11, 2012 the United States Fish and Wildlife Service (USFWS) proposed to list the Lesser Prairie Chicken (LPC) as a Threatened Species under the Endangered Species Act (ESA). In subsequent Federal Register Notifications, USFWS has proposed a special 4(d) Rule under Section 4 of the ESA.

2. Implementation of the Lesser Prairie Chicken Listing Proposal and 4(d) Rule would take place through a three pronged system; the 5 State Rangewide Conservation Plan by Western Area Fish and Wildlife Agencies (WAFWA) proposes to create a demand system, deriving mitigation revenue for administration of Lesser Prairie Chicken conservation programs from utilities, energy, wind producers, agriculture, local government and others implicated for habitat impacts. Mitigation monies collected from impact activities are then proposed to purchase (supply) conservation habitat throughout the region occupied by the Lesser Prairie Chicken.

3. The second and third prongs of the USFWS Listing Proposal implements policies from the Natural Resources Conservation Service (NRCS)/USFWS Conference Opinion and Biological Opinion process; that is US Department of Agriculture (USDA)/NRCS programs will be modified to levy requirements on private land for those participating in habitat, farm and other federal NRCS economic-incentive programs. Because a large portion of Kansas farmers and ranchers participate in federal programs, NRCS Conservation Practices 645 and 528 will affect a significant portion of private lands.

4. The 32 County Kansas Natural Resource Coalition (KNRC) prepared and adopted into local ordinances a *Natural Resource Coordination Plan* and *Lesser Prairie Chicken Conservation, Study and Management Plan*. The KNRC Coordination Plan contains as its basis Federal statutes, regulations, and Executive Orders (EO), and the Coalition relies on the extensive federal record as foundation for coordination, environmental procedure, due process and facts provided in this Finding of Fact and Conclusions of Law document.

5. KNRC's basis for expecting coordination during the Lesser Prairie Chicken Listing Proposal is derived from the Endangered Species Act Section 4(b) which requires the Secretary of Interior to *"take into account conservation efforts by political subdivisions of states,"* and the Federal Land Policy and Management Act (FLPMA) Section 1712(c)(9) requiring consistency with local plans.

6. The *Lesser Prairie Chicken Conservation, Management and Study Plan* prepared by KNRC contains viable, low cost, scientifically sound and ongoing conservation practices for the Lesser Prairie Chicken, including a process to fill data gaps and technical uncertainties in the scientific record.

7. Application of the authorities in the KNRC *Conservation* and *Coordination Plans* is based on the Tenth Amendment police power of the United States Constitution empowering local government to protect public safety, health and welfare. Local governments have a duty to guard against damage to the economic stability and the social cohesiveness of the communities they serve.

BACKGROUND

The Kansas Natural Resource Coalition (KNRC) -

8. KNRC is a coalition of 32 Western Kansas counties that have real and material interest in the proposal to list the Lesser Prairie Chicken as a threatened species under ESA. Since its inception and the December 11, 2012 proposal by USFWS, KNRC has been actively engaged in the process of coordination through its Lesser Prairie Chicken Conservation, Study and Management Plan.

9. The mission of the KNRC is:

> *The Kansas Natural Resource Coalition (KNRC) is an association of counties who maintain collective and participatory involvement in administrative government on behalf of its citizenry. The coalition serves as a conduit between local, state and federal governments to promote balanced, necessary and effective administrative policymaking. The KNRC mission includes monitoring, analyzing, understanding, communicating and participating in those initiatives that materially affect the natural or human systems governed by individual member counties.*

Approach -

10. Background documents of the Coalition's Lesser Prairie Chicken conservation efforts have been made available to KNRC members and USFWS through correspondence, filings to the public record, data transmittals, verbal communications, and coordination meetings. KNRC's detailed knowledge of the technical issues, conservation requirements, historical context, policy initiatives, and statutory/executive requirements surrounding the Lesser Prairie Chicken all coalesce in the Public Hearing process and the Coalition's Finding of Fact and Conclusions of Law.

11. A Public Hearing was held on November 7 and 8, 2013 to receive, review and evaluate available information pertaining to the proposed Lesser Prairie Chicken listing and establish compliance of USFWS with congressional acts, presidential EOs, federal and state regulations, sound scientific principals, economic considerations, cultural and civic impacts, good environmental practice and established Plans.

12. As part of the Public Hearing and information-review process, KNRC considered the historical context, relationships of USFWS with local government and communities, the availability, accuracy, quality and thoroughness of technical information, scope of the listing approach, and necessity for ESA protections in light of existing conservation and regulatory programs. Based upon the established record, incomplete or missing studies, and testimony presented, the hearing council weighed the efficacy of the Listing Proposal against potential impacts to economic stability, social cohesiveness, diminution of private property values, and potential conservation deficits in state and local plans.

Criteria for Evaluation of Listing Proposal -

13. Criteria used to guide the Public Hearing and prepare this Finding of Fact document include:

- Do statutory requirements exist for USFWS to attempt consistency with the Coalitions' *Lesser Prairie Chicken Conservation, Management, and Study Plan*?
- Are there Regulatory, Statutory and/or Executive laws requiring USFWS to perform cultural and socioeconomic analysis in conjunction with, in preparation for, or as part of the USFWS Threatened Listing Proposal for the Lesser Prairie Chicken?
- Is there sufficient evidence in the public record, from testimony, and in the experience of KNRC Hearing Council to conclude the USFWS Lesser Prairie Chicken Listing Proposal is a *Major Federal Action* as defined by National Environmental Policy Act (NEPA) and Regulations by the Council on Environmental Quality (CEQ)?
- Does the USFWS Listing Proposal and 4(d) Rule demonstrate the means and measures necessary to create, balance and maintain harmonic conditions between the existing human environment and conservation requirements of the Lesser Prairie Chicken?
- Is the October 23, 2013 endorsement of the WAFWA Rangewide Plan by USFWS considered a *Major Federal Action*?
- Is there sufficient information in the public record, correspondence, and from testimony to conclude participation by Kansas Department of Wildlife Parks and Tourism (KDWPT) is a Cooperating Agency with USFWS in development of the WAFWA Rangewide Plan?
- Is there sufficient information in the public record, correspondence and from testimony to conclude participation by USDA/NRCS is a Cooperating Agency with USFWS through its participation in preparation of Conference/Biological Opinions?
- Does a Regulatory, Statutory and/or Executive-Order basis exist requiring USFWS, KDWPT and NRCS to coordinate efforts, initiatives, activities and other *Major Federal Actions* with individual KNRC members prior to initiation of such action?

- Based upon the elements contained in the KNRC Coordination Plan, Exhibits and Testimony from the Public Hearing and its own experience, can KNRC conclude USFWS has failed in the requirement to coordinate the Lesser Prairie Chicken threatened-listing proposal with local government?
- Is there evidence to conclude any failure by USFWS to coordinate its actions with KNRC members in the Lesser Prairie Chicken listing process may be knowing, willful and deliberate?
- The Endangered Species Act, Section 4(b)(1)(A) BASIS FOR DETERMINATIONS, provides:

  > "*The Secretary shall make determinations required by subsection (a)(1) solely on the basis of the <u>best scientific and commercial data available to him after conducting a review of the status of the species and after taking into account those efforts, if any</u>, being made by any State or foreign nation, <u>or any political subdivision of a State</u> or foreign nation, to protect such species, whether by predator control, protection of habitat and food supply, or other conservation practices, within any area under its jurisdiction, or on the high seas*."

- Is there evidence in the public record and from testimony at the Public Hearing to conclude USFWS has taken "*into account*" the *Lesser Prairie Chicken Conservation, Management, and Study Plan* and the efforts by local government in its Listing Proposal?
- Have the potential economic, cultural or property impacts stemming from potential implementation of the WAFWA 5 State Plan or NRCS Conservation Practices 645 or 528 been reasonably evaluated, made available for consideration and is the technical basis for them warranted?
- Does a sufficient technical record exist to conclude a "*Threatened*" Determination of the Lesser Prairie Chicken over its 5-State Range due to historical, ongoing, and probable future impact of cumulative habitat loss and fragmentation resulting from conversion of grasslands to agricultural use, encroachment by invasive woody plants, wind energy, development, petroleum production, presence of roads and manmade vertical structures including tower, utility lines, fences, turbines, wells and buildings?
- Does the body of information, evidence, exhibits and testimony from the Public Hearing provide sound basis to conclude the existence or future of the Lesser Prairie Chicken is threatened due to: habitat destruction, modification, or curtailment; the species or its habitat is over utilized for commercial, recreational, scientific or educational purposes; the species is particularly vulnerable or affected by disease or predation; existing state or federal conservation programs are not adequate or sufficient to ensure the existence of the Lesser Prairie Chicken?
- Has a reasonable range of unintended private property take consequences from implementation of the WAFWA Rangewide Plan or NRCS Conservation Practices 645 and 528 been made available to local government?

COORDINATION HISTORY; NOTIFICATION

14. On August 23, 2013 KNRC transmitted its *Natural Resource Coordination Plan* and *Lesser Prairie Chicken Conservation, Management and Study Plan* throughout the US Departments of Interior, Commerce, Agriculture and to senior leadership of USFWS in Regions 2 and 6.

15. The KNRC Coordination Plan, adopted into local ordinances of all 32 KNRC Counties, provides the foundation for local governments to call for meaningful participation in Major Federal Actions at the onset of Major Federal Action; the Coordination Plan is a compilation of federal statutes, EOs and regulations that require assessment and balancing of natural and human environments and meaningful coordination with local government on those Major Actions that concern them.

16. Mr. James Carlson, environmental policy expert, engineer, and Executive Director for the Kansas Natural Resource Coalition testified that on September 11, 2013, coordination was formally and personally invoked with USFWS Deputy Director of Endangered Species Paul Souza and Department of Interior (DOI) Counselor to Assistant Secretary Michael Bean. During that Coordination Meeting, both Mr. Souza and Mr. Bean were given Notice of the November 7 and 8, 2013 KNRC Public Hearing.

17. Mr. Carlson testified he and President Klemm reviewed in detail with USFWS the elements from the KNRC Coordination and Conservation Plans, as well as EOs and coordination requirements found in the Federal Land Policy and Management Act. During that meeting the requirement to achieve consistency with the KNRC *Lesser Prairie Chicken Conservation, Management and Study Plan* was established.

18. Mr. Carlson testified he specifically drew attention to the requirements of US Department of Interior Agencies to coordinate in EO 13352 and the need for a Regulatory Impact Analysis in EO 12291.

19. Mr. Carlson testified USFWS was *"nearly to completely disinterested in the coordination and conservation plans we had presented,"* and that USFWS pointed KNRC to the WAFWA Rangewide Plan.

20. At the Public Hearing Mr. Carlson pointed out WAFWA is quasi-governmental organization, and the WAFWA Rangewide Plan would be a collaboration of non-elected officials, testimony corroborated by Commissioner Ken Klemm.

21. Mr. Carlson testified Section 4 of the Endangered Species Act requires the Secretary of Interior to "take into account," which means to weigh and contemplate carefully the conservation measures by local government prior to making a determination under Section 4 of the Endangered Species Act.

22. Mr. Carlson testified in making its listing notification, USFWS had not coordinated whatsoever with local government.

23. Kansas State Representatives Hoffman, Hineman and Kansas State Senators Powell and Ostmeyer testified USFWS had not coordinated with their committees or the State Legislature. In his concluding remarks, Senator Powell stated:

> *"Unlike the Fish and Wildlife Service, the Coalition of Counties has coordinated its work and efforts extensively with me, with my [Senate Natural Resource] committee, and with the Legislative and Executive branches of our State Government. They [KNRC] have engaged in coordination with the [USFWS] Federal Agency, but the Coalition reports that the Service has not followed through with any meaningful discussions."*

24. Mr. Carlson testified commissioners from 16 KNRC Counties signed affidavits stating that USFWS has not notified them of the Lesser Prairie Chicken Listing Proposal nor contacted them at any point during the Listing Process; this testimony was corroborated by Commissioner Klemm, who shared the steering committee had a 100% return rate of all affidavits randomly distributed to 16 of the 32 KNRC counties.

25. At the November 1, Coordination Meeting Number 2, Heather Whitlaw, Supervisor of the Kansas USFWS Field Office, refused to discuss how the Service is "taking into account" the KNRC Plans, and she was unwilling – at the direction of the Department of Interior Solicitor – to describe how USFWS is attempting consistency between the endorsed WAFWA Rangewide Plan and the Coalition's *Lesser Prairie Chicken Conservation, Management and Study Plan*. Her response was simply to read a prepared statement:

> *"…language was that she [Solicitor Jacobsen] cannot agree with the Coalition's interpretation of federal authorities and feels that the project leaders/staff person, such as myself, is not prepared to debate this today."*

26. The October 18, 2013 agenda calling Coordination Meeting Number 2 specifically requested USFWS to send *"delegates who have the latitude, position and authority to speak for USFWS on regional policy, technical and Lesser Prairie Chicken issues that will be discussed."*

27. Ms. Heather Whitlaw, Field Supervisor of the Kansas Field Office was the only USFWS representative sent to the November 1, 2013 Coordination Meeting Number 2.

28. On November 7 and 8, 2013, KNRC held the Public Hearing to which both Ms. Whitlaw and Dana Jacobsen, Assistant Regional Solicitor Rocky Mountain Region for Department of Interior, refused repeated invitations. In written correspondence Ms. Whitlaw stated the Public Hearing is "*not the right forum for discussions*" of conservation plans.

29. Solicitor Jacobsen refused attendance at the KNRC Public Hearing due to "budget constraints" and "other commitments;" despite several public notifications and personal requests for attendance; no USFWS personnel attended the Public Hearing held by representatives of 32 counties of local government.

30. In correspondence following the November 1, 2013 Coordination Meeting, USFWS Solicitor Jacobsen and Director Ashe were specifically requested to attend the Public Hearing and give testimony and rationale behind USFWS disagreement with the Federal Statutes, EOs and CEQ Regulations presented in the KNRC *Natural Resource Coordination Plan*.

31. USFWS has refused to respond to written and verbal requests to coordinate with local government by non-attendance at the November 7 and 8, 2013 Public Hearing on the Lesser Prairie Chicken Listing Proposal.

32. As of the close of the Public Hearing process, USFWS has ignored repeated verbal and written requests to attempt consistency with the *Lesser Prairie Chicken Conservation, Management and Study Plan* and has provided no comments, questions or feed back on that document.

33. Sheila Ellis, Research Analyst, farmer and ranch owner, testified Logan County, Kansas did not receive early notification on the Lesser Prairie Chicken Listing Proposal and 4(d) Rule despite resolutions and notification requests.

34. Between May and November 2009, 38 Kansas counties in addition to Logan County, adopted and provided resolutions to USFWS specifically invoking coordination and notification rights prior to any Major Federal Action.

35. None of the 39 Kansas counties who invoked coordination were notified of USFWS's intent to list the Lesser Prairie Chicken as a Threatened Species before publication of the Listing Notification in the December 11, 2012 Federal Register.

36. Logan County did not receive notification of USFWS's intent to list the Lesser Prairie Chicken as a Threatened Species prior to publication of the Listing Notification in the December 11, 2012 Federal Register.

37. On October 26, 2012 at Logan County Coordination Meeting Number 6, USFWS Assistant Regional Director Thabault was specifically asked by Commissioner Uhrich about the Lesser Prairie Chicken, to which Mr. Thabault replied:

> *"…we [USFWS] were under that settlement agreement obliged to either issue a proposed rule or withdraw the listing in September. Uh, we were not able to comply with that date and we got a, uh, uh, some waiver from the court and we are now obliged to make some sort of determination, just shortly before the end of November. So, we will either publish a proposed rule to list the species or we will withdraw the species from the candidate list; those are the two decisions points we have before us. So no proposal's been put out yet."*

38. The Lesser Prairie Chicken Listing Notification was published in the Federal Register on December 11, 2012.

Previous USFWS Activities -

39. Commissioner Carl Uhrich of Logan County gave testimony that both the Kansas and Region 6 Offices of USFWS understand the Federal requirement to coordinate with local government; Logan County has sent "many" letters to USFWS calling coordination meetings and the Service has not denied the applicability of coordination or participation in coordination efforts on releases of Black-footed Ferrets in the county.

40. Commissioner Uhrich testified, "*USFWS will coordinate but not cooperate.*"

41. On November 19, 2007, Logan County adopted Resolution No. 07-11 invoking its right as local government to Coordinate and be notified prior to introduction of endangered species, including Black-footed Ferrets; USFWS was subsequently made aware of that resolution. Sheila Ellis testified that since the Logan County resolution, USFWS has repeatedly introduced Black-footed Ferrets at the Haverfield/Logan County release site without notification or explanation to local government. In some cases, Black-footed Ferret introductions came to light through the local press, placing the Logan County Commissioners in an awkward position with their constituents.

42. Introduction of the Black-footed Ferret at the Haverfield/Logan County release sites brought immediate conflict with local residents and litigation with the Logan County Commission. Local residents believe infestation and proliferation of Prairie Dogs, the primary food source of the Black-footed Ferret, to be incompatible with agriculture, ranching, property values, human safety and Kansas statutes which require local governments to eradicate all Prairie Dog populations on private lands.

43. A central issue with the introduction of the Black-footed Ferret is control of Prairie Dog infestations along the perimeter boundaries such that Prairie Dog infestations do not propagate and impact neighboring properties.

44. Commissioner Uhrich testified over time 150 Black-footed Ferrets have been released in Logan County, and published 2013 counts record a current population of 11 Black-footed Ferrets. The to-date cost of the Logan County Black-footed Ferret recovery program to the American taxpayer was stated to be approximately one million dollars. Corroborative testimony by Ms. Ellis put rangewide expenditures for the Black-footed Ferret program between 1981 and 2012 at $30 million.

45. Mrs. Ellis testified the Haverfield/Logan County release site was selected for introduction because plague has decimated Black-footed Ferret populations at the South Dakota introduction sites and recent South Dakota Black-footed Ferret counts at that site have declined, due to plague, from 350 to 72.

46. Keith Edwards, a 5th generation farmer and rancher who manages a 7 mile contiguous boundary with the Haverfield/Logan County release site questioned the genetic diversity of Black-footed Ferret populations released in Logan County, stating the ferrets are a result of line breeding from 16 DNA sources.

47. On October 15, 2009, then USFWS Field Office Supervisor Mike LeValley admitted on the record to knowingly and willfully violating the Logan County Notification Resolution by scheduling and performing Black-footed Ferret releases on the Haverfield/Logan County release site.

48. Requests to USFWS under the Data Quality Act for verification of the historical range of the Black-footed Ferret resulted in USFWS producing documentation of a ferret skull specimen, purportedly a dead pet originating from Gove County brought into a tavern in Logan County.

49. To date, USFWS has produced no credible scientific information in support of its claim the Black-footed Ferret once occupied the range within Logan County.

50. During coordination meetings held on April 4, 2012 and October 26, 2012, Logan County Commissioners were misled by on-the-record statements of USFWS Assistant Regional Director Thabault and Kansas Field Supervisor LeValley as to future planning for Black-footed Ferret releases in the historical purported range. Black-footed Ferret Safe Harbor Agreement (BFFSHA) documents released on December 19, 2012 reveal scoping began on March 13, 2012 and a September 12, 2012 final signature on a Memorandum of Understanding for the BFFSHA contradict the on-the-record statements given by Mr. Thabault and Mr. LeValley as to knowledge of plans and release activities.

51. Mrs. Ellis testified USFWS was unwilling to establish baseline Prairie Dog population counts along perimeter properties surrounding the Haverfield/Logan County introduction sites because of the "*unavailability*" of data. The message was USFWS was under no obligation to establish, monitor, or track changes in Prairie Dog populations on properties adjacent to the Haverfield/Logan County sites such that impact to neighboring properties could be gauged, monitored, and its impacts understood.

52. In public meetings, coordination meetings, public documents and its Environmental Assessment for the Black-footed Ferret introduction, USFWS characterized the project as "*experimental*" with a finite, 5-year duration. Classification of the Black-footed Ferret introduction as experimental was coupled with public assurances by USFWS to neighboring landholders and correspondence with Kansas US Representative Moran that ranching activities on adjacent properties would not be restricted and if "*problems arise that cannot be resolved*" with the Black-footed Ferret introduction project USFWS was prepared to terminate and "*take its ferrets and go home*."

53. When USFWS issued itself an Endangered Species Permit for introduction of the Black-footed Ferret, the permit was classified under Section 10(a) (Recovery) instead of Section 10(j) (Non-essential Experimental Population.) Throughout the permitting and introduction process, USFWS misrepresented to the Logan County Commissioners, Landholders, and the public at large the nature and intent of the Black-footed Ferret introduction program.

54. The Section 10(a) ESA permit for recovery of the Black-footed Ferret expired on December 31, 2012 and USFWS has not opened up the permit renewal for public comment in the Federal Register.

55. The Black-footed Ferret recovery program in Logan County, Kansas is currently taking place under the authority of an expired Endangered Species Act permit.

56. Keith Edwards testified rapid, prolific infestation of Prairie Dogs coupled with newly placed chemical (Rozol and Phostoxin) restrictions encumbered landholders' ability to control Prairie Dog populations when they are particularly active and reproduction rates high. The chemical restrictions were imposed despite USFWS commitments to local property owners that longstanding management and ranching practices would be unaffected by Black-footed Ferret introductions.

57. Prairie Dog chemical restrictions placed on neighboring land holders combined with escalating Prairie Dog infestations translated into substantial and documented proliferation on farms and ranches "*miles*" away from the Haverfield Black-footed Ferret introduction site. Impacts to the Edwards' property include increased labor for Prairie Dog control, expenditures for chemicals, lost revenue from decreased pasture usage, and reduced stocking rates. The Black-footed Ferret introductions and subsequent Prairie Dog infestations have resulted in increased safety risks from rattlesnakes that accompany Prairie Dog towns.

58. The increased rattlesnake risk was corroborated by Commissioner Uhrich, who recounted a recent, near-fatal instance where a boy was bitten by a rattlesnake in the newly Prairie Dog infested area.

59. Direct ranch operating losses incurred by the Edwards operations were stated to be in excess of $160,000.

60. Increased Logan County expenditures directly attributable to the USFWS Black-footed Ferret release program is $167,089.59.

61. Keith Edwards produced photographs of Prairie Dog infestations three miles from the Haverfield/Logan County release site.

62. Mrs. Ellis testified that "*miles and miles*" of property in a concentric circle beyond the Black-footed Ferret introduction site have been impacted by expanding and increasingly uncontrolled Prairie Dog infestations; a situation complicated by recent chemical restrictions placed on landholders.

63. Black-footed Ferret introductions at the Haverfield/Logan County release site have resulted in demonstrated property damage, forced cuts in stocking rates, reductions in land valuations, increased costs for rodent control and lost tax revenue to Logan County.

64. Testimony by Commissioner Uhrich and Mrs. Ellis recount how the James Ludolph property abutting the Haverfield introduction site has been deemed "*valueless*."

65. Mr. Ludolph holds land that is repeatedly infested by uncontrolled Prairie Dogs from the Haverfield Complex; he is currently unable to make productive use of his property because crop losses will complicate crop insurability across the remainder of his farming operation. Mr. Ludolph has reduced stocking rates on the affected property by as much as 75% and his land is becoming increasingly unproductive.

66. Commissioner Uhrich and Mrs. Ellis testified that Mr. Ludolph has stopped farming altogether on the abutting parcel because Prairie Dogs consume crops faster than he can grow them.

67. Reclamation costs to restore Mr. Ludolph's land to pre-ferret conditions are estimated at $410,000.

68. Mr. Ludolph retains tax liability for land that is increasingly non-productive and "valueless."

69. Increased chemical restrictions, ineffective buffer zones for Prairie Dog control, lack of baseline monitoring for Prairie Dogs on neighboring properties, and substantive, increased risks of rattle snakes have compromised the safety, productivity, and property values of Logan County landholders adjacent to the Black-footed Ferret introduction sites.

70. Throughout the Black-footed Ferret introduction project, USFWS has failed to respond to data requests, reasonable baseline monitoring, effective prairie dog buffer zone control and legitimate public safety concerns. Further, the record indicates by not examining the human related consequences prior to Black-footed Ferret introduction, diminution of private property values and other human-related impacts remain unaccounted for.

71. The total estimated expenses, value diminution, crop losses, livestock impacts, and reduced stocking rates for those giving testimony of Black-footed Ferret introductions is $4,217,360.82.

SCIENCE, DATA, AND TECHNICAL CONSIDERATIONS

72. The KNRC Hearing Council received testimony from national technical experts, statisticians, environmental policy experts and conservationists on the scientific methodology, interpretations, availability, accuracy and completeness of the body of science used by USFWS to support the Lesser Prairie Chicken Listing Proposal.

73. The Hearing Council weighed testimony in the context of its own *Natural Resource Coordination Plan* and *Lesser Prairie Chicken Conservation Management and Study Plan*, the public record, and its knowledge of the facts.

74. The KNRC Hearing Council received and weighed a body of testimony, evidence, information, data, and conclusions against the standards binding the Secretary of the Interior in Section 4(a) of the Endangered Species Act that require the Secretary of the Interior to demonstrate - through science - the evidence supports the Lesser Prairie Chicken is threatened throughout its range and is in need of Federal listing protection:

    1) the present or threatened destruction, modification, or curtailment of its habitat or range;

    2) overutilization for commercial, recreational, scientific, or educational purposes;

3) disease or predation;
4) the inadequacy of existing regulatory mechanisms;
5) other natural or manmade factors affecting its continued existence.

75. The Hearing Council received information and testimony in consideration of the effects of climate change, disease, elevated structures, population trends, impacts of electrical transmission/distribution lines and sound emanating from oil and gas exploration, maintenance and operations; the hearing council then assessed whether genetic variation of the Lesser Prairie Chicken is normal and sufficient to survive current stressors, and the sufficiency of existing parcels and programs to sustain populations.

76. Mr. Norman MacLeod, Natural Resource Policy expert on endangered species and former Executive Director of Environmental Sciences Independent Peer Review Institute testified the term "science," as defined and used in the Endangered Species Act, excludes consideration of items that are not "science."

77. The term "Best Available Science" suggests that some information is Best and other information is not; that science implicitly holds to a standard of measure.

78. The Coalition defines "best available science," in its Natural Resource Coordination Plan, Appendix D, page D-1, as *"that body of reproducible and credible data, information, and studies that are collectively available to the average person under normal circumstances."*

79. Dr. Robert Zink, Chair of Ornithology and Professor of Ecology, Evolution and Behavior at the University of Minnesota testified that Lesser Prairie Chicken populations have demonstrated throughout history remarkable up and down population trends in response to climate stressors, and Lesser Prairie Chickens adapt their range in response to climate and weather changes.

80. The Center for Environmental Science, Accuracy and Reliability (CESAR) was contracted to perform an independent peer review of the biological evidence using the Five Listing Factors in the Endangered Species Act. CESAR employs independent biologists that do not reside in the area, and whose interest is in "making sure that the Best Available Science is used to make listing petitions."

81. Dr. Zink stated that in issuing its listing report, he and CESAR peer-reviewed the studies and science used in the December 11, 2012 USFWS Lesser Prairie Chicken Listing Proposal as well as conducted ecological niche modeling for prediction of historical Lesser Prairie Chicken distributions.

Climate and Drought -

82. Over the past 20,000 years, Lesser Prairie Chicken populations have survived and responded to 15 or 16 glacial events by adapting its range, and have survived ongoing changes in global climate. The glacial advance/retreat process naturally fragments habitat, displacing all species in its path. The biological and historical record of the Lesser Prairie Chicken indicates a remarkable ability to survive multiple glacial episodes, and resilience of the Lesser Prairie Chicken to respond and rebound from climate extremes is corroborated by WAFWA and the states, who recognize the Lesser Prairie Chicken has a high reproductive potential in years of adequate conditions.

83. Dr. Zink testified that as glaciers recede, plant communities and organisms again invade and re-colonize, and Lesser Prairie Chickens and other fauna follow the vegetation as range adaptations take place.

84. Dr. Zink testified Lesser Prairie Chickens have adapted from the south and west to their current distribution.

85. Dr. Zink testified drought has had a major effect on Lesser Prairie Chickens, a conclusion corroborated by the Coalition in its March 11, 2013 Public Comments. Since 2006, the entire ecoregion occupied by the Lesser Prairie Chicken has been undergoing sever drought comparable to the 1930's and 1950's, which exceeds a minus 4 (severe to extreme) on the Palmer Drought Severity Index. The Coalition has cited numerous literature references that Lesser Prairie Chicken populations historically decline and recover remarkably following drought events, a conclusion supported by WAFWA and the states.

86. The ongoing impact, intensity, magnitude, and difficulty presented by drought was mentioned independently during the testimony of Ranchers Emick, Hixson, Klemm, Commissioner Lewis, Senator Hineman and Senator Ostmeyer.

87. Mr. MacLeod testified the Listing Proposal is taking place during deep drought conditions comparable to the 1930's and 1950's and that USFWS has not adequately accounted for drought in its Listing Proposal.

88. In the December 11, 2012 Federal Register Notification, page 73868, USFWS recognizes drought is *"considered a universal ecological driver across the great plains,"* with prolonged drought capable of causing local extinctions of annual forbs and grasses. Despite acknowledgement that drought significantly affects entire ecological systems, the contribution of drought as a threat was not evaluated or brought forward by USFWS.

89. The official 2012 WAFWA Lesser Prairie Chicken population count was 34,440, as to where the 2013 count stood at 17,616; WAFWA and the states believe extreme population fluctuations are the norm for this species and KDWPT recognizes *"the new 2013 counts to be attributed with severe drought conditions (not habitat loss)."*

90. The record from previous droughts indicates populations of all gallinaceous birds, such as the Lesser Prairie Chicken, to rebound remarkably when drought-stricken regions receive adequate rainfall.

91. Newly formed habitat conservation programs, such as that contemplated by the WAFWA Rangewide Plan, will take years to result in substantive habitat improvements – as to where the KNRC *Lesser Prairie Chicken Conservation Management and Study Plan* provides for ongoing conservation activities.

92. Dr. Zink pointed out listing the Lesser Prairie Chicken as a threatened species under the Endangered Species act would have no effect on weather patterns or climate change events.

93. In 1967 the Attwaters Prairie Chicken was included as one of the first species to be protected under Federal Endangered Species protections. At the time of listing, populations of Attwaters Prairie Chickens were estimated at 1,000 birds; current populations of Attwaters Prairie Chicken languish at marginally over 100 birds. By contrast and during the same time period, Greater Prairie Chicken populations in voluntary conservation programs in Wisconsin and Minnesota have thrived, increasing from 1600 birds to 3000.

Compensatory and Additive Mortality -

94. Compensatory mortality is considered by biologists to be normal, natural and necessary to maintain and balance population levels; additive sources constitute human-induced contributions from individual threats that collectively add to and thus contribute to overall population declines, such that existence of a species may be threatened or endangered. Dr. Zink questioned the methodology in the USFWS listing approach where independent threats were "*simply added together*" apart from analysis of their individual, additive contribution, and he questioned that USFWS has adequately demonstrated that human contributions exceed compensatory levels.

95. In June of 2012, WAFWA and the 5 states urged USFWS to perform a comprehensive threat analysis for the Lesser Prairie Chicken indicating their awareness of the importance of such scientific analysis and its absence in the Lesser Prairie Chicken technical record.

96. USFWS has not performed a comprehensive threat analyses and has not scientifically demonstrated in its Listing Proposal that individual anthropogenic threats pose an extinction potential to the Lesser Prairie Chicken.

Structures, Disease and Predation -

97. The hypotheses of whether Lesser Prairie Chickens demonstrate adversity to tall structures, such as wind towers and power lines, was questioned as untested as preferences for nest location vary with predator density in any given year. Because raptors demonstrate adversity to wind towers, Lesser Prairie Chickens have been observed in studies nesting closer to those structures during periods of high raptor density. Nesting location choices vary with predator conditions and density, and no scientific data implicating specific structure type(s) is available.

98. In June, 2012, WAFWA and the states noted that there are no studies to indicate increased predation of adult nests or hatch-year birds originating from structures is "*outside the range of natural variation.*"

99. WAFWA and the states concluded,

> "*Presently little is known on how wind power developments affect Lesser Prairie Chickens and/or Lesser Prairie Chicken habitats. To date the effects are speculative and not justification for listing, especially less than 2% of EOR is expected to be developed for this [wind energy] use.*"

100. Dr. Zink testified that CESAR reviewed the same studies USFWS used in its Listing Proposal. He stated that with respect to the threats posed by structures, the authors of those studies themselves concluded, "*we have no reason to believe the Prairie Chicken populations are being impacted severely by predation*."

101. The increased threat of power lines and towers is purported by USFWS to result in increased predation because those structures afford better perches and increased vantage points for raptors. Dr. Zink reviewed other studies that conclude "*mammalian and reptilian predators have a greater influence on Lesser Prairie Chicken mortality during the breeding season*." He went on to conclude because "*mammalian and reptilian predators don't sit on top of telephone poles, the big threat then, to us, seemed to be an insignificant one*."

102. No raptor predation studies or data exist distinguishing power poles, wind towers, pump jacks, and other structures selectively implicated by USFWS from raptor predation threats posed by grain elevators, trees and bridges – bringing into question the reasoning used by USFWS to selectively implicate specific energy infrastructure.

103. Dr. Zink reviewed studies used by USFWS in support of its Listing Proposal. He testified the science to support the Listing Proposal was skewed to achieve a particular outcome: [The listing] *"has a bunch of internal inconsistencies. What the paper* [various studies] *said, some of the things* [for the Listing Proposal] *were just cherry-picked. I mean, the whole story wasn't brought forward.*"

104. The Coalition previously concluded, in its Conservation Plan, that anthropogenic (man-made) structures can present "logistical impediments" but Lesser Prairie Chickens routinely cross anthropogenic boundaries.

105. The literature demonstrates Lesser Prairie Chickens navigate across all anthropogenic sources in search of forage, winter riparian areas, and preferred mixed grass habitats.

106. The documented establishment of 68 new, previously undetected leks north of the Arkansas River since 1960 represents a major northward range expansion of the Lesser Prairie Chicken across road, power lines, bridges, an interstate-highway corridor and other anthropogenic features.

Genetic Variability -

107. In its listing document, USFWS tied habitat fragmentation with genetic variability to demonstrate habitat fragmentation contributes to reduced genetic variation and decline of the species' resilience to outside stressors.

108. Genetic variability determines if populations are resistant to changes in climate, predation, competition and other stressors and thus may be extraordinarily susceptible to risk of extinction. Dr. Zink testified that a very significant genetic variability study (Hagen, 2010), employing a large number of biologists was not referenced in the Listing Proposal. Using data obtained from the Hagen study, Dr Zink and CESAR performed genetic variability analysis.

109. Dr. Zink and CESAR compared the genetic variability in existing Lesser Prairie Chicken populations throughout Kansas, Colorado, and Oklahoma. His work concluded Lesser Prairie Chicken populations contained just as much genetic variability in Colorado and Oklahoma as in Kansas, with Kansas populations being substantially larger than those in Colorado and Oklahoma. Dr. Zink concluded his studies show none of the Lesser Prairie Chicken populations are doing poorly, and he questioned why USFWS used some Hagen studies but neglected others in its Listing Proposal.

110. WAFWA and the states referred to the 2010 Hagen Study in preparation of the June 2012 letter. WAFWA's positive inclusion and statement *"according to current information, genetic exchange is still occurring at a significant level to maintain high genetic diversity for the species throughout a significant portion of its range, despite fragmentation levels,"* is indicative of their conclusion genetic variability is not reason to conclude reduced populations of the Lesser Prairie Chicken are susceptible to stressors of climate, disease and predation.

111. Dr. Zink concluded that reduced genetic variation is not occurring so existing fragmentation trends are not exposing Lesser Prairie Chicken populations to increased risk of extinction.

112. The wildlife agencies of the states as represented by WAFWA do not conclude the science supports that genetic variability is a problem resulting from habitat fragmentation.

Population Counting: Methodology and Trends -

113. In its September, 2012 Lesser Prairie Chicken survey, WAFWA observed Lesser Prairie Chicken monitoring and population counting methods differ markedly, yielding data inconsistencies in population trends over time, lek size, range and ultimately population status. Variations in survey methodology and scientific assumptions, combined with the historical lack of coordination between academia, state agencies, and others, has greatly complicated Lesser Prairie Chicken population measurement and behavioral assessment efforts.

114. In June, 2012 WAFWA and the states recognized *"limitations of current methods used for population estimates. These shortfalls include survey bias, small sample sizes, and access issues."*

115. In its 2013 Lesser Prairie Chicken count Kansas Department of Wildlife, Parks and Tourism noted their data set to be incomplete due to missed routes.

116. Lesser Prairie Chicken seasonal migration habits result in differential annual counts as the species relocates around local landscapes in search of favorable habitat, forage, and nesting conditions.

117. Nicole Dick, BA Mathematics, MS Statistics, Professor of Statistics and Mathematics at Garden City Community College, testified the Lesser Prairie Chicken population data in the WAFWA Rangewide Plan understates the populations of the Lesser Prairie Chicken because the surveys *"only counted some of the chickens"* and the methodology of [WAFWA] *"surveyed leks and how they only counted some of the chickens."*

118. Because Lesser Prairie Chicken counting methodologies only identify male "booming" during the mating season, females remain unaccounted for; the counting methodology simply doubles the number of audio-identified males, therefore assuming a 1 to 1 ratio of males to females.

119. Variations in individual sampling units determine the accuracy of measure and reliability of counting estimates because counting relies on audio detection of Lesser Prairie Chicken lekking activities. Further accuracy limitations to population counts include local topography, wind speed, season, institutional variations in methodology, and protocol.

120. The detectability of Lesser Prairie Chicken lekking activities was determined to be 5248 feet (less than 1 mile) in a published study co-authored by Heather Whitlaw, Field Office Supervisor of the Kansas USFWS Office. In her study, Whitlaw concludes at 5248 feet with optimum conditions audio detectability of lekking activities is *"equivalent to or below that of a whisper."* Her audibility study verifies Lesser Prairie Chicken detectability to be further complicated by topography, wind, weather and Lesser Prairie Chicken habitat conditions.

121. Lesser Prairie Chicken counting protocols correspond to roadway locations, which in Western Kansas are often found at much greater distances than one-mile intervals.

122. The Whitlaw Study asserts audibility limitations of Lesser Prairie Chicken booming activities at greater than 1 mile will result in missed leks, reduced population counts and skewed data sets throughout the entire Lesser Prairie Chicken species candidate period.

123. Professor Dick concluded methodology used in the WAFWA Rangewide Plan population counts underestimate the number of Lesser Prairie Chickens.

124. In its two day 2013 Lesser Prairie Chicken lek counting survey, Kansas Department of Wildlife, Parks and Tourism counted only males, assumed males attend all counted leks and that leks were detected at 1 mile intervals, in a "*degree of bias*[that is] *is fairly consistent across years*." In its two-day 2013 count, KDWPT notes spring 2013 data collection was incomplete "*due to un-surveyed rates from previous years, and as a result data collection* [for 2013 survey] *was incomplete.*"

125. Norman MacLeod testified the Lesser Prairie Chicken surveys were performed for a maximum of 1% of the habitat concluding, *"This is a very small sampling area and likely represents a larger than acceptable potential margin of error in population counts."*

126. In their June 7, 2013 comments USDA/FSA/NRCS/FS note for any final rule that *"in order to forecast as the FWS is required to for a final rule, a metric that is tied to the density or abundance of birds is needed before any determination is made."*

Habitat Fragmentation -

127. USFWS stands alone among government agencies in its assessment of habitat fragmentation, population trends, grazing pressures, and collision mortality. USDA, Forest Service, NRCS, WAFWA and the states are all on record as disagreeing with USFWS's untested definition of fragmentation, population trends, and hybridization of the Lesser Prairie Chicken.

128. In its December 11, 2012 listing document, USFWS cites *"historic, ongoing and probable future fragmentation"* of Lesser Prairie Chicken habitat as the primary factor for range contraction, and it suggests the compound effect of stressors and threats to be synergistic as the range of the Lesser Prairie Chicken further contracts—resulting in additional population declines of the Lesser Prairie Chicken.

129. In September, 2010 the Threatened and Endangered Task Committee appointed by the Secretary of Kansas Department of Wildlife, Parks and Tourism determined Lesser Prairie Chicken populations experience large variations in population density despite minimal loss in habitat.

130. On September 1, 2010 the Secretary of Kansas Department of Wildlife, Parks and Tourism accepted recommendations from the Threatened and Endangered Task Committee that denied a Petition by the Kansas Ornithological Society to list the Lesser Prairie Chicken as a Kansas State threatened species.

131. In June, 2012 WAFWA and the states observed that fragmentation has contributed to historical population declines and that recent conservation programs have slowed habitat fragmentation.

132. WAFWA and the states are on record as disagreeing with the science presented in 2008 and 2010 USFWS listing-priority and Candidate Notice of Reviews (CNOR) determination process:

- CNOR are based upon risk assumptions and projections, as to where states have hard science on fragmentation trends;
- Since the Lesser Prairie Chicken has become a candidate species, populations of the bird have undergone a 3-fold range expansion in Kansas, and 25% increase in estimated occupied range (EOR);
- Lesser Prairie Chicken populations have stabilized or are increasing depending upon habitat type;

- As of June, 2012 the feared return of Conservation Reserve Program (CRP) land to agricultural pursuits has not occurred; according to NRCS/FSA the CRP program over the short term has witnessed an 11% decrease between 2008 and 2011, but long term trends since 1998 demonstrate an overall 3% net gain in CRP enrollment;
- The assumption that expiration of individual CRP contracts translates into land being taken out of Lesser Prairie Chicken habitat is not accurate;
- Attrition of CRP enrollments is partially a result of NRCS and FSA programs becoming more discriminatory and excluding marginal lands once accepted in the program;
- The NRCS/CRP SAFE program, specifically aimed at Lesser Prairie Chicken conservation, retains 126,824 acres (of the available 147,600 acres) under long-term contracts;
- Successes of 5-State Watershed Action Team (SWAT) programs are reported by NRCS to provide measurable conservation practices, translating directly into reductions in habitat fragmentation;
- A significant portion of Lesser Prairie Chicken habitat remains in Lesser Prairie Chicken conservation plans and programs controlled by Federal and State agencies through Candidate Conservation Agreement with Assurances (CCAA) related programs:
    - 279,998 Texas Acres in Lesser Prairie Chicken farming and ranching CCAAs and 971,533 acres in wildlife management and programs;
    - 1,523,573 New Mexico and 97,335 Oklahoma acres in grazing programs;
    - 1,024,691 5-state acres in grazing cost-share programs; and,
    - 187,864 New Mexico acres, 11,000 Colorado acres and 20,989 Oklahoma acres in habitat protection programs.

133. In its June 7, 2013 comments the federal agencies responsible for the CRP program, USDA/NRCS/FSA/FS, note CRP acreage remains stable at 86% and the threat of expiring CRP contracts and potential extirpation of the Lesser Prairie Chicken due to decreased habitat "requires further examination:"

> "*An examination of current data of CRP acreages and LEPC populations indicates that CRP acreage has remained relatively stable over the past 20 years and LEPC populations in this region are projected to increase with virtually no likelihood of extirpation in the next 30-100 years (Garton 2012). An analysis that compared the location of expired CRP fields to the 2010 NAIP imagery in Kansas indicated that 86 percent of the acreage was still in grass. Not only were these acres still in grass cover but were located in areas of significant conservation need for LEPC, suggesting that the threat of grassland loss through expiration of CRP contracts requires further examination.*"

134. Relocation and establishment of 68 new Lesser Prairie Chicken leks north of the Arkansas River between 1998 and 2011 indicates adaptability of the species to conditions and resilience to habitat fragmentation.

135. Dr. Zink testified Lesser Prairie Chickens migrate to varying habitat regions throughout the year for lekking, breeding, roosting and feeding, which means transition across habitat "edges" is routine and normal behavior; he characterized routine transitions of Lesser Prairie Chickens as "*normal behavior*" and not of concern with respect to biological traps, sinks, or impediment to survival from edge concerns purported in the listing document.

136. In its Lesser Prairie Chicken Conservation Plan, the Coalition recommended land multi-use studies to determine the minimum baseline Lesser Prairie Chicken population level parcel and habitat sizes necessary to support 6 to 10 leks and minimum nesting, breeding, roosting and feeding activities.

Grazing -

137. The USFWS and NRCS Conference Report > Conference Opinion > Biological Opinion process has codified Conservation Practices mandatory to NRCS contracts under the Upland Wildlife Habitat Management and other NRCS programs. Under Standard Conservation Practice 528, "Prescribed Grazing," routine agricultural livestock grazing would be highly regulated and subject to Conservation Practice 645, "Upland Wildlife Habitat."

138. Conservation Practice 645 of the Biological Opinion imposes grazing restrictions and is purported to "improve and maintain desired plant species composition, quality, vigor and a vegetative structure mosaic," as well as "*increase forage quality for grazing and browsing animals' health and productivity.*"

139. Conservation Practice 645 allows the ability of federal agencies *"to modify existing infrastructure* [on private property] *to reduce or eliminate potential adverse effects resulting from those structures,"* and requires preparation of an Environmental Evaluation for each property receiving funding.

140. Conservation Practice 645 allows establishment of permanent photo locations on private property. Conservation Practice 645 allows access to private property "*on a regular basis*" for "*evaluation of habitat conditions*."

141. In its December 11, 2012 Federal Register Notification, USFWS recognized the lack of science, studies, and information on grazing throughout the 5 State region:

> *"Although documented, the significance of direct livestock effects on the Lesser Prairie Chicken is largely unknown, detailed rangewide information is lacking on the extent, intensity, and forms of recent grazing, and the associated effects on the Lesser Prairie Chicken."*

142. Immediately thereafter USFWS speculates:

> *"However, livestock grazing occurs over such a large portion of the area currently occupied by lesser prairie-chickens that any degradation of habitat it causes is likely to produce population-level impacts on the lesser prairie-chicken."*

143. In its June 7, 2013 comments the agencies responsible for farm programs, e.g. USDA/FWA/NRCS/FS specifically refer to the threat posed by livestock grazing as a "*notion*," and they collectively are on record as vehemently defending livestock grazing as an effective tool for range management:

> *"There is significant scientific disagreement regarding the assumption that livestock grazing occurring over a large portion of the LEPC occupied area degrades habitat and causes population-level impacts on the LEPC. NRCS data refute this notion. Well-managed grazing lands can be high quality LEPC habitat. Further, NRCS has worked with ranchers to implement over 1 million acres of prescribed grazing management in the LEPC range, contributing to improved rangeland health. Using National Resource Inventory data, NRCS initial analyses show that rangeland health and vegetation conditions for LEPC are not as impacted or overgrazed as the proposed rule supposes."*

144. Clint Pearson, banker, 5th generation rancher and manager of ranches in 5 Kansas counties, testified that the NRCS CRP Program can be an impediment to the Lesser Prairie Chicken habitat. Because grazing is either not allowed or heavily restricted on CRP lands, the result is a homogeneous plant community that impedes Lesser Prairie Chicken mobility.

145. Mr. Pearson testified grazing is a powerful tool in land management and historic "mob grazing" patterns that tear up and aerate land making it more productive for livestock and the Lesser Prairie Chicken.

146. Ken Klemm, Sherman County Commissioner, buffalo ranch owner, and holistic conservationist, testified grazing is a natural part of the system, and mob grazing of millions of buffalo was beneficial to Lesser Prairie Chickens as the two *"evolved together, cohabitated together and could exist in perfect harmony together."*

147. Commissioner Klemm read into the record a firsthand account from 1860 by author and lay ornithologist J.R. Mead. Mead recounts firsthand knowledge of buffalo grazing habits where wave after wave of buffalo herds would pulverize the landscape to "innumerable parallel paths." The buffalo would eat all the vegetation "close to the ground." Mr. Mead goes on to write how the whole country, following grazing patterns, would reestablish itself to an appearance of a *"well-kept park belonging to an English nobleman."*

148. Rancher Keith Edwards corroborated Commissioner Klemm's testimony that buffalo trampling contributes to grass recovery. He gave testimony that rather than being a threat, grazing is a tool for effective ecosystem management.

149. Mr. Edwards, in testimony corroborated by Commissioner Klemm, discussed holistic management principles by international grazing conservationist Allan Savory. The carefully planned holistic principals discussed by Mr. Edwards and employed by Commissioner Klemm demonstrate in practice improved vegetative diversity, quality and abundance that results in improved Lesser Prairie Chicken habitat.

150. Mr. Edwards testified that at holistic management seminars he has attended, experts presented aerial photographs of lands demonstrating abundant vegetation on mob grazed lands and "sparse" vegetation on adjacent, government-managed lands.

151. Mr. Edwards concluded his testimony that mob grazing increases grass diversity and that restricting grazing will decrease the chance for survival of the Lesser Prairie Chicken.

152. Nikki Schwerdfeger, Hamilton County Commissioner and 3rd generation farm and ranch owner, testified as a girl her grandparents told about the Lesser Prairie Chicken lekking season to observe and enjoy the species; over time she witnessed introduction of center pivot sprinklers, fencing, and increased agricultural activities across their hundred-year-old farmstead.

153. Commissioner Schwerdfeger testified introduction of modern agricultural practices have sustained forage and alfalfa for the Lesser Prairie Chicken.

154. Commissioner Schwerdfeger's testimony is corroborated by detailed comments KNRC filed with USFWS on March 11, 2013.

155. Commissioner Schwerdfeger said that her 15 quarters of ranch land continues to support Lesser Prairie Chicken lekking, nesting, and foraging activities, and declines in Lesser Prairie Chicken, songbird, quail, and other fowl populations are due to drought conditions witnessed throughout the region. She stated the Lesser Prairie Chickens have *"adapted to farm life."*

156. Commissioner Schwerdfeger testified her land is a prime candidate to collect mitigation monies from the WAFWA Rangewide Plan, and that she could *"be a bad neighbor and say, okay there is money in it for me. Let me have it. But the Lesser Prairie Chickens will survive without paying me to do the things I am already doing."*

WAFWA RANGEWIDE PLAN

157. In June, 2012 WAFWA and the states concluded local conservation practices are sufficient and that scientific and commercial information indicates the Lesser Prairie Chicken is not now or in the foreseeable future threatened, rendering the need for federal intervention unnecessary:

> "*We conclude, with existing habitat conservation practices being implemented to reduce habitat fragmentation, and the best scientific and commercial information available, the LPC is not now, or in the foreseeable future, threatened by predation or disease to the extent that listing under the ESA as a threatened or endangered species is warranted at this time.*"

158. In its September 1, 2010 memorandum the Secretary of Kansas Department of Wildlife and Parks (KDWP) accepted recommendations from its Threatened and Endangered Task Committee that KDWP should not list the Lesser Prairie Chicken as a State Threatened Species.

159. The reasoning used by the Kansas Department of Wildlife and Parks Threatened and Endangered Task Committee in concluding listing of the Lesser Prairie Chicken was unnecessary included:

- "*Documentation of over 200 lek sites north of the Arkansas River since 1990 in an area where the Lesser Prairie Chicken population was sparse or nonexistent*;"
- *"The Threat of habitat loss due to expiring CRP contracts has lessened due to federal agricultural policies that target renewal of CRP contracts to focus on Lesser Prairie Chicken habitat. One of the Conservation Priority Areas in Kansas is specifically designated for the Lesser Prairie Chicken;"*
- *"The threat of habitat fragmentation from energy development remains an uncertainty, but recent efforts to protect Lesser Prairie Chicken habitat are recognized;"*
- *"There is currently not enough known about the effects of energy development on Lesser Prairie Chicken habitat to assume developed areas will preclude Lesser Prairie Chicken use;"*
- *"Several ongoing and pending conservation actions directly or indirectly target habitat used by the Lesser Prairie Chicken;"* and,
- *"The majority of the ad hoc committee of Prairie Grouse Experts recommended that the Lesser Prairie Chicken remain unlisted in Kansas."*

160. The first sentence of the introduction section of the WAFWA Rangewide Plan states [the plan] "*is intended to preclude the need to list the Lesser Prairie Chicken under the Endangered Species Act of 1973, as amended (ESA)."*

161. In testimony given before the Hearing Council, Keith Sexson stated the intent of the WAFWA Rangewide Plan is to "*preclude a listing.*"

162. The purpose that the WAFWA Rangewide Plan is designed primarily to "preclude a listing" is corroborated in testimony by Jim Pittman at the Public Hearing, in coordination meetings, on slide presentations and in correspondence.

163. At the Public Hearing, when asked if USFWS has adequate scientific and commercial information upon which to base their proposed listing of the Lesser Prairie Chicken, Mr. Sexson stated Kansas Department of Wildlife, Parks and Tourism had *"not taken a position on the information that they [USFWS] have available to essentially go forward with a proposed listing."*

164. Keith Sexson was the primary recipient of the September 1, 2010 Memorandum where then Secretary Hayden accepted the position of the Threatened and Endangered Task Committee that the Lesser Prairie Chicken not be listed as a state threatened species.

165. Keith Sexson was the author of the June 2, 2012 letter to Dr. Benjamin Tuggle on behalf of WAFWA and the states that concluded the best science and commercial information do not support a federal determination that the Lesser Prairie Chicken is threatened or a listing necessary for its continued existence.

166. Norman MacLeod, endangered species and public policy expert and former executive director of Environmental Sciences Independent Peer Review Institute, testified that as of November 5, 2013 Kansas Department of Wildlife, Parks and Tourism had sold 3,723 Lesser Prairie Chicken Hunting Permits at $2.50 each.

167. Mr. MacLeod concluded due to the number of available hunting permits and the ongoing hunting season, Kansas Department of Wildlife, Parks and Tourism does not believe the Lesser Prairie Chicken "*is in sufficiently dire straits to warrant listing under the ESA.*"

168. Jim Pitman testified that there had been numerous conferences "*at the technical and at the administrative levels"* between WAFWA, USFWS and a select portion of the oil and gas industry during preparation of the mitigation portion of the WAFWA Rangewide Plan.

169. Jim Pitman testified the primary target of WAFWA mitigation is *"big industries;"* and that participation by oil and gas organizations is specifically what the service *"has indicated they're going to review when they evaluate the effectiveness of our plan."*

170. Mr. Pitman testified that USFWS, individual companies from the oil and gas industry, and WAFWA were involved in the *"permitting-process"* discussions and of the WAFWA Rangewide Plan because CCAAs have been tested in court.

171. A select group of oil and gas companies participated with WAFWA in defining the mitigation cost structure for the WAFWA Rangewide Plan.

172. Mr. Pittman testified local government was not involved in scoping or development of the WAFWA Rangewide Plan and no attempt was made to contact individual counties; participation of the counties was only sought in public meetings and comment periods following completion of the draft WAFWA Rangewide Plan and subsequent revisions.

173. The WAFWA Rangewide Plan proposes a 17-seat Advisory Committee that reports to a WAFWA Initiative Council comprised of non-elected members from the 5-state Fish and Wildlife Agencies. The 17-seat Advisory Committee would be comprised of industry, Non-Governmental Organizations (NGO), and other interested parties, along with 3 seats allocated among the 197 counties throughout the area regulated by the WAFWA Rangewide Plan.

174. The WAFWA Rangewide Plan proposes to put 197 local government counties on the same advisory platform as NGOs, all competing for three advisory seats.

175. Verbal testimony by senior management representatives of Wheatland Electric Cooperative, Sunflower Electric, Kansas Electrical Power Corporation, CMS Electric Cooperative and the statewide organization Kansas Electric Cooperatives (KEC) revealed that none of those companies or associations were contacted by WAFWA representatives for review, comment or opinion during preparation of the mitigation cost portion of the WAFWA Rangewide Plan.

176. Kansas Electric Cooperatives' CEO Bruce Graham testified the *"only certainty, after reviewing the* [WAFWA Rangewide] *Plan, is that mitigation will be onerous and costly."* He went on to testify the WAFWA Rangewide Plan will conflict with other Kansas state economical programs, such as the Rural Opportunities Zone Initiative, and that implementation of the mitigation portion would impact affordable housing, development and raise the cost of new rural infrastructure.

177. Mr. MacLeod testified that in his review of the WAFWA Rangewide Plan, *"WAFWA envisions collection of a quarter of a billion dollars in enrollment and mitigation fees over the course of 10 years,"* and *"the KNRC alternative would achieve similar goals at far lower expense."*

178. At two points during his testimony, Mr. Sexson states the WAFWA Rangewide Plan would "*prohibit disruption*" of economic activity *"in an area vital to state and national interest."*

179. Mr. Sexson testified he was not familiar with the safeguards to the human environment ensured by the NEPA process; the focus of the WAFWA Rangewide Plan was to provide a strategy to eliminate threats perceived by USFWS in order to preclude a listing. He also shared that there were no assurances that the WAFWA Rangewide Plan would be accepted by USFWS nor had Kansas Department of Wildlife, Parks and Tourism considered what would become of pre-enrollment mitigation monies from industry if USFWS listed the Lesser Prairie Chicken but rejected the WAFWA Rangewide Plan.

180. Kansas Department of Wildlife, Parks and Tourism has contributed to preparation of a federally endorsed plan without being familiar with the fundamental federal procedural and economic requirements that balance human and natural environments.

181. Mr. Graham testified calculations made by KEC would raise the cost of distribution lines by $11,000 to $22,000 per mile and transmission lines by $870,000 per mile, and that the not-for-profit electric cooperatives that occupy the Lesser Prairie Chicken range have no alternative but to pass those increased cost to member consumers, with the statement, *"every mile of line that they have to construct is going to mean visible dollars on the electric bill."*

182. Lynn Freese, Director of Member Services for Wheatland Electric Cooperative (WEC) that services 14 counties in the range of the Lesser Prairie Chicken, testified that of the 48-mile-average of distribution line WEC constructs per year, WEC would be facing *"an additional cost exposure of over $550,000 per year."* He testified WEC would be, by law, allowed to pass 90% of those costs on to customers, which would result in an estimated 1% escalation of all electrical rates per customer, per year.

183. Wheatland Electric Cooperative estimates 90% of the increased costs would be borne by new development, and over a 25 year period, the WAFWA Rangewide Mitigation proposal would add $13,750,000 in costs in WEC's service territory alone.

184. Wheatland Electric Cooperative concluded their analysis of WAFWA Rangewide Plan's mitigation costs by stating:

> *"Imposing these costs on member/consumers of Wheatland Electric will assuredly have a negative impact on new development, as well as the existing member/consumer base, especially those in the lower income brackets who tend to be elderly and minorities."*

185. Kirk Thomson, General Manager of CMS Electrical Cooperative, testified the mitigation costs under WAFWA Rangewide Plan would have a direct impact on rural populations, and those costs would disproportionally fall on folks in the western part of Kansas.

186. Mr. Thompson stated construction costs for a mile of distribution line in Chat 2 Habitat would double, and his calculations indicate a new development could cost a homeowner an additional $300 per month over a typical 60-month contract period.

187. Mr. Thompson stated that individual landowners wishing to develop their property would themselves be faced with pass-through costs contemplated by the mitigation portion of the WAFWA Rangewide Plan because territory serviced by cooperatives *"does not have developers to front or share costs."*

188. Mr. Thompson questioned why the costs to conserve the Lesser Prairie Chicken - because of the impacts of increased electric rates - should fall only to those in Western Kansas, and not the entire state or even the nation.

189. Scoping and primary preparation of the WAFWA Rangewide Plan has taken place without the involvement of or input from the 32 member KNRC Coalition.

190. The cost portion of the WAFWA Rangewide Plan has been prepared in concert with and input from only a small portion of affected industries.

191. The organizational structure of the WAFWA Rangewide Plan provides a limited role and advisory-only capacity for local governments.

192. The WAFWA Rangewide Plan, prepared using federal monies and with federal oversight, does not consider the cost implications to the human environment, industry, local government, minorities, families and local disadvantaged populations.

193. The WAFWA Rangewide Plan neglects to consider the downstream and long term cultural impacts and social cohesiveness issues that could arise from costs associated with its mitigation proposal.

LAND USE

Conservation Easements -

194. Conservation Easements are land title encumbrances that impose specific and detailed requirements on landholders such as buffer zones; riparian setbacks; land use and access restrictions; livestock and management requirements; imposition of inspection rights; structure construction, design, location or removal restrictions. Conservation Easements form the heart of the WAFWA Rangewide Plan with 25% of revenues proposed to purchase "In Perpetuity" habitat easements for Lesser Prairie Chicken habitat.

195. Examples of Conservation Easement programs cited in the WAFWA Rangewide Plan include the 4,183-acre Nature Conservancy Wilhite Ranch and 1,293-acre Lowe Ranch State Habitat in Prowers County, Colorado.

196. Prowers County, Colorado is located in Lesser Prairie Chicken habitat immediately adjacent to Coalition members across the Kansas state border.

197. Two large Prowers County ranch and land owners, Ms. Jillane Hixson and Ms. Valerie Emick, gave testimony about firsthand experience with Conservation Easements.

198. Ms. Hixson is a 3rd generation rancher and landholder; The Hixson farm dates back to the 1890s at which time her forefathers homesteaded the property she now manages.

199. In 2003, the Hixson family entered into a newly-legislated Colorado Conservation Easement Program and subdivided 150 acres of prime property valued at $12,000/acre ($1.8 million) into 3 separate Conservation Easements.

200. The Colorado Conservation Easement Tax Statute is based upon Internal Revenue Service (IRS) standard 26 USC170(h).

201. When the Colorado Conservation Easement program was initiated, thousands of prospective landholders attempted to participate in the program, and the $265 million claim to tax exemptions quickly overwhelmed the $20 million planned by Colorado for the Conservation Easement program. This resulted in a decision within Colorado Department of Revenue (CDOR) to implicate state-certified conservation easement appraisers.

202. The Hixson Conservation Easements were appropriately inspected by Colorado state certified appraisers, all conservation forms were completed, and state-required studies done according to policies. Following execution of the Conservation Easements, tax incentives were granted by the State of Colorado and the tax exemptions were transferred to a number of Conservation Easement purchasers.

203. In 2007 conflicts arose between CDOR, IRS, and the Hixson family over the value of the Hixson Conservation Easements even though the easements were appraised, certified and all procedures for their recording were precisely followed.

204. In 2011, CDOR appraised the Hixson property at a value of $0 per acre, and assigned penalties and back taxes of $1,560,000. The CDOR determination was at odds with formal determinations made by the IRS, who held the Hixson Conservation Easements retained value according to their 170(h) standard.

205. In addition to their property having been devalued from $1.8 million to $0 and the cost of lawyers, accountants, appraisers, stress and time, Ms. Hixson testified their family is still facing 34 law suits from individuals who purchased the Conservation Easement tax credits under the State approved program.

206. Ms. Hixson testified about another Conservation Easement holder in Winter Park, Colorado who also participated in the Colorado Conservation Easement Program and holds property valued by CDOR at $0 - while neighboring properties routinely sell for $60 million.

207. In the event of bankruptcy, the Hixson land containing Conservation Easements will be auctioned for the value of the land minus the encumbrances; the land can then be purchased by the Conservation Easement holder or Land Trust Company, who are the only entities that can remove the Conservation Easement restrictions from the title. The land can then be resold for market value.

208. In 2008 the Colorado Legislature revised the Conservation Easement Statute and applied the law retroactively, negatively affecting all landholders who entered into Conservation Easements between 2003 and 2008.

209. Ms. Hixson went on to testify that the CDOR has rejected 800 appraisals from the period of 2003 - 2007.

210. The Conservation Easement restrictions remain on the Hixson property.

211. Valerie Emick, a 3rd generation rancher, owns a large ranching and wind farm operation also in Prowers County, Colorado. In 2005, Ms. Emick and her family donated 13 parcels of high quality land to the Conservation Easement program, one containing a gravel pit operation. Ms. Emick testified due to problems with the Conservation Easement program, that the State of Colorado (CDOR) has valued their land at $0 per acre.

212. The Emicks donated 5 easements for $794,000 in tax credits and to-date have spent $340,000 in legal fees stemming from law suits associated with purchasers of their Conservation Easements tax credits. Ms. Emick described how the Colorado system does not allow for buyers and sellers of Conservation Easement tax credits to share information, complicating fact-finding.

213. Ms. Emick believes Conservation Easement land devaluations could happen in Kansas and Conservation Easements are a way for states to make up budget shortfalls and the government to gain control of private lands - testimony that was corroborated by Ms. Hixson.

214. In the October, 2013 version of the WAFWA Rangewide Plan, page 78, WAFWA proposes a 3,929,600 acre set aside for Focal Areas and a 500,480 acre set aside for Connectivity Zones in Kansas. USFWS has accepted a minimum goal of 25% lands to be set aside by in perpetuity Conservation Easements (but desire 50% or more.)

215. Based upon the Hixson and Emick property devaluation experience and current average NRCS land-value of $1,900 per acre, the USFWS goal for the 1,107,520 acres of habitat set aside of Focal and Connectivity lands could result in a devaluation of $2,104,288,000 - before additional consideration that Conservation Easements result in mineral-right devaluations, split-estate issues and access concerns.

Split Estates -

216. Mr. Freese testified Wheatland Electric owns several thousand acres of restored Lesser Prairie Chicken habitat in Kearny and Finney Counties – land that is an *"ideal candidate to be enrolled in the WAFWA Mitigation Program."*

217. Mr. Freese indicated under the current WAFWA Conservation Plan, subsurface mineral right holders across the many thousands of acres of Lesser Prairie Chicken range could experience difficulty accessing their water and mineral rights if the land is set aside in the WAFWA Conservation Mitigation program.

218. Mr. Freese articulated a scenario that as Lesser Prairie Chicken populations on lands in mitigation programs increase and birds migrate to adjacent properties, conflicts between adjacent landholders will arise because some lands will not be in conservation programs.

219. Mr. Freese testified there is "*gas production under every square foot*" and oil production "*under certain portions*" of Wheatland property and if Wheatland were to allow Conservation Easements on the surface then access for drilling pads and new wells could be prohibited. Because subsurface rights for the Wheatland properties are held by others, he recounted a situation where lawsuits will result because subsurface rights holders will be denied access by conservation easement provisions on the same tract of land.

220. Counties derive tax revenue from oil and gas production.

221. Mr. Pitman speculated that if conflicts arose between a mineral rights holder and a landholder enrolled in conservation, the conflict would be sent to the advisory board of WAFWA. This approach would remand split estate disputes to an unelected board partially comprised of foreign nationals to redress American land disputes.

222. Mr. Sexson testified the states would retain management authority over "resident fish and wildlife" lending uncertainty to the role of the state and WAFWA in redressing split-estate conflicts.

223. Commissioner Klemm read into the record the Third Amendment of the Kansas Bill of Rights, and pointed out there is no mechanism to exercise the right for redress of grievances under the Kansas Constitution or the First Amendment of the U.S. Constitution in the WAFWA Conservation Plan.

224. Commissioner Klemm drew attention to the fact that Kansas Department of Wildlife, Parks and Tourism has no authority under the Executive Branch of government to "*assess fees to private property, both land and improvements*;" and he has not heard of the legislature granting such authority.

225. Because WAFWA has no authority and thus would only be the administrator of the WAFWA Conservation Program, and because Kansas Department of Wildlife, Parks and Tourism has no jurisdiction over the split estate issue, any issues arising from split estate problems would be left to land owners and mineral-rights holders.

COMPLIANCE WITH FEDERAL STATUTES AND EXECUTIVE ORDERS

226. The Statutes, EOs and CEQ Regulations cited in the *Kansas Natural Resource Coordination Plan* assure local government receives accurate information, appropriate review of alternatives, reasonable assessment of economic consequences, prior notification of federal proposals, reasonable opportunity to vet issues and ample time to understand the implication of federal proposals on the human and natural environments.

227. Federal Statutes, EOs and CEQ Regulations cited in the *Kansas Natural Resource Coordination Plan* assures federal agencies preparing proposals will carefully consider the potential economic consequences, risk to private property from incidental property takes, impacts to agriculture and have published a reasonable understanding of the implications for the proposed Major Federal Action.

228. Mr. Carlson testified that KNRC personally reviewed with USFWS the *Natural Resource Coordination Plan* and the FLPMA ESA requirement to take into account local plans.

229. KNRC has been precise in its correspondence and consistent in its expectation that USFWS adhere to the CEQ, NEPA, Regulatory Flexibility Act and EO mandates that balance human and natural environments.

230. At the November 1, 2013 Coordination Meeting Number 2, USFWS stated objections to KNRC's interpretation of Statutes, EOs and CEQ Regulations and has since refused to address, respond to or communicate with KNRC details of its objections to KNRC.

231. Department of Interior Solicitor Dana Jacobsen refused repeated overtures to attend the KNRC Public Hearing or further comment on USFWS's stated disagreement of the authorities in the KNRC Plan.

232. There is no indication in the Public Record USFWS has performed the required Quantitative Regulatory Flexibility Analysis regarding the economic impact to small entities and businesses in the region covered by the Lesser Prairie Chicken Listing Proposal.

233. There is no indication USFWS has accounted for unintended consequences, performed a comprehensive cost/benefit analysis using local data, statistics and history, evaluated the aggregate cost/benefit to the human and natural environments, or attempted to select the least net-cost alternative.

234. The Listing Proposal is silent on the evaluation of impacts to private property and other potential, unnecessary takings required by EO 12630.

235. USFWS personnel have stated, at Coordination Meeting Number 2, its intent to not perform an Environmental Assessment (EA) or Environmental Impact Statement (EIS) as required by the National Environmental Policy Act and Council on Environmental Quality.

236. KNRC has brought USFWS's attention to the obligation to perform an Environmental Assessment and the application of recent decisions from the 10th Circuit Court of Appeals.

237. USFWS continues to ignore the Coalition's position that applicability of the 1995 ruling by the 10th Circuit Court of Appeals that Catron County Board of Commissioners v. USFWS supersedes its own interpretation the EIS is not required *"as a matter of law."*

238. USFWS is unresponsive to the Coalition's position that it must account for private property land interests and public health and safety as required by EO 13352. By continuing to ignore the *Lesser Prairie Chicken Conservation, Management and Study Plan*, USFWS is disregarding EOs 12372 and 13575 requiring federal agencies to utilize local plans and processes and accommodate concerns by local elected officials.

239. The FLMPA requirement for federal agencies to attempt consistency with local plans "*to the maximum extent possible*" necessitates USFWS attempt to reconcile differences with the KNRC *Natural Resource Conservation, Management and Study Plan* and reconcile its endorsement of the WAFWA Rangewide Plan to the local KNRC Plan.

240. In not performing the minimum required economic and social impact studies, USFWS has not considered the impact of the Listing Proposal on minorities, low-income populations and families as required by EOs 12898 and 12250.

Critical Habitat -

241. In the December 11, 2012 Listing Proposal, USFWS stated it has determined *"designation of critical habitat to be prudent but not determinable at this time."* Webster's Dictionary of 1828 defines "*prudent*" as "*cautious; circumspect; wise; careful of enterprises, measures or actions*."

242. The WAFWA Rangewide Plan endorsed by USFWS proposes four geographical ecoregions comprising the Lesser Prairie Chicken range, and within those zones are "Focal Areas" and "Connectivity Zones" deemed essential to conservation of the Lesser Prairie Chicken - requiring special management and protection.

243. By endorsing the WAFWA Rangewide Plan, USFWS has geographically identified ecoregions, focal areas and connectivity zones that are critical habitat by definition in Endangered Species Act Section 3(5)(a).

244. Mr. Pitman gave testimony that WAFWA used the term "Crucial Habitat" instead of "Critical Habitat" so as intentionally not to be clear in the geographic designation of the Lesser Prairie Chicken habitat.

245. Mr. Pitman indicated if USFWS were designating areas of critical habitat, "*they would probably want to identify areas just where the birds are located, and currently high quality habitat*" and that the WAFWA Ecoregions, Connectivity Zones and Focal Areas "*may be good for that purpose*."

246. Executive Director Carlson testified that there is no distinction between the words "crucial" and "critical" when it comes to the intent and implementation of the WAFWA Rangewide Plan.

247. Hearing Officer Fred Kelley Grant pointed out that when USFWS pointed to the ecoregions and strongholds in the Federal Register Notification, they are identifying Critical Habitat; he went on to say,

> *"USFWS is attempting to divide the statute that says when they list [a species] they shall designate critical habitat: they've tried to divide it so that all they do is list it, and they [USFWS] say we're not designating critical habitat so we don't have to go through NEPA, but in fact, they are."*

248. USFWS has proposed four Ecoregions with Connectivity Zones in its Listing Proposal that contain specific, geographic focal areas occupied by the Lesser Prairie Chicken that contain habitat essential to conservation and which require special management protections.

249. By endorsing the WAFWA Rangewide Plan, USFWS has designated Critical Habitat for the Lesser Prairie Chicken.

CONCLUSIONS

Coordination

- The Secretary of Interior has demonstrated full understanding of the statutory and administrative coordination requirement through its action with local government in the Logan County, Kansas, Black-footed Ferret introductions and in multiple locations nationwide.
- Throughout the preparation, publishing and the promotion of its Lesser Prairie Chicken Listing Proposal and special 4(d) Rule, the Secretary has willfully neglected coordination with 39 Western Kansas local governments.
- By ignoring repeated requests to attend the Kansas Natural Resource Coalition (KNRC) Public Hearing or provide any response of its stated disagreement with KNRC's use of authorities in the *Natural Resource Coordination Plan* and its *Lesser Prairie Chicken Conservation, Management and Study Plan*, the Secretary has deliberately refused to coordinate with local government.
- By dispatching field-level staff to attend crucial and time sensitive coordination meetings - despite specific requests for personnel commensurate to the issues - USFWS has disregarded the importance, timeliness and significance of local coordination efforts germane to the Lesser Prairie Chicken Determination Process.
- Through willful and ongoing disregard for the *Lesser Prairie Chicken Conservation, Management and Study Plan* adopted by 32 member Kansas Counties that predominate Lesser Prairie Chicken habitat, the Secretary is missing an integral conservation component fundamental to an accurate determination under Section 4 of the Endangered Species Act.
- By continuing to ignore KNRC's plea to attempt consistency between the USFWS-endorsed Western Association of Fish and Wildlife Agencies (WAFWA) Rangewide Plan and the KNRC *Lesser Prairie Chicken Conservation, Management and Study Plan* the Secretary has neglected statutory responsibility and fallen short of the standard required of federal agencies to keep apprised of, assist with and reconcile inconsistencies between local plans.
- Throughout the experimental Black-footed Ferret introduction project USFWS has knowingly violated local ordinances, provided incomplete information and perceptively misled Logan County commissioners during on-the-record coordination meetings.

- Because the Secretary has not taken into account the 32-County KNRC *Lesser Prairie Chicken Conservation, Management and Study Plan* whatsoever, the Secretary is not in a position to make a sound, fully-informed, scientific determination of the present and future risks to the Lesser Prairie Chicken under ESA Section 4(b).

Science, Data and Technical Considerations

- The Secretary demonstrated that the USFWS lacked sufficient scientific information upon which to base a defensible ESA listing decision for the Lesser Prairie Chicken by extending the decision deadline to remedy the Service's lack of information. Despite the availability of a significant body of additional scientific and commercial information, USFWS has failed to provide meaningful consideration to a significant portion of that information. USFWS failed to fully comply with its mandate to use the best available scientific and commercial information for the purpose of making a fully informed listing decision.
- The threat posed by habitat fragmentation in the listing proposal is scientifically untested, inconclusive, based upon outdated Conservation Reserve Program (CRP) information and lacking range-wide population trend data.
- The public record does not contain evidence or studies that USFWS has performed required population density and abundance metric analysis on a range or ecoregion level.
- The public record does not contain evidence USFWS has performed an analysis characterizing and distinguishing the individual, additive and compensatory contributions of all threats in its listing proposal.
- USFWS concerns of habitat withdrawal from CRP and State Acres for wildlife Enhancement (SAFE) programs due to expiring contracts are verifiably inaccurate, anecdotal and without scientific justification.
- Baseline data sufficient to adequately ascertain habitat fragmentation as a significant threat to the continued existence and future of the Lesser Prairie Chicken on a rangewide basis does not exist.
- Genetic variability analysis not sufficiently considered by USFWS in its Listing Proposal indicate that more than adequate genetic exchange continues throughout Lesser Prairie Chicken populations in Kansas, Colorado and Oklahoma; none of the populations can be considered inordinately susceptible to stressors of climate, disease or predation, despite current land fragmentation levels.

- The states and WAFWA do not conclude there is a lack of genetic variability related to habitat fragmentation sufficient to threaten the continued existence and viability of the Lesser Prairie Chicken.
- During the time horizon of its existence as a species, the Lesser Prairie Chicken has demonstrated resilience to climate variation on the short and long term scale. As the climate warms, the species expands its range northward, and as it cools, it expands its range southward. During the 1930s (Dust Bowl) Lesser Prairie Chickens demonstrated the capacity to survive a combination of drought and high temperatures exacerbated by anthropogenic landform changes and habitat fragmentation characteristics that are unlikely to be repeated.
- Lesser Prairie Chickens routinely and typically display movement across areas occupied by manmade structures, highways, power lines, oil pads and active crop lands in search of forage or in response to stressors. New leks observed across the Arkansas River and the Interstate 70 corridor are indicative of the resilience, response and ability of Lesser Prairie Chickens to adapt to current fragmented conditions.
- Seasonal movement of Lesser Prairie Chickens in search of food, forage and nesting sites is normal behavior; observed and documented patterns and new leks observed across the Arkansas River and Interstate 70 corridor alleviate concern about edge effects associated with habitat fragmentation.
- Inconsistencies in population counting methodology, small sample size, survey bias, access issues, and auditory detectability issues - all recognized by USFWS - combine to result in significant underestimation of Lesser Prairie Chicken populations.
- Year-to-year declines or spikes in Lesser Prairie Chicken population counts are normal and a result of varying weather patterns.
- WAFWA and the states agree that improving conservation programs, brush management, and heightened awareness have slowed - in some cases reversed - habitat fragmentation; and that more than 90% of CRP Lands having expired contracts remain as grasslands favorable to Lesser Prairie Chicken occupation. This data is corroborated by USDA/FSA/NRCS/FS.
- Since 2008 Lesser Prairie Chicken populations have stabilized or are increasing depending upon habitat type and proximity to drought stricken areas.

- The 2013 hunting-season policy on Lesser Prairie Chickens, for $2.50 per permit, clearly indicates Kansas Department of Wildlife, Parks and Tourism does not conclude that the Lesser Prairie Chicken is threatened in its Kansas Range.

WAFWA Rangewide Conservation Plan

- The responsible state agencies have access to the best quality, and most recent science and have primary interest in and responsibility for species preservation, placing them in the best position to assess the vulnerability of the Lesser Prairie Chicken to extinction.
- WAFWA and the states are on record as stating *"the Lesser Prairie Chicken is not now or in the foreseeable future at risk of extinction in all or a significant portion of its range."*
- Development, preparation and promotion of the WAFWA Rangewide Plan are a reaction to the specter of a "threatened" designation corroborated by a position taken by WAFWA and the states as late as June, 2012.
- *The Lesser Prairie Chicken Conservation, Management and Study Plan* is a low-cost, local government effort that balances conservation of the Lesser Prairie Chicken with agricultural productivity, ensuring the continued existence of the species in tandem with the general welfare of Western Kansans.
- Existing state and federal conservation programs remain more than adequate, increasing in conservation scope and efficacy, and have sufficient authority to respond to and conserve Lesser Prairie Chicken populations.
- The WAFWA Rangewide Plan contemplates a new, non-governmental structure that would oversee administration of the program at an annual cost of $27 million.
- Targeting of wind energy and electrical transmission infrastructure as responsible for predation and habitat fragmentation, to the exclusion of threats posed by trees, bridges, and grain elevators is speculative with an insubstantial scientific basis.
- Testimony that the primary predation threat to the Lesser Prairie Chicken emanates from mammalian sources brings into question contributions from raptor sources and minimizes the need for mitigation proposed in the WAFWA Rangewide Plan.

- The WAFWA Rangewide Plan was drafted by wildlife agencies of the 5-states along with select industries under guidance by USFWS; local government was excluded from the drafting process.
- The cost structure of the mitigation section of the WAFWA Rangewide Plan was negotiated between WAFWA and a small number of oil and gas companies to the exclusion of electric cooperatives, wind, agriculture and other potentially-affected industrial sectors.
- Through economic participation in a Major Federal Action the Kansas Department of Wildlife Parks and Tourism is a Cooperating Agency.
- Testimony by KDWPT revealed the mitigation portion of the WAFWA Rangewide Plan was prepared without consideration of the economic, cultural, social and minority impacts to the human environment.
- Conservation easements necessary to fulfill the 25% in perpetuity requirement in the WAFWA Rangewide Plan will result in property devaluations calculated to be as much as $2,104,288,000.
- The mitigation fees contemplated by the WAFWA Rangewide Plan will primarily be born by industry, agriculture, communities and residents in the 32 counties comprising the Coalition.
- Neither USFWS, WAFWA nor the states have evaluated alternatives, economic impacts, cost/benefits, down stream impacts or implications of the Listing Proposal to industry, communities, schools, minority and low-income populations of the human environment resulting from certain increased energy and mitigation costs.
- Neither USFWS, WAFWA nor the states have evaluated the required "No Action" alternative.

Grazing

- Throughout history millions of Bison in vast herds roamed the high plains, mob-grazing the vegetative landscape to stubble, pulverizing the soils and altering the landscape in the process. For their part, Lesser Prairie Chicken populations participated in, benefited from and adapted to grazing activities that characterize the high plains ecosystem.
- Contemporary ranchers and farmers utilizing working lands understand, nurture and guard those habitat, property and riparian areas upon which they depend - a fact particularly true in livestock grazing management.

- In its Listing Proposal, USFWS specifically recognizes the lack of Science "*on the extent, intensity and forms*" of potential impacts from grazing throughout the 5 State region, calling into question from the onset the need for the Regulatory Policies proposed in the Conference Opinion, NRCS Conservation Practices 528 and 425 and the Special 4d Rule.
- USFWS, through its Conference/Biological Opinion and Special 4d Rule, proposes to levy Regulatory Policies that according to USDA/FSA/NRCS/FS are both scientifically unjustified and unnecessary.
- Through its participation in the Conference Opinion process USDA/FSA/NRCS/FS is a Cooperating Agency.
- None of the 32 KNRC Counties were contacted by USFWS or USDA/FSA/NRCS/FS to coordinate during the Conference Opinion/Biological process.
- Conservation Practices 528 and 645 are tantamount to regulation as they impose new requirements on agricultural operations receiving federal subsidies - policies that will spill to agricultural operations that elect not to participate in federal programs.
- No analyses of the impact or benefit to agriculture, local business, communities or cultures resulting from the NRCS proposed Environmental Evaluation occur in the public record.
- Provisions in Conservation Practice 645 allowing Federal agencies to remove or modify structures on private properties could constitute a "Take" under the 5th Amendment of the US Constitution and Executive Order 12630.
- The imposition of permanent photo points as proposed under Conservation Practice 645 has no meaningful conservation purpose, is invasive, and imposes unnecessary restrictions on participants in government subsidy programs.
- Mob-grazing practices are beneficial to creating, sustaining and enhancing Lesser Prairie Chicken habitat and should be incorporated into all future federal programs and practices.
- The conservation practices found in the KNRC Lesser Prairie Chicken Conservation, Management and Study Plan are sufficient to protect, enhance and maintain Lesser Prairie Chicken habitat necessary to ensure the ongoing survival and vitality of the species.

Critical Habitat

- The geographic "Focal Areas" and "Connectivity Zones" identified in the USFWS-endorsed WAFWA Rangewide Plan are by definition in the Endangered Species Act Critical Habitat.
- Under NEPA and recent appellate court decisions USFWS is required to perform an Environmental Assessment and either issue a Finding of No Significant Impact (FONSI) or enter the Environmental Impact Statement (EIS) process prior to proceeding with it Listing Determination.
- In its Listing Determination USFWS has not used all practical means, nor applied statutory laws and administrative rules necessary to identify, consider and balance conservation of the Lesser Prairie Chicken in productive harmony with the social, economic and cultural considerations within the 32 counties located in the Lesser Prairie Chicken range.

Appendix A

Table of Executive, Judicial, Congressional, and Policy Authorities

Table of Authorities from KNRC Plans			
Authority	**Citation**	**Requirement**	**Plan Reference**
Federal Land Policy and Management Act	43 USC 1712(c)(9)	Requires Secretary to attempt to remain apprised of local Land Use [Conservation] Plans and assures consideration is given to local plans; Secretary is to assist in and attempt to resolve inconsistencies between Federal and non-Federal Government plans and attempt for meaningful involvement of local government officials. Applies in para materia.	Coordination Plan, Conservation Plan
National Environmental Policy Act	42 USC §§4321 - 4347 42 USC §4331 (a)-(c)	Provides the Policy of the Federal Government during major environmental action is to use "all practicable means," to coordinate Federal plans with local governments, in order to promote the general welfare, and create conditions where man and nature exist in productive harmony fulfilling the social, economic, and other requirements of present and future generations of Americans.	Coordination Plan, Conservation Plan
Endangered Species Act	16 USC §§1531 - 1544	Section 4(b)(1)(A) provides the Secretary must take into account, through the mechanism of Coordination and in the context of science only, the KNRC Conservation efforts - prior to making determinations.	Coordination Plan, Conservation Plan
Judicial Review	Catron County Board of Commissioners v. USFWS 75 F.3d 1429	1995 Ruling by 10th Circuit rejected USFWS position EA/EIS is not required "*as Matter of Law*" during Threatened 4d Proposal with Critical Habitat designation. The proposed Lesser Prairie Chicken 4d listing mirrors precisely the Catron County issues including designation of geographic "Focal" and "Crucial Habitat" areas in USFWS funded and endorsed WAFWA Rangewide Plan. KNRC holds NEPA process is required.	Coordination Plan Page 5; Appendix D Appendix E
Regulatory Flexibility Act	5 USC §§601-612	Major Federal Actions must include a Regulatory Flexibility Agenda or Analysis (RFA) that includes publication/notification to each affected county. The RFAs explore the range of alternatives and economic impact(s) to specific and identified governmental jurisdictions where actions are proposed, along with the reasoning and a schedule for the Proposed Action. RFAs typically include quantitative analysis of the economic impact(s) likely to occur to each small entity or business. The summary provides the nature, objectives and legal basis for Proposed Actions and competing alternatives which accomplish the same objectives, and any federal rules which may duplicate, overlap or conflict with the Proposed Action.	Coordination Plan Page 7
EO 12291	Agency Accountability; Duplication assessment; Cost/Benefit Analysis	EO 12291 provides proposed administrative decisions and regulations to based on adequate information, understanding of consequences, and Proposed Actions are not to be undertaken unless benefits outweigh the costs. Alternative analysis are to be performed and the least net cost alternative to society is to be selected; Agencies are to set regulatory priorities to maximize the aggregate net benefits to society, to take into account the condition of the particular industries and the economy affected by proposed regulations.	Coordination Plan Page 7
EO 12630	Governmental Actions and Interference With Constitutionally Protected Property Rights	The Fifth Amendment of the US Constitution provides private property shall not be taken for public use without just compensation. Executive departments are to be sensitive to, account for and evaluate potential private property takings to prevent unnecessary takings and establish if the actions worsen situations they are designed to protect as well as estimate cost to government if litigation becomes necessary. Executive departments are to weigh if a Proposed Action contributes more to public health and safety than the No Action alternatives.	Coordination Plan Appendix E

Table of Authorities from KNRC Plans			
Authority	**Citation**	**Requirement**	**Plan Reference**
EO 12372 EO 13575	Intergovernmental Coordination with State & Local Governments; White House Rural Council	Federal agencies are to Coordinate with elected local governments directly affected by a proposed Federal Action; if a local government develops its own Plan, Federal agencies shall utilize the local plan of process to determine official views of State; communicate early in process with local officials to explain actions; make efforts to accommodate communicate local elected officials' concerns; allow local governments to consolidate Federal plan submissions. Encourage State plans that meet objectives and standards and seek coordination views of local elected officials between states.	Coordination Plan Page 3
EO 13352	Facilitation of Cooperative Conservation	The Secretary of Interior is specifically required to Coordinate with local government in Conservation activities; DOI is to take appropriate account of and respect the interests of private property and in the interest of public [human] health and safety	Coordination Plan Page 6; Appendix E-4
Data Quality Act	Data Quality Act (Information Quality Act) Section 515(a) 3504(d)(1); 3516; 66 Federal Register 34489	Proposed Actions must be based upon usable, objective, timely, accurate, readably-accessible and reproducible data, information, facts, and research. The minimum federal standards are even higher for that body of information defined by OMB to be "influential" in nature - such as data used for decision making of important public policies.	Coordination Plan Page 7
EO 12866	Regulatory Planning and Review	Federal agencies are to conduct a Cost/Benefit analysis of alternatives, including No Action. C/B analysis is to consider quantifiable and qualitative measures. In selecting an alternative, agencies are to select approaches that maximize net benefits including potential economic, environmental and public health and safety.	Coordination Plan Revision 4
CEQ Regulations	40 CFR §1500 - 1508	Implements NEPA.	Coordination Plan Appendix B
CEQ Regulations	40 CFR 1508	Requires agencies in the EIS process to address the individual and incremental impact of each proposed environmental action(s) to the overall and aggregate environmental baseline.	Coordination Plan Appendix B
EO 12898 EO 12250	Environmental Justice and Minority Populations	Federal agencies are to identify and address impact to human health or environmental decisions on minority and low-income populations resulting from Proposed Rules programs, policies, and activities.	Coordination Plan Revision 3
Unfunded Mandates Act	2 USC §1501	Requires coordination and "special consideration" of local governments and the private sector during Proposed Actions that exceed $50M; requires evaluation of "Direct Costs" or "Direct Savings," to local governments as well as preparation of budgetary impact-estimates to each affected County.	Coordination Plan Revision 3
5/14/1998 DOI Policy Manual	Part 318 Chapter 3	DOI Part 318 DM3 is an internal DOI Procedural Manual entitled "**Record of Compliance**" (The ROC). The ROC specifically details compliance procedures to be undertaken, citing EOs 12866, 12612, 12988, The Regulatory Flexibility Act and Small Business Regulatory Enforcement Fairness Act. The purpose of the ROC is to "*reduce the chance the Rule will be litigated*" and it provides for signatures of the DOI Assistant Secretary prior to submittal of the Proposed Rule for Federal Register notification.	Coordination Plan Revision 3

Appendix B

List of Exhibits from

Public Hearing and Administrative Record

Exhibits of KNRC Hearing Officer & Public Hearing
Closed 5:00p.m. November 8, 2013

VOL	EXHIBIT	HEARING OFFICER TITLE	ADMITTED
1	HO1	KNRC President Klemm-Opening Statement	X
	HO2	Notice of Public Hearing	X
	HO3	November 7, 2013 Appearance Schedule Agenda	X
	HO4	November 8, 2013 Appearance Schedule Agenda	X
	HO5	Logan County Timeline	X
	HO6	Response, Ms. Jacobsen, Solicitor	X
	HO7	Letter, Mr. Grant	X
	HO8	Response, Ms. Whitlaw	X
	EXHIBIT	**PUBLIC HEARING TITLE**	**ADMITTED**
	A	Data Do Not Support the Listing of LPC	X
	B	LPC Range Wide Conservation Plan	X
	C	Range Wide Conservation Plan for the LPC	X
	D	Testimony of Carl Uhrich/attachments – continuation to volume 2	X
2	D	Testimony of Carl Uhrich/attachments – continuation of volume 1	X
	E	Addressing the Human Dimensions of Wolf Reintroduction	X
	F	Disturbance of Lekking Prairie Chickens	X
	G	Natural Resource Coordination Plan	X
	H	LPC Conservation, Management and Study Plan	X
	I	Written testimony to KNRC by Michael White & Kim Goodnight	X
	J	Email from Whitlaw, Heather-USFWS KS Field Supervisor	X
	K	Facsimile to Heather Whitlaw of USFWS	X
	L	Letter Fred Grant-KNRC hearing officer to USFWS Solicitor Dana	X
	M	Activity Report	X
	N	KNRC News Release	X
	O	USFWS News Release	X
3	P	Testimony of Sheila Ellis	X
2	Q	Testimony of Keith Edwards	X
	R	Testimony of Kyle Hoffman	X
	S	Testimony on behalf of WAFWA and KDWPT	X
	T	Testimony of Mike Lewis	X
	U	Testimony of Bruce Graham	X
	V	Testimony of Representative Don Hineman	X
	W	Testimony of Lynn Freese	X
	X	Testimony of Kirk Thompson	X
	Y	Testimony of Paul Reynolds	X

	Z	Testimony of Clint Pearson	X
	AA	Testimony of Norman MacLeod	X
	BB	County Questionnaire	X
	CC	KDWPT Memorandum	X
	DD	Comment letter from Ralph Ostmeyer/Larry Powell to USFWS Dan	X
	EE	KNRC Public Hearing sign in sheets	X
	FF	Federal Register-Vol.77 No.238---Vol.78 No. 87---Vol.78 No. 131	X

Exhibits of KNRC ADMINISTRATIVE RECORD
Closed 5:00 p.m. CST, November 15, 2013

VOL	EXHIBIT	TITLE	ADMITTED
1	I	Written testimony of James Ludolph	X
	II	Written testimony of Byron Sowers	X
	III	Written testimony of John J. Dowd, Jr. Pres. Syracuse Flying Service, Inc	X
	IV	Written testimony of Jeff and Sky Pate	X
	V	Written testimony of Lori Lennen	X
	VI	Written testimony of Ed Goedhart	X
	VII	US House Committee on Natural Resources (USHCNR) Hearing Notice 8-22-13	X
	VIII	Written testimony of Matt Knox, Montana Farm Bureau to USHCNR 9-4-13	X
	IX	Written testimony of Renee Taylor Environment Consulting to USHCNR 9-4-13	X
	X	US House Committee on Natural Resources (USHCNR) Hearing Notice 7-23-13	X
	XI	Written testimony of Kent McMullen Franklin Co Washington to USHCNR 8-1-13	X
	XII	Written testimony of Rob Roy Ramey II. Ph.D. to USHCNR 8-1-13	X
	XIII	Written testimony of Damien M. Schiff, Pacific Legal Foundation to USHCNR 8-1-13	X
	XIV	Written testimony of Kent McMullen Franklin Co Washington to USHCNR 8-1-13	X
	XV	US House Committee on Natural Resources (USHCNR) Hearing Notice 5-24-13	X
	XVI	US House Committee on Natural Resources Mega Settlement Agreements Map 6-4-13	X
	XVII	Written testimony of Tom Jankovsky, Comm Garfield Co, CO to USHCNR 6-4-13	X
	XVIII	Written testimony of Tyler Powell Dep Sec of Envir OK to USHCNR 6-4-13	X
	XIX	Written testimony of James Carlson, Exe Dir KNRC to USHCNR 6-3-13	X
	XX	US House Committee on Natural Resources (USHCNR) Hearing Agenda 7-31-07	X
	XXI	Written testimony of Rob Roy Ramey II. Ph.D. to USHCNR 7-31-07	X

VOL	EXHIBIT	TITLE	ADMITTED
2	XXII	Keith Sexson-KDWPT/WAFWA ltr to USFWS Benjamin Tuggle-R 2 6-2-12	X
	XXIII	KDWPT-statement--97% of Kansas PRIVATE OWNERSHIP--accessed 5-3-13	X
	XXIV	Public [Private] Land Ownership by State [50]—National Wilderness Institute	X
	XXV	CONFERENCE OPINION—6-30-2011—USFWS for NRCSs LPCI	X
	XXVI	USFWS Dir. Ashe/staff -Available to Media on Endorsement	X
	XXVII	POSITION Summary—Proposed Lesser Prairie-Chicken Threatened Listing/4d Rule	X
	XXVIII	Transmit-NRCP/LPCSMP; Notice of Hearing; Coordination Briefing request 8-23-13	X
	XXIX	KNRC-Talking Points – 9-14-13	X
	XXX	Excerpt 11-1-13 #2 Coordination Meeting w/ USFWS-insert full transcript upon completion	X
	XXXI	KDWPT Webinar Lesser Prairie-Chicken Update Presentation file slides 4-30-13	X
	XXXII	Mitigation Cost Estimations/Webinar Framework 4-30-13	X
	XXXIII	KDWPT News Release-extending historic LPC range outside Current-MAP 7-7-11	X
	XXXIV	WAFWA News Release 1st Statistically Valid LPC Population estimate 10-3-12	X
	XXXV	WAFWA report Range-Wide Population size-LPC-2012 &2013	X
	XXXVI	KDWPT Prairie Chicken Lek Survey - August 2013	X
	XXXVII	Habitat Conservation Plan Grants by State FY 2009-Whooping crane/LPC Grant	X
	XXXVIII	Oklahoma 5 Factors presentation Grant information pages 4-24 & 25-12	X
	XXXIX	Excerpts Grants information -- 5-State RWCP October 2013	X
	XL	KDWPT News Release USFWS grant supporting GPLCC for 5-State plan 5-15-13	X
	XLI	Great Plains Landscape Conserva Coop Fact Sheet, LPC priorities, Charter 6-23-11	X
	XLII	Bipartisan Letter LPN change from 8 to 2 dated 2-21-12	X
	XLIII	Texas Comptroller-ESA economic impact exhibits 5-10-13	X
	XLIV	USFWS Dir Dale Hall Memo-Maintaining Integrity -Scientific Decision-making 2-3-06	X
	XLV	USDA (FSA-NRCS-FS) Comments on DOI-FWS Proposed rule LPC 6_7_13	X
	XLVI	Comments of Kansas Counties, KEC, , 171 landholders w/references 3-11-13	X

VOL	EXHIBIT	TITLE	ADMITTED
2	XLVII	Usefulness of the Umbrella Species Concept as a Conservation Tool April 21, 2003	X
	XLVIII	C Kay-Wolf Recovery-Hidden Agenda-not about wolves…about control of west-96	X
	XLIX	WINTER Surveys of NE Prairie Chickens/Management Implications October 1963	X
	L	Not So Private Property? Endangered Species Pose Problems for Landowners 12-16-09	X
	LI	Grouse Wars: Spotted Owl of the Prairie States Threaten Energy Production 12-6-12	X
	LII	Sen. Vitter--Op-Ed--Endangered Species Act's hidden costs 2-8-13	X
	LIII	Forbes-EPA Secret & Costly 'Sue & Settle' Collusion w/ Environ Org 2-17-13	X
	LIV	Salt Lake Tribune—Are endangered species endangering property rights? 3-8-13	X
	LV	Mountain States Legal Foundation-W Pendley-LPC Is Not Threatened 3-11-13	X
	LVI	WSJ-Using Sue & Settle to Thwart Oil & Gas Drillers-S Moore 10-4-13	X

Appendix C

Acronym Glossary

Acronym Glossary

Acronym	Definition
BFF	Black-footed Ferret
BFFSHA	Black-footed Ferret Safe Harbor Agreement
CCAA	Candidate Conservation Agreement with Assurances
CDOR	Colorado Department of Revenue
CEO	Chief Executive Officer
CEQ	Council of Environmental Quality
CESAR	Center for Environmental Science, Accuracy and Reliability
CNOR	Candidate Notice of Reviews
CRP	Conservation Reserve Program
DOI	US Department of Interior
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act
FSA	Farm Service Agency
IRS	Internal Revenue Service
KDWP	Kansas Department of Wildlife and Parks (thru 6_30_11)
KDWPT	Kansas Department of Wildlife, Parks and Tourism
KEC	Kansas Electric Cooperatives, Inc
KNRC	Kansas Natural Resource Coalition
LPC	Lesser Prairie Chicken
NEPA	National Environmental Policy Act
NGO	Non-governmental Organization
NRCS	Natural Resources Conservation Service
SAFE	State Acres For wildlife Enhancement
SWAT	State Watershed Action Team
USC	United States Code
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
WAFWA	Western Association of Fish and Wildlife Agencies
WEC	Wheatland Electric Cooperative

NOTICE OF PUBLIC HEARING

The Advisability Of Listing The Lesser Prairie Chicken as a Threatened Species Under The Endangered Species Act

On Thursday, November 7, 2013 and Friday, November 8, 2013, between 9:00 am and 4:30 pm, The Kansas Natural Resource Coalition (KNRC), through its Hearing Council, will conduct a Public Hearing at the Clarion Hotel, 1911 East Kansas Avenue, Garden City Kansas 67846, to receive information and consider the advisability of listing the Lesser Prairie Chicken (LPC) (*Tympanuchus pallidicinctus*) as a Threatened Species under the Endangered Species Act (ESA).

The Public Hearing will be held for the purpose of receiving, analyzing and evaluating all relevant information regarding the proposed listing and to evaluate consistency of listing efforts with congressional acts, presidential executive orders, federal and state regulations, sound scientific principal, economic considerations, cultural and civic impacts, general environmental practice and established plans.

All persons, organizations and agencies possessing such information are invited to appear before the KNRC Hearing Counsel to offer testimony, oral and/or written, pertaining to the proposed LPC listing. The Hearing Counsel will receive information, including - but not limited to - LPC studies, population counts, scientific methodologies, historic and current data, range maps, impact studies, charts, alternative plans, conservation practices, correspondence, photographs, scientific conclusions and/or other relevant Lesser Prairie Chicken information, including but not limited to:

- Specific, tangible and documented natural and/or human threats to the LPC species, its habitat, range and/or ecosystem(s);
- Information, data and studies of future impact(s), if any, that would be expected to occur to the LPC species, its habitat, range and/or ecosystem(s)in the event a "not warranted" determination is made or no action is taken;
- Specific, tangible or measurable improvement(s) to LPC populations, habitats, ecosystems, and/or other benefits projected to result from, in conjunction with, or emanating out of a threatened-status listing determination under ESA;
- Information as to present/future impact(s) upon or benefit to the human environment, cultural systems, social cohesiveness, changes in economic circumstances, and/or changes to agriculture, commerce, industry or private property projected to result from, in conjunction with, or emanating out of a threatened-status listing determination and, alternatively, information regarding impact(s) emanating from a not warranted or no action determination under ESA;
- Public notifications, correspondence, comments and/or review opportunities from the Environmental Assessment (EA) or Environmental-Impact Statement (EIS) process, including Findings of Impact and similar, related NEPA procedural studies, and information relevant to the coordination process initiated by any federal agency with local government(s), if any.

Persons, organizations and/or agencies requesting to appear before the Hearing Council must submit a written Intent to Testify to KNRC, PO Box 93, Garden City, KS 67846 or KNRC.counties@gmail.com on or before 5:00 pm CST Monday, November 04, 2013. Copies of written and electronic information may be filed during the hearing, and the record will remain open for acceptance of written and/or electronic information until 5:00 pm CST on Friday, November 15, 2013. All written and electronic submissions shall be provided to the Hearing Counsel or received by land delivery at PO Box 93, Garden City, Kansas 67846 before the November 15 deadline.

Attachment E

Freedom of Information Notification
and Document List for November 18, 2021 Meeting

Budd-Falen Law Offices
November 4, 2021

BUDD-FALEN LAW OFFICES
L.L.C.
ATTORNEYS FOR THE WEST

KAREN BUDD-FALEN [1]
FRANKLIN J. FALEN [2]
BRANDON L. JENSEN [3]

[1] ALSO LICENSED IN ID & NM
[2] ALSO LICENSED IN NE, SD & ND
[3] ALSO LICENSED IN CO & NM

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TERESA L. SLATTERY [4]
CONNER G. NICKLAS [5]
KATHERINE E. MERCK [6]
RACHAEL L. BUZANOWSKI

[4] ALSO LICENSED IN IL & TX
[5] ALSO LICENSED IN CO & MT
[6] ALSO LICENSED IN ID & MT

November 4, 2021

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
#7005 1820 0000 8609 4051

Email: Pete_Gober@fws.gov

Mr. Pete Gober
Black-Footed Ferret Recovery Coordinator
U.S. Fish and Wildlife Service
PO Box 190
Wellington, CO 80549

Re: Freedom of Information Act Request

Dear Mr. Gober:

Pursuant to the Freedom of Information Act ("FOIA"), 5 U.S.C. § 552, on behalf of Logan County Kansas Board of County Commissioners, this letter requests that you transmit to my office all documents, letters, correspondence, electronic mail correspondence, telephone notes, maps, Federal Register notices and all other documentation in any file regarding the Smoky Hill Safe Harbor Agreement (SHA) for the Black-footed Ferret. This information includes but is not limited to the following:

1) The written determinations from FWS that document the net conservation benefits from management actions at each site included in the Smoky Hill SHA;
2) Confirmation of title and split estate inquiries that assess if the varying land interests could impair wildlife management within the SHA;
3) Copies of the *Monitoring Plan* and Federal Register notifications that assure that each ESA Section 10(a)(1)(A) under the Smoky Hill Safe

Harbor Agreement meets the standards and requirements of the 1999 Final SHA policy;

4) Demonstration that FWS has completed the Federally required NEPA determinations, including Federal Register notifications confirming that FWS has reported any significant economic, social, historical, and/or cultural impacts, and provided the public with the opportunity for input on the issuance of permits under Smoky Hill Safe Harbor Agreement;
5) Copies of each site-specific Reintroduction Plan, including cadastral maps depicting the location of the Conservation Zones, Management Zones, property boundaries, and a description of each management activity to be undertaken or prohibited for that parcel;
6) Copies of all Fish and Wildlife Service policies, Solicitor Opinions and/or Department of Interior Memoranda that regulate or limit access to the information requested in Numbers 1 through 5 above.

This information should not be subject to the Freedom of Information Act exemptions and access to the requested documents should be granted within twenty (20) working days.

I also request that if you determine that some of the information requested is exempt from FOIA, that this information be identified by document, along with the statutory basis for your claim and your reasons for not exercising your discretion to release this information. FOIA also provides that if only portions of the file are exempt from release, the remainder of the file must be released. Therefore, I request that I be provided with all non-exempt portions that can reasonably be segregated.

If there is any problem in providing this information, please let me know so that further arrangements can be made. I can be reached at the phone number above or via email at karen@buddfalen.com. In addition, please contact me if the estimated cost of responding to this request for information exceeds one hundred dollars ($100.00).

Thank you for your cooperation.

Sincerely,

Brandon Jensen
Budd-Falen Law Offices, LLC

Xc: VIA email:
Noreen Walsh, FWS Regional Director – Noreen_Walsh@fws.gov

Jason Luginbill, Project Leader Fish and Wildlife Service - Jason_Luginbill@fws.gov

Martha Williams, Acting Director Fish and Wildlife Service - Martha_Williams@fws.gov

Logan Board of County Commissioners via regular mail
Cody Younkin, Chairman
710 West 2nd Street
Oakley, KS 67748

United States Department of the Interior

FISH AND WILDLIFE SERVICE
2609 Anderson Avenue
Manhattan, Kansas 66502

In Reply Refer to:
FWS/IR05/IR07

August 23, 2021

Board of Logan County Commissioners
710 West 2nd Street
Oakley, Kansas 67748

Dear Board of Logan County Commissioners,

The U.S. Fish and Wildlife Service (Service), Kansas Ecological Services Field Office (KSFO), was approached by participating Cooperators in the ongoing Black-footed ferret (BFF) recovery program efforts in Kansas in the fall of 2018. The Cooperators inquired about enrolling other properties (see attached approximations for geographic locations) they owned or operated into the existing Black-Footed Ferret Programmatic Safe Harbor Agreement (October 23, 2013). They were looking to expand their participation with the recovery of BFF in Logan County, Kansas.

We assessed the properties with the landowners on June 24-25, 2019, to evaluate the potential for the new properties to advance recovery efforts locally and range wide. Our observations indicated that the potential properties do have basic and fundamental biological components, i.e., prairie dogs, the main source of prey for BFF. It was noted that the new properties could contribute to BFF recovery efforts in Kansas and across the range.

The properties were enrolled into the programmatic safe harbor agreement under the name of the Smoky Hill Safe Harbor Agreement in November of 2019. To date, the sites have not been surveyed for ferrets and there have not been ferrets released on the new sites. However, it is the Cooperators desire to receive Black-footed ferrets on the property to support recovery efforts for the species.

Future plans for the sites could involve ferret releases and surveys, similar to the activities on the Butte Creek Ranch Safe Harbor Agreement, however, introductions will not happen until all participating and non-participating interests and involvement have been discussed, detailed logistics are ready to be implemented and the framework is fiscally supported.

The KSFO desires to continue discussions with the Logan County Commission and to further explore opportunities that can serve all interests. We would like to specifically discuss Service priorities for the recovery of the BFF at the Logan County sites, our ability to implement the necessary actions to serve in the recovery of the BFF, working with the Cooperators and Logan County.

The KSFO requests a meeting with the commissioners in the fall of 2021. We will coordinate the meeting by reaching out via email or letter for proposed dates. In the interim, if you have questions or would like to discuss anything prior to our meeting please feel free to reach out to me at jason_luginbill@fws.gov. Thank you very much for your time.

Sincerely,

Jason S. Luginbill
Project Leader