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November 24, 2008

WER 5839.03
United States Fish and Wildlife Service
Proposed Rule
Designating the Northern Rocky Mountain
Population of Gray Wolf as a Distinct Population
Segment and Removing This Distinct Population
Segment from the Federal List of Endangered and
Threatened Wildlife
FWS-R6-ES-2008-008
RIN 1018-AW37

Public Comments Processing
Attention: RIN 1018-AW37
Division of Policy and Directives Management
U.S. Fish and Wildlife Service
4401 North Fairfax Drive, Suite 222
Arlington, VA 22203

Dear Sir or Madam:

The staff of the Wyoming Game and Fish Department has reviewed Designating the Northern Rocky Mountain Population of Gray Wolf as a Distinct Population Segment and Removing This Distinct Population Segment from the Federal List of Endangered and Threatened Wildlife Proposed Rule. We offer the following comments for your consideration.

As you know, we have clearly:

- 1) Committed to managing for 15 breeding pairs with the state of Wyoming
- 2) Committed to insure genetic diversity
- 3) Provided adequate regulation of take on wolves doing damage on private land

Specific questions posed by the Service:

- 1) *Whether it is appropriate or necessary to revise our recovery goal ... to clarify that the genetic exchange called for can be satisfied through either natural migration or managed genetic exchange.*

Response:

The 1994 EIS established that wolf movement between subpopulations is sufficient evidence of population viability and genetic exchange. Specifically, the 1994 EIS defined “*Recovered Wolf Population*” to mean: “In the Northern Rockies a recovered wolf population is ten breeding pairs of wolves in each of three areas for three successive years with some level of wolf movement between areas” (USFWS 1994: *glossary page 5*). The EIS further defined “*Viable Population or Minimum Viable Population of Wolves*” as: “The number, distribution, and persistence of wolves considered necessary for a wolf population to have a reasonable likelihood of survival for the foreseeable future. Recovery goals for the wolf in the Northern Rocky Mountain Wolf Recovery Plan and this EIS are ten breeding pairs in each of three recovery areas for three successive years with some level of interchange between areas. The FWS considers that a viable (recovered) wolf population will exist in the Northern Rockies once this goal is attained.” (USFWS 1994: *glossary, page 5*)

The EIS definitions for recovered wolf population and viable population were based on a biologically legitimate premise that occasional movement of wolves among recovery areas would result in genetic exchange. The consultation memo on wolf population viability that was appended to the EIS did not alter those definitions. The memo stated: “Thirty or more breeding pairs comprising some 300+ wolves in a meta-population with genetic exchange between sub-populations should have a high probability of long-term persistence.” The memo went on to conclude, “... the 1987 wolf recovery plan’s population goal of ten breeding pairs of wolves in three separate recovery areas for three consecutive years is reasonably sound and would maintain a viable wolf population in the foreseeable future” (USFWS 1994: *Appendix 9, page 42*). The conduit for “genetic exchange” was clearly wolf movement among recovery areas. No document produced by the USFWS has ever suggested that genetic exchange has to be documented through laboratory analysis, nor is this necessary in a wild population in which organisms periodically exchange among subpopulations.

When the USFWS adopted the 1994 EIS definition of recovered wolf population in 2003, that definition was not altered to require genetic testing as a basis for determining genetic exchange. Specifically, the USFWS stated, “Therefore, in place of the 1987 Recovery Plan goal, we have adopted the definition of wolf population viability and recovery developed in the 1994 EIS (Service 1994a)” [FR 68:15817]. The EIS definitions of population viability and recovery are based on exchange of wolves. This was clearly stated in several places in the EIS, for example: “The FWS stands by its definition of a viable wolf population being 100 wolves in each of 3 recovery areas, with some movement of wolves between areas for three consecutive years. Please see Glossary of Terms and Appendix 9” (USFWS 1994: *Chapt. V, page 23*).

Radio-collared wolves have moved from Central Idaho into the GYA on 4 known occasions (FR 73:10553). Since only 30% of the wolves were radio-collared at any given time, an unbiased estimate of the actual number of wolves that entered the GYA is 4/0.3 or 13±. Wolf B58 from Central Idaho was first detected in Wyoming in spring, 2002 when the NRM wolf population was only 563 based on the fall, 2001 estimate. This indicates wolves were capable of dispersing, and did disperse among recovery areas when the population was comparable to the minimum management goals for a recovered population, and much lower than the current population level. Genetic diversity is not a problem within the GYA. Commenting on this issue, VonHoldt et al. (2007) remarked, “Strikingly, the observed [YNP] population’s level of heterozygosity was included in the distribution of the managed breeding strategy, indicating that the natural social behaviour of wolves is sufficient to preserve high levels of variation given access to unrelated mates and a large diverse breeding pool.”

However, the authors' long-term genetic predictions were based on questionable assumptions and modeling procedures. The VORTEX model (Miller and Lacy 2005) used for population viability analysis does not simulate active behavioral selection for unrelated mates (outbreeding) and therefore underestimates genetic heterozygosity in its long-term genetic trajectory predictions. The authors also made a highly untenable assumption that wolves from the other subpopulations would not immigrate and successfully interbreed with YNP wolves.

To summarize, the existing level of genetic diversity in the GYA is high, wolf social structure and mate selection behaviors are likely to maintain high genetic diversity, and wolf movements among recovery areas fulfill the evidentiary requirements of "genetic exchange" set forth by the definitions of "recovered wolf population" and "viable population" in the 1994 EIS. However, we do not object to the Service revising the recovery goal to clarify that genetic exchange can be satisfied through managed genetic exchange. This is consistent with Wyoming's post-delisting management plan concerning genetic connectivity, as set forth in Chapter 21, Section 6 of the Commission regulations, which states: "To the extent practicable, the Commission is committed to managing gray wolves in Wyoming so that genetic diversity and connectivity issues do not threaten the gray wolf population. This will be accomplished by encouraging the incorporation of effective migrants into the gray wolf population. Conservation measures will include, but are not limited to, working with other States to promote natural dispersal into and within the WTGMA and, if necessary, by relocation or translocation." (Also refer to pages 3 and 23 of the Wyoming Gray Wolf Management Plan and Comment 8 of this letter).

2) *What additional management, protections, and regulatory mechanisms may be needed to facilitate genetic exchange (including both natural migration and managed genetic exchange) including the actions outlined in the draft memorandum of understanding regarding the protection of genetic diversity of NRM gray wolves?*

Response:

In reviewing the draft MOU, we see some potential issues. The fourth "Whereas" statement indicates Wyoming has agreed in its management plan to classify wolves as trophy game statewide. Wyoming's classification is defined in Chapter 21, Section 3(j) of the Commission regulations, which have established a dual classification. Wyoming's management plan is based on this dual classification concept. In addition, the perpetual collection and analysis of genetic samples, to our knowledge, has never been required for management of a genetically diverse species population that has been delisted and transferred back state management. There is also no criterion in the MOU specifying what degree of inbreeding depression constitutes a problem.

The States of Idaho and Montana control dispersal corridors connecting the Central Idaho, NW Montana, and GYA wolf populations. The implementation of management, protection, and regulatory mechanisms to facilitate genetic exchange will be the prerogative and proprietary responsibilities of Idaho and Montana. Wyoming encourages and will support any effort by those states to maintain and enhance dispersal corridors into the GYA. There is no specific evidence that areas outside the current Wolf Trophy Game Management Area (WTGMA), such as the Wyoming Range, provide an important or necessary connection for wolves dispersing from Central Idaho into the GYA. Adequate dispersal corridors exist into

and through YNP, as well as the north and south ends of the Teton Mountain Range, if not through that range.

Wyoming will cooperate with Idaho, Montana, and YNP to encourage and promote dispersal of effective migrants into the GYA. In Wyoming, this will be accomplished by regulating the level of wolf mortality within the trophy game management area, which will preserve the potential for dispersing wolves to survive and reproduce (Refer to Comments 9 v and vi). In addition, Wyoming has the largest area among the 3 states in which wolves are fully protected. YNP accounts for over half the approximate 200-mile boundary and potential dispersal corridor between the WTGMA and ID and MT.

Wyoming is committed to monitoring the genetics of wolf populations in the state to determine if any future management actions are needed.

(3) *What portions of Wyoming need to be managed as a trophy game area, how Wyoming should manage wolves in the trophy game area, and the significance of all portions of the range in the State of Wyoming in maintaining the viability of the NRM DPS.*

Response:

Wyoming will manage wolves as trophy game animals within the portion of the state that contains suitable wolf habitat. This area, known as the Wolf Trophy Game Management Area (WTGMA) is described in Chapter 21, Section 3(j) of the Commission regulations, and on pages 5 and 49 of the Wyoming Gray Wolf Management Plan.

Based on the best scientific information available, approximately 70% of *theoretically* suitable wolf habitat in Wyoming is contained within the WTGMA (Oakleaf et al. 2006). Conversely, the area of Wyoming outside the Trophy Game Area is not considered significant to the recovery of gray wolves in the Northern Rocky Mountains (72 FR 6118; February 8, 2007; Oakleaf et al. 2006; 73 FR 10550); nearly all wolves that have attempted to occupy the portion of Wyoming outside the Trophy Game Area have been involved in conflicts and lethally removed under Service management; and the stagnant distribution patterns since recovery objectives were achieved indicate there is limited suitable habitat in Wyoming for the NRM DPS wolf population to expand significantly beyond the three core recovery areas (72 FR 6120, February 8, 2007).” In addition, “[s]trips and smaller (less than 2,600 km² [1,000 mi²]) patches of theoretically suitable habitat (Carroll et al. 2006, p. 34; Oakleaf et al. 2006, p. 559) (typically, isolated mountain ranges) often possess higher mortality risk for wolves because they are surrounded by, or in close proximity to, unsuitable habitat with a high mortality risk” [FR 73:10537].

The USFWS has endorsed the concept of a dual classification in Wyoming since the earliest stages of the development of Wyoming’s wolf management plan. On September 26, 2002, USFWS Director Williams told the Department that “[w]olves will need legal protection from unregulated human mortalities under State law *in an area at least as extensive as they currently occupy* to maintain the population above recovery levels.” In December 2002, Deputy Regional Director Blankenship told the Department that “based on what we know now about the dual status proposal, this has the potential of working, *provided the area where wolves are classified as trophy game animals is of sufficient size to preclude relisting of the wolf once they are delisted.*” During the Service’s final informal review of the draft Wyoming Gray Wolf Management Plan in early July 2003, Mr. Ed Bangs (USFWS Wolf

Recovery Coordinator) expressly endorsed the dual status classification. He commented that the Wyoming Gray Wolf Management Plan “appears to contain enough area and adequate wolf management policies for the [Department] to reasonably conserve a recovered wolf population in Wyoming.” On April 16, 2003, Mr. Bangs also stated in a radio interview that the predator status “was a public relations problem, *but biologically it was fine.*”

In its 12-month finding on Wyoming’s petition to delist the NRM DPS of gray wolf, the Service stated, “The WGFD needs to be given the regulatory authority to adaptively manage the species *throughout suitable habitat in Wyoming*, outside of the National Park/Wilderness units, to account for wide fluctuations in wolf population levels” (FR 71:43430). Commenting on the proposed trophy game area that was subsequently adopted by the 2007 legislature, the USFWS stated, “If this type of regulatory framework was enacted by Wyoming state law and its wolf management plan it would provide assurance that Wyoming’s share of the tri-state NRM wolf population would be maintained above recovery levels into the foreseeable future and that a significant portion of the range in Wyoming was occupied by wolf packs” (FR 72:6132). The Service’s finding in the final delisting rule concluded, “The Trophy Game Area designated by Wyoming is clearly large enough to support 15 breeding pairs and 150 wolves even if Yellowstone Park had none (a very unlikely scenario). Therefore the Trophy Game Area is large enough to maintain Wyoming’s commitment to the NRM wolf metapopulation on its own. Wolves occurring in the portion of the State outside of the Trophy Game Area, which consists largely of habitat unsuitable for wolf pack establishment and persistence, will be designated as ‘predatory animals’ and will be subject to unregulated human-caused mortality. Areas in Wyoming outside the trophy game area have not supported persistent wolf packs since 1995 ...” [FR 73:10549].

Wolves attempting to occupy the areas outside the current WTGMA encounter much higher densities of livestock and other domesticated animals, and are far more likely to depredate. Consequently, those wolves become exposed to a much greater risk of mortality.

Big game habitats throughout Wyoming have been extensively altered by anthropogenic influences. During winter, wild ungulates, concentrate on remnant fragments of winter ranges where their vulnerability to opportunistic predation by wolves would be unnaturally high. Big game are also likely to displace onto agricultural lands and into subdivisions when they attempt to avoid predation, which leads to additional problems such as damage to livestock feed stacks or private residence ornamental landscaping. This is an unfortunate reality in the contemporary ecological setting. Wolves are where they reasonably can be, as reflected by Wyoming’s delineation of an acceptable wolf management area (the WTGMA). Social and economic costs of attempting to manage wolves in unsuitable habitats outside the WTGMA would be exceedingly high, and those costs are not shared by the interests who advocate having wolves in those kinds of locations.

- (4) *The adequacy of existing regulatory mechanisms in Montana, Idaho, and Wyoming, including whether Wyoming's regulatory mechanisms do or should manage for 15 breeding pairs and 150 wolves in mid-winter and if Wyoming's malleable trophy game area affects its ability to manage for such numbers of wolves.***

Response:

The revised Wyoming Gray Wolf Management Plan and Chapter 21 of the Commission regulations provide unequivocal commitments to manage for at least 15 breeding pairs

comprised of at least 150 wolves in Wyoming. Language in the Plan and Commission regulation also assures that the Commission's authority to adjust the size of the trophy game can only be exercised on the basis of best available science and will not impact the State's ability to manage for 15 breeding pairs and 150 wolves in midwinter. These commitments and assurances are described below:

Commitments to manage for 15 breeding pairs and 150 wolves:

Chapter 21, Section 4(a): "The Commission shall manage for at least fifteen (15) breeding pairs (comprising of at least 150 gray wolves) within the WTGMA, with at least seven (7) of those breeding pairs in the WTGMA located primarily outside of the National Parks."

Wyoming Gray Wolf Management Plan, Pages 1, 5, 13: "The State of Wyoming will commit to manage for at least fifteen (15) breeding pairs consisting of at least 150 wolves within the WTGMA including the National Parks, John D. Rockefeller Memorial Parkway (Parkway), and National Elk Refuge (NER). Of these fifteen (15) breeding pairs, at least seven (7) breeding pairs will be maintained outside the National Parks and Parkway. In the event the Commission determines there are less than eight (8) breeding pairs inside the National Parks for 2 consecutive years, the Department shall take actions to ensure the total number of breeding pairs inside the WTGMA is at least fifteen (15) breeding pairs."

Commitments assuring the trophy game area can only be adjusted on the basis of best scientific and information available:

Chapter 21, Section 4(c); and Wyoming Gray Wolf Management Plan, Pages 1, 6: "The Commission shall not diminish the area of the WTGMA as defined in Section 3(h) unless, based upon the best scientific data and information available, the Commission determines that diminishing the area for the WTGMA will not prevent the Commission from achieving the management objectives described in Section 4(a)."

Analysis: The above stated commitments are consistent with the authorities granted the Commission by Wyoming Enrolled Act 123 (W.S. § 23-1-304), which states, "The commission shall by rule and regulation establish areas within the state where gray wolves are classified as trophy game animals and set seasons and bag limits within those areas. The areas designated, seasons and bag limits shall be set annually in a manner the commission determines, through rule and regulation, only as necessary to reasonably ensure at least seven (7) breeding pairs of gray wolves are located in this state and primarily outside of Yellowstone National Park, Grand Teton National Park and John D. Rockefeller, Jr. Memorial Parkway at the end of the current calendar year."

W.S. § 23-1-304 requires at least 7 breeding pairs of gray wolves must be located outside the National Parks. Therefore, managing for 15 breeding pairs comprised of at least 150 wolves throughout the WTGMA is consistent with this authority. In addition, the definition of "breeding pair" at W.S. § 23-1-304(c) stipulates, "For purposes of this section breeding pair" means an adult male and an adult female gray wolf raising at least two (2) pups of the year until December 31. The number of breeding pairs shall be certified by the department prior to January 31 of each year." This definition establishes that the determination of breeding pairs shall be done in mid-winter, which is consistent with the Service's criteria for

management of a recovered wolf population. The consideration of best scientific data and information available is consistent with the Commission's authority to potentially adjust the boundaries of the WTGMA.

- (5) *If we determine that Wyoming's State law and State wolf management plan do not constitute adequate regulatory mechanisms, the area in northwestern Wyoming that is a significant portion of the range of the NRM DPS that should retain its nonessential experimental population status under section 10(j) of the Act, even if we determine the rest of the DPS should be delisted.***

Response:

Wyoming feels that with current regulatory changes wolves should be delisted in all three states. If the Service does not delist, the non-essential experimental designation (10(j) rule) is necessary to continue managing depredation on livestock and wild ungulates.

- (6) *How Idaho, Montana, and Wyoming's management of take associated with their defense of property laws and hunting regulations affects each State's commitment and ability to manage for 15 breeding pairs and 150 wolves in mid-winter.***

Wyoming has not promulgated a wolf hunting regulation as yet, however mortality quotas and hunting seasons will be based on the management criteria established by regulation and by W.S. § 23-1-304(a). Chapter 21, Section 4(a) of the Commission regulations stipulates, "Gray wolves found in that portion of Wyoming described as the WTGMA are hereby designated as trophy game animals and managed under the authority of the Wyoming Game and Fish Commission. The Commission shall manage for at least fifteen (15) breeding pairs (comprising of at least 150 gray wolves) within the WTGMA, with at least seven (7) of those breeding pairs in the WTGMA located primarily outside of the National Parks." Legal harvest of gray wolves within the WTGMA will be controlled through carefully regulated mortality quotas. Any hunter who legally harvests a wolf within the WTGMA will be required to report the wolf within 24 hours, and must register the wolf at a WGFD regional office within 5 days. The wolf hunting season shall close immediately upon reaching the approved harvest mortality quota, or upon the season closing date if the mortality quota is not reached.

Wyoming's defense of property regulations have been updated and revised to be consistent with the Service's defense of property provisions at 50 CFR 17.84(n) – the "10(j) Rule" [FR 72:36948]. The following provisions in Chapter 21 of the Wyoming Game and Fish Commission Regulations pertain to defense of property in Wyoming and are consistent with statutory authorities granted the Commission by Enrolled Act 123 [W.S. §§ 23-1-101, 23-1-304, 23-3-115].

Section 7. Lethal Control of Gray Wolves in the Wolf Trophy Game Management Area.

The Department may utilize aggressive management techniques to protect private property, including livestock and domesticated animals within the WTGMA.

- (a) The provisions of this section shall not apply if the lethal removal of gray wolves:**

- (i) **may prevent the Department from achieving the management objectives described in Section 4(a); or**
- (ii) **may result in the re-listing of gray wolves under the Endangered Species Act.**

Section 8. Issuance of a Lethal Take Permit.

- (a) A Lethal Take Permit shall only be issued when there are:
 - (i) At least fifteen (15) breeding pairs (**comprising of at least 150 gray wolves**) in the WTGMA; and
 - (ii) At least seven (7) breeding pairs of gray wolves inside the WTGMA located primarily outside of the National Parks.

If the requirements of Section 8(a) are satisfied, the Department shall issue Lethal Take Permits when requested by an owner in the WTGMA and upon verification by Department personnel, or personnel from USDA-APHIS-Wildlife Services operating under authority of an approved memorandum of understanding, when gray wolf predation upon livestock or domesticated animals has occurred, or for the take of gray wolves in a chronic wolf predation area.

- (b) Lethal Take Permits shall only allow for the take of gray wolves by the use of legal firearms. Lethal Take Permits shall not allow the take of gray wolves from aircraft.
- (c) Lethal Take Permits shall be issued for not more than two (2) gray wolves for the specific private land parcel or specific grazing allotment as designated on the permit, and shall state the name, address and phone number of the permittee, other authorized persons, and be signed by the permittee and a Department representative.
- (d) Lethal Take Permits shall be immediately suspended or cancelled if the Department determines that further lethal control:
 - (i) **may prevent the Department from achieving the management objectives described in Section 4(a); or**
 - (ii) **may result in the re-listing of gray wolves under the Endangered Species Act.**

Notification of suspension or cancellation of Lethal Take Permits shall be provided via personal notification, first class mail or by telephone or facsimile to all current permittees.

- (e) The permittee, or other authorized persons listed on the permit shall notify a Department representative named on the Lethal Take Permit as soon as practicably possible (not to exceed 24 hours) by personal contact, or phone contact of the take of a gray wolf under the authority of a Lethal Take Permit.
- (f) Failure by the permittee, or other authorized persons listed on the permit to abide by all provisions and conditions stipulated in this section shall be cause for the Department to cancel the permit.

- (g) Lethal Take Permits shall expire on December 31 of the year issued, unless the permit is canceled in accordance with the other provisions of this section.
- (h) Lethal Take Permits shall not be issued outside the geographic area defined as the WTGMA. Gray wolves, which are classified as predatory animals can be taken without a license in any legal manner and at any time as provided by W.S. §23-2-303(d), §23-3-103 (a), §23-3-112, §23-3-304 (b), §23-3-305 and §23-3-307.

Section 9. Non-lethal Control of Gray Wolves in the Wolf Trophy Game Management Area.

- (a) Non-lethal control shall be initiated when deemed appropriate by the Department or when requested by the owner, but may be discontinued at the discretion of, and upon determination by the Department that lethal control is necessary to mitigate continued harassment, injury, maiming or killing of livestock or domesticated animals.
 - (b) Non-lethal control actions shall be initiated if further lethal control:
 - (i) **may prevent the Department from achieving the management objectives described in Section 4(a); or**
 - (ii) **may result in the re-listing of gray wolves under the Endangered Species Act.**
- (7) ***Whether and under what authority the Service may identify and designate a DPS within a broader pre-existing listing and determine that this DPS should be removed from the endangered species list.***

The Endangered Species Act does provide the Service authority to designate a DPS within a broader pre-existing listing and determine that this DPS should be removed from the endangered species list. Section 4.(c) of the Act states, “The Secretary of the Interior shall publish in the Federal Register a list of all species determined by him or the Secretary of Commerce to be endangered species and a list of all species determined by him or the Secretary of Commerce to be threatened species. Each list shall refer to the species contained therein by scientific and common name or names, if any, specify with respect to each such species over what portion of its range it is endangered or threatened, and specify any critical habitat within such range. The Secretary shall from time to time revise each list published under the authority of this subsection to reflect recent determinations, designations, and revisions made in accordance with subsections (a) and (b).”

The designation of a DPS throughout a broader pre-existing listing is a revision of the portion of the species’ range in which it is endangered or threatened in accordance with Section 4.(c). More specifically, it is a modification of a listing that recognizes the existence of a legitimate DPS. Delisting a DPS at the time it is designated is a revision of the species’ listed status in accordance with Sections 4.(a) and 4.(c).

Many listings under the Endangered Species Preservation Act of 1966 and the Endangered Species Act of 1973 were expedited by listing species throughout, and even beyond their historic range. Those “rangewide” and extra-rangewide listings often encompassed multiple distinct population segments that were not recognized at the time of listing. Any attempt to identify and list all species’ DPSs individually would have brought the listing process into

gridlock and produced lengthy delays in listing species that were in dire need of the Act's protection. This happened in 1978 when the gray wolf was listed throughout the conterminous United States even though taxonomists disagreed on the numbers and distributions of wolf subspecies. The original listing of *Canis lupus* also did not consider that the majority of the historic range in the United States is no longer suitable for occupancy by wolves or that parts of California and portions of the eastern and southeastern United States were outside the historic range [FR 68:15805].

Although rangewide listings are administratively expedient in the beginning, the strategy can lead to unnecessary complications with respect to recovery plans, demonstrating recovery criteria are met, and downlisting or delisting the species. A more pragmatic and reasonable approach to species recovery considers "significant portion" to constitute the remaining habitats that are actually suitable, or can be reasonably restored and rehabilitated, based on the biology of the species, technical feasibility, cost and the potential for significant social conflicts. This concept has been applied in reverse for decisions to not list species and has been upheld by the courts. For example, the negative finding on the petition to list the black-tailed prairie dog (*Cynomys ludovicianus*) was upheld even though this species has been reduced to just 2% of its historic range. Likewise, species such as the American bison (*Bison bison*) have not been listed because viable populations exist in a miniscule fraction of the historic range. If a species listing is not warranted because viable populations and adequate conservation measures are present within some limited portion of the species' historic range, then logically the decision to find a species recovered can be based on the same interpretation of "significant portion."

Additional issues raised in the Federal Register notice:

- (8) On page 63932, the Service makes the following statements: "***Wyoming's current regulatory framework for delisted wolves minimizes the likelihood of successful migration through the area designated as predatory animals by Wyoming statute ... Wolf dispersal patterns suggest dispersing wolves moving into the Greater Yellowstone Area from Idaho or Montana tend to move through the predatory area. Physical barriers (such as high-elevation mountain ranges that are difficult to traverse in winter) appear to discourage dispersal through the National Parks' northern and western boundaries. Limited social openings in the National Parks' wolf packs also direct dispersing of wolves from Idaho and Montana toward the predatory area portions of Wyoming. Finally, Wyoming's winter elk feeding grounds attract and could potentially hold dispersing wolves in the predatory area.***"

These assertions are unfounded and speculative. Marked wolves from Central Idaho have not been killed or otherwise detected within the predatory animal area. On the other hand, a radio-collared wolf from Central Idaho has taken up residence in YNP, indicating that dispersing wolves do migrate into and through the Park (FR 73:63928). Furthermore, the Service's geographic characterization of mountain ranges is inaccurate. High-elevation mountain ranges are not present within the southwestern quadrant of YNP (e.g., Bechler Meadow) or the area between the southern Park boundary and Conant Creek along the Idaho border. These regions are comparatively low elevation, with only moderate topographic relief, and present no barrier to dispersing wolves. The "Reclamation Road," which traverses from Flag Ranch in the Rockefeller Parkway to Ashton, ID, does not gain significant elevation nor does it cross a steep mountain range. The Service has not provided data

documenting that wolves require the Wyoming predatory area to effectively move into the Greater Yellowstone Area from Idaho, Montana or Wyoming.

- (9) On page 63930, the Service indicates the following management practices may be considered to further encourage natural dispersal among core populations: ***“reducing the rate of population turnover and fostering persistent wolf packs in all or select core recovery segments or all or select areas of suitable habitat (Oakleaf et al., 2006; 72 FR 6106, February 8, 2007); creating occasional disruptions of wolf pack structure or reduced wolf density in select areas of suitable habitat to create social vacancies or space for dispersing wolves to fill; maintaining higher rather than lower overall wolf numbers in all or select recovery areas; maintaining more contiguous and broader wolf distribution instead of disjunction and limited breeding pair distribution; minimizing or precluding human-caused wolf mortality between and around core recovery segments during critical wolf dispersal and breeding periods (December through April); and reducing the rates of or eliminating human-caused mortality in core recovery segments during denning and pup rearing periods (April through September).”***

Response:

Wyoming does not agree that dispersal and genetic exchange are likely to become significant issues preventing the GYA wolf population from remaining at or above recovery levels in the foreseeable future. The Service has also concluded that genetic issues are not likely to threaten the GYA wolf population in the foreseeable future (FR 73:63928). Wyoming considers the additional strategies listed above as excessive and unnecessary to facilitate adequate levels of wolf exchange between recovery areas. Some of the strategies are also contradicting. For example, “reducing the rate of population turnover” and “maintaining higher rather than lower overall wolf numbers in all or select recovery areas” are inconsistent with “creating occasional disruptions of wolf pack structure or reduced wolf density in select areas of suitable habitat to create social vacancies.”

Our comments on specific strategies follow:

- i. ***“reducing the rate of population turnover and fostering persistent wolf packs in all or select core recovery segments or all or select areas of suitable habitat (Oakleaf et al., 2006; 72 FR 6106, February 8, 2007)”***

The suitable habitat in Wyoming that is significant to wolf recovery is currently included within the Wolf Trophy Game Management Area. Other “theoretically suitable habitat” such as the Wyoming Range, lower Wind River Range, and Bighorn Range are narrow (isolated in the case of the Bighorn Range) strips that are unsuitable for wolf occupancy due to high potential for conflict and much greater risk of mortality [FR 73:10537]. There is no direct evidence that the Wyoming Range is an important dispersal corridor linking Central Idaho to the GYA (see comment No. 8). The Wyoming Range and the lower end of the Wind River Range were excluded from the DAU because of the high potential for persistent conflicts due to existing numbers of domestic sheep that are grazed on both public and private lands in these areas WGFD (2007). The same situation pertains to the Bighorn Mountain Range. Several individual wolves and packs have attempted to use the Wyoming Range, upper Green River Basin, lower Wind River Range, and Bighorn Range in the last few years, but most were

removed from the population due to livestock depredations. In several instances, the same packs have been removed repeatedly.

- ii. ***“creating occasional disruptions of wolf pack structure or reduced wolf density in select areas of suitable habitat to create social vacancies or space for dispersing wolves to fill”***

Service control actions have effectively instituted this strategy outside the National Parks since 1995. Reducing wolf density not only creates space for dispersing wolves, but has also maintained a healthier wolf population. The segment of the wolf population living outside the National Parks has not been impacted by density-dependent effects including disease (parvovirus, canine distemper, sarcoptic mange) and intraspecific competition that currently limit the wolves inside YNP. Agency control actions and regulated hunting will continue to create social vacancies and limit wolf density outside the National Parks after wolves are delisted.

- iii. ***“maintaining higher rather than lower overall wolf numbers in all or select recovery areas”***

This strategy is not needed to achieve adequate dispersal and exchange of wolves between recovery areas. In the 1994 EIS [Page 56, Chapter V – Consultation and Coordination], the Service stated, “Many people question whether enough wolves would be introduced to constitute a viable population. Some felt that reintroduction was necessary to increase genetic diversity to maintain a viable population. **Still others felt that the small number of wolves introduced was only a guise to the true number that would be needed to constitute a viable population before delisting can occur ...** **Response – This issue was specifically examined in detail and incorporated extensive scientific peer review.** The goals outlined in the 1987 Wolf Recovery Plan of having 10 breeding pairs of wolves (estimated about 100 individuals) in each of 3 recovery areas **[with at least 1 individual moving from one recovery area to the other per generation (about every 10 years)]** for 3 consecutive years would constitute a viable wolf population. This goal would involve a total population of about 300 wolves.” Furthermore, wolf B58 dispersed from central Idaho to Wyoming’s Greybull River drainage in 2002 when the total NRM population was just 563 indicating such dispersals will occur even at comparatively low population levels.

- iv. ***“maintaining more contiguous and broader wolf distribution instead of disjunction and limited breeding pair distribution”***

This strategy would require that states maintain wolves in unsuitable habitats outside the areas they currently occupy. The Service previously dismissed the need for such a strategy at FR 73:10553: “*Issue 33*: Many pointed out that natural connectivity is an important consideration for the long-term conservation of the NRM wolf population. Some suggested that we should provide habitat protections for identified natural linkage zones between and within the GYA and central Idaho and northwestern Montana. It was also suggested that we should identify critical habitat for these linkage zones. *Response 33*: **Wolves have an unusual ability to disperse long distances rapidly across virtually any habitat and to select mates to maximize genetic diversity. Thus, connectivity issues are less likely to affect wolves than nearly any other species of land mammal (Paquet *et al.* 2006, p. 3). Although it is highly unlikely there would**

ever be a need, complications from a potential lack of natural habitat connectivity could be quickly resolved by agency management, such as relocations.” The Service also stated, “...some level of natural connectivity will continue because of the large amount of public land and low human density between the GYA and central Idaho and the **ability of wolves to disperse rapidly over long distances through otherwise unsuitable habitat** (Carroll 2006, p. 376)” [FR 73:10540].

- v. ***“minimizing or precluding human-caused wolf mortality between and around core recovery segments during critical wolf dispersal and breeding periods (December through April)”***

This strategy is being implemented in Wyoming. Proposed hunting seasons will close upon reaching the established mortality quota or by November 30 if the quota is not reached. (The federal register notice statement [FR 73:63931] that Wyoming’s hunting seasons would end on December 31 is in error). Depredations and associated control actions take place primarily during summer through early fall (July-September). Very few wolves are killed in depredation control actions during the critical dispersal and breeding period. As noted in Comment 8, there is no credible evidence that dispersing wolves moving into the Greater Yellowstone Area (GYA) tend to move through the predatory animal area, or that unregulated take in the predatory animal area has the potential to substantially diminish wolf movements into the GYA.

- vi. ***“reducing the rates of or eliminating human-caused mortality in core recovery segments during denning and pup rearing periods (April through September)”***

This strategy is being implemented in Wyoming during the denning period (refer to strategy v. above). Human-caused mortalities during the pup-rearing period will, of necessity, depend on the level of wolf depredations and need for depredation control actions. Since lethal removal has proven the only effective means to address chronic depredation by wolves, reducing or eliminating human-caused mortality during pup rearing periods may not be a viable strategy. However, it is unlikely that human-caused mortality during the pup-rearing period will have a significant impact on wolf dispersal, and in fact, may facilitate it by disrupting pack social structure.

Thank you for the opportunity to comment.

Sincerely,



Steve Ferrell
Director

SF/ST/cmc

cc: USFWS Cheyenne Office

Literature Cited:

Carroll, C. 2006. Linking connectivity to viability: insights from spatially explicit models of large carnivores. Chapter 15 in *Connectivity Conservation*, eds. K.R. Crooks and M. Sanjayan. Cambridge Univ. Press.

Miller, P.S., and R.C. Lacy. 2005. *VORTEX: A Stochastic Simulation of the Extinction Process. Version 9.50 User's Manual*. Apple Valley, MN: Conservation Breeding Specialist Group (SSC/IUCN).

Oakleaf, J.K., D.L. Murray, J.R. Oakleaf, E.E. Bangs, C.M. Mack, D.W. Smith, J.A. Fontaine, M.D. Jimenez, T.J. Meier, and C.C. Niemeyer. 2006. Habitat selection by recolonizing wolves in the northwestern United States. *J. Wildlife Management*. 70:554-563.

Paquet, P.C., S.M. Alexander, P.L. Sawn, and C.T. Darimont. 2006. Influence of natural landscape fragmentation and resource distribution and connectivity of gray wolves in the Archipelago of coastal British Columbia. Chapter 6 in *Connectivity Conservation*, eds. K.R. Crooks and M. Sanjayan, Cambridge Univ. Press.

USFWS. 1994. The reintroduction of gray wolves to Yellowstone National Park and central Idaho. Final Environmental Impact Statement. Denver, Colorado. 608 pp.

vonHoldt, B.M., D.R. Stahler, D.W. Smith, D.A. Earl, J.P. Pollinger, and R.K. Wayne. 2007. The genealogy and genetic viability of reintroduced Yellowstone grey wolves. *Molecular Ecology* :1-23.

Wyoming Game and Fish Department. 2007. Final Wyoming Gray Wolf Management Plan. 40pp.