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50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Removing the Eastern Distinct Population Segment of the Gray Wolf From the List of Endangered and Threatened Wildlife; Proposed Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

RIN 1018–AJ03

Endangered and Threatened Wildlife and Plants; Removing the Eastern Distinct Population Segment of the Gray Wolf From the List of Endangered and Threatened Wildlife

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Proposed rule.

SUMMARY: The U.S. Fish and Wildlife Service (Service or we) proposes to remove the Eastern Distinct Population Segment (EDPS) of the gray wolf (*Canis lupus*) from the List of Endangered and Threatened Wildlife established under the Endangered Species Act of 1973, as amended (Act). We propose this action because available data indicate that this DPS no longer meets the definitions of threatened or endangered under the Act. The gray wolf population is stable or increasing in Minnesota, Wisconsin, and Michigan, and exceeds its numerical recovery criteria. Completed State wolf management plans will provide adequate protection and management to the species in these three States if the gray wolf is delisted in the EDPS. The proposed rule, if finalized, would remove this DPS from the protections of the Act by ending its threatened classification. This proposed rule would also remove the currently designated critical habitat for the gray wolf in Minnesota and Michigan and remove the current special regulations for gray wolves in Minnesota and other Midwestern States. This proposal, if finalized, would not change the status or special regulations currently in place for the Western or Southwestern DPSs of the gray wolf or for the red wolf (*C. rufus*).

DATES: We must receive comments by November 18, 2004 in order to ensure their consideration in our final decision. We must receive requests for public hearings by September 7, 2004.

ADDRESSES: You may submit comments and other information, identified by RIN 1018–AJ03, by any of the following methods:

- Federal eRulemaking Portal: *http://www.regulations.gov.* Follow the instructions for submitting comments.
- Mail: Gray Wolf Delist—EDPS, c/o Content Analysis Team, P.O. Box 221150, Salt Lake City, UT 84122–1150
- Fax: (801) 517–1015
- Email: *egwdelist@fs.fed.us.* Include ''Attn: Gray Wolf Delisting'' in the subject line of the message.

Instructions: All submissions received must include the agency name and Regulatory Information Number (RIN) for this rulemaking. For detailed instructions on submitting comments and additional information on the rulemaking process, see the ''Public Comments Solicited'' heading of the **SUPPLEMENTARY INFORMATION** section of this document.

The complete file for this rule is available for inspection, by appointment, during normal business hours at our Midwest Regional Office: U.S. Fish and Wildlife Service, Federal Building, 1 Federal Drive, Ft. Snelling, MN 55111–4056. Call 612–713–5350 to make arrangements. The comments and materials we receive during the comment period also will be made available for public inspection, by appointment, during normal business hours. See the ''Public Comments Solicited'' section of **SUPPLEMENTARY INFORMATION** for location information.

FOR FURTHER INFORMATION CONTACT: Direct all questions or requests for additional information to the Service using the Gray Wolf Phone Line—612–713–7337, facsimile—612–713–5292, the general gray wolf electronic mail address—*GRAYWOLFMAIL@FWS.GOV,* or write to: Gray Wolf Questions, U.S. Fish and Wildlife Service, Federal Building, 1 Federal Drive, Ft. Snelling, MN 55111–4056. Additional information is also available on our World Wide Web site at *http://midwest.fws.gov/wolf.* In the event that our internet connection is not functional, please contact the Service by the alternative methods mentioned above. Individuals who are hearing-impaired or speech-impaired may call the Federal Relay Service at 1–800–877–8337 for TTY assistance.

SUPPLEMENTARY INFORMATION:

Background

This rule begins with discussions on the biology, ecology, taxonomy, and historical range of the gray wolf. We then describe previous Federal listing actions taken for this DPS of gray wolves. Next, we discuss the purpose and relevant definitions of the Act and conclude this introductory section with a discussion of the conservation and recovery of the EDPS of the gray wolf.

We then analyze the current status of the EDPS relative to the criteria set out in section 4(c)(1) of the Act to determine whether it still warrants listing under the Act. This analysis takes into account the effects of current and future likely actions that may positively or negatively affect the EDPS if it were delisted.

A. Biology and Ecology of Gray Wolves

Gray wolves are the largest wild members of the Canidae, or dog family, with adults ranging from 18 to 80 kilograms (kg) (40 to 175 pounds (lb)) depending upon sex and subspecies (Mech 1974). The average weight of male wolves in Wisconsin is 35 kg (77 lb) and ranges from 26 to 46 kg (57 to 102 lb), while females average 28 kg (62 lb) and range from 21 to 34 kg (46 to 75 lb) (Wisconsin Department of Natural Resources (WI DNR) 1999a). Wolves' fur color is frequently a grizzled gray, but it can vary from pure white to coal black. Wolves may appear similar to coyotes (*Canis latrans*) and some domestic dog breeds (such as the German shepherd or Siberian husky) (*C. familiaris*). Wolves' longer legs, larger feet, wider head and snout, and straight tail distinguish them from both coyotes and dogs.

Wolves primarily are predators of medium and large mammals. Wild prey species in North America include white-tailed deer (*Odocoileus virginianus*) and mule deer (*O. hemionus*), moose (*Alces alces*), elk (*Cervus elaphus*), woodland caribou (*Rangifer caribou*) and barren ground caribou (*R. arcticus*), bison (*Bison bison*), muskox (*Ovibos moschatus*), bighorn sheep (*Ovis canadensis*) and Dall sheep (*O. dalli*), mountain goat (*Oreamnos americanus*), beaver (*Castor canadensis*), and snowshoe hare (*Lepus americanus*), with small mammals, birds, and large invertebrates sometimes being taken (Mech 1974, Stebler 1944, WI DNR 1999a). In the EDPS, during the last 22 years, wolves have also killed domestic animals including horses (*Equus caballus*), cattle (*Bos taurus*), sheep (*Ovis aries*), goats (*Capra hircus*), llamas (*Lama glama*), pigs (*Sus scrofa*), geese (*Anser sp.*), ducks (*Anas sp.*), turkeys (*Meleagris gallopavo*), chickens (*Gallus sp.*), pheasants (*Phasianus colchicus*), dogs, and cats (*Felis catus*) (Paul 2001, Wydeven *et al.* 2001a).

Wolves are social animals, normally living in packs of 2 to 12 wolves, although 2 packs in Yellowstone National Park (NP) had 22 and 27 members in 2000; Yellowstone NP's Druid Peak pack increased to 37 members in 2001 (USFWS *et al.* 2001, 2002). Winter 2001–02 pack size in Michigan's Upper Peninsula averaged 4.3 wolves (Potvin *et al.* submitted). Packs are primarily family groups consisting of a breeding pair, their pups from the current year, offspring from the previous year, and occasionally an unrelated wolf. Packs typically occupy,

and defend from other packs and individual wolves, a territory of 50 to 550 square kilometers (km^2) (20 to 214 square miles (mi^2)). In the northern U.S. Rocky Mountains, territories tend to be larger, usually from 520 to 1,040 km^2 (200 to 400 mi^2), and in Wood Buffalo NP in Canada, territories of up to 2,700 km^2 (1,042 mi^2) have been recorded (Carbyn, Canadian Wildlife Service, *in litt.* 2000). Normally, only the top-ranking (''alpha'') male and female in each pack breed and produce pups. Litters are born from early April into May; they range from 1 to 11 pups, but generally include 4 to 6 pups (Michigan Department of Natural Resources (MI DNR) 1997; USFWS 1992a; USFWS *et al.* 2001). Normally a pack has a single litter annually, but the production of 2 or 3 litters in one year has been documented in Yellowstone NP (USFWS *et al.* 2002). Yearling wolves frequently disperse from their natal packs, although some remain with their natal pack. Yearlings may range over large areas as lone animals after leaving their natal pack or they may locate suitable unoccupied habitat and a member of the opposite sex and begin their own pack. Dispersal distances of 800 km (500 mi) have been documented (Fritts 1983; James Hammill, MI DNR, *in litt.* 2001). Individual wolves have more recently traveled from central Wisconsin to east-central Indiana (655 km (407 mi)) and northern Illinois (unknown distance), from the Upper Peninsula of Michigan to northern Missouri (965 km (600 mi)), and from the Minnesota-Wisconsin-Michigan population to east-central Nebraska (unknown distance).

The gray wolf historically occurred across most of North America, Europe, and Asia. In North America, gray wolves formerly occurred from the northern reaches of Alaska, Canada, and Greenland to the central mountains and the high interior plateau of southern Mexico. The only areas of the conterminous United States that apparently lacked gray wolf populations since the last ice age are parts of California and portions of the eastern and southeastern United States (an area occupied by the red wolf). In addition, wolves were generally absent from the deserts and mountaintop areas of the western United States (Young and Goldman 1944, Hall 1981, Mech 1974, Nowak 2000). (Refer to the *Taxonomy of Gray Wolves in the Eastern United States* section below for additional discussion.)

European settlers in North America and their cultures often had superstitions and fears of wolves and a unified desire to eliminate them (Boitani 1995). Their attitudes, coupled with perceived and real conflicts between wolves and human activities along the frontier, led to widespread persecution of wolves. Poisons, trapping, and shooting spurred by Federal, State, and local government bounties extirpated this once widespread species from more than 95 percent of its range in the 48 conterminous States. At the time the Act was passed, only several hundred wolves occurred in northeastern Minnesota and on Isle Royale, Michigan, and a few scattered wolves may have occurred in the Upper Peninsula of Michigan, Montana, and the American Southwest.

Researchers have learned a great deal about gray wolf biology, especially about the species' adaptability and its use of nonwilderness habitats. Public appreciation of the role of predators in our ecosystems has increased. Surveys indicate that approximately 60 percent of persons in the eastern and western United States have positive attitudes towards wolves and their restoration (Williams *et al.* 2002). Most importantly, within the last decade the prospects for gray wolf recovery in several areas of their historical range in the United States have greatly increased. In the EDPS, wolves have dramatically increased their numbers and occupied range.

The gray wolf is one of two North American wolf species currently protected by the Act. The other species is the red wolf (*Canis rufus*), which is listed as endangered throughout its historical range in the southeastern United States and extending west into central Texas. The red wolf is the subject of a separate recovery program. This final rule does not affect the current listing status or protection of the red wolf.

Gray wolf populations in the United States are protected under the Act by separate listings covering the EDPS, the Western DPS, and the Southwestern DPS (50 CFR 17.11(h)), regulations establishing three non-essential experimental populations (50 CFR 17.84(i) and (k)), and by special regulations for parts of the Western and Eastern DPSs (50 CFR 17.40(d), (n), and (o)). Regulations for the Western and Southwestern DPSs would not be removed or changed if this proposal is finalized.

It is important to note that the protections of the gray wolf under the Act does not extend to gray wolf-dog hybrids regardless of the geographic location of the capture of their pure wolf ancestors. As noted in the final reclassification rule (68 FR 15804, April 1, 2003), gray wolf-dog hybrids have no value to gray wolf recovery programs and can introduce dog genes into wild wolf populations.

B. Taxonomy of Gray Wolves in the Northeastern United States

Both versions (USFWS 1978 and 1992a) of the Recovery Plan for the Eastern Timber Wolf (Recovery Plan) were developed to recover the gray wolf subspecies *Canis lupus lycaon,* commonly known as the eastern timber wolf. *Canis lupus lycaon* was believed to be the gray wolf subspecies that historically occurred throughout the northeastern quarter of the United States east of the Great Plains (Young and Goldman 1944, Hall 1981, Mech 1974). Since the publication of those recovery plans, various studies on the subspecific taxonomy of the gray wolf have been conducted with conflicting results (Nowak 1995, 2002, 2003; Wayne *et al.* 1995; Wilson *et al.* 2000).

Wilson *et al.* (2000) questioned the identity of the *Canis* species in southeastern Canada, an area with an extant wolf population adjacent to the northeastern United States. The alternative view of southeastern Canada wolf taxonomy as advanced by Wilson *et al.* (2000) appears to be gaining wider acceptance among taxonomists. That view is that the wolf currently occurring in Algonquin Provincial Park and southern Quebec Province, and possibly the ancestral wolf of southeastern Canada and the northeastern United States, is a smaller form of wolf, similar to or indistinguishable from the red wolf. Others argue that ecologically, the ancestral wolf in northern New England and northern New York where moose and woodland caribou were the predominant ungulate prey (Hall 1981), and throughout New York State where elk were indigenous (Hall 1981), was likely to be a large-bodied gray wolf, rather than a smaller, deer-eating wolf, such as the red wolf (Daniel Harrison, University of Maine, pers. comm.).

We acknowledge that our understanding of wolf taxonomy at both the species and the subspecies levels is likely to continue changing as new studies are completed and the results of additional genetic and morphometric analyses are published. Analyses of the canids recently found in the northeastern United States and southeastern Canada point to a north-south (and to a lesser extent, west-east) gradient consisting of western gray wolf, eastern wolf, and coyote. The western gray wolf historically occupied much of the western United States and much of Canada. According to recent genetic analyses (Wilson *et al.* 2000), the eastern

wolf, now referred to by some investigators as *Canis lycaon,* currently occupies southeastern Canada and may have historically occupied the northeastern United States and portions of the Great Lakes area as well (Fascione *et al.* 2001). The Service believes that it is equally likely there was a contact zone between the two forms of wolves along this broad boundary between the northern extent of white-tailed deer range and the southern extent of caribou and moose range.

Currently, molecular genetic and morphological data suggest several plausible identities for the large canid that historically occupied the Northeast. Nowak's (1995) morphological data support the contention that *Canis lupus lycaon,* a subspecies of the gray wolf, occupied part of the Northeast, including southern New England. A recent molecular genetics study (Wilson *et al.* 2000) disputes that this species is a gray wolf, and suggests it is a form of red wolf and both forms should be referred to as *C. lycaon.* Nowak's (2002) more recent analysis places the boundary between the gray wolf and red wolf in central New York and northern Vermont, with *C. l. lycaon* to the north and west of this line and the red wolf subspecies, *C. rufus floridanus,* to the east and south. Furthermore, Nowak (2002, 2003) now suggests that *C. l. lycaon* may be a subspecies of hybrid origin resulting from matings of *C. lupus* and *C. rufus.*

The historical range of the gray wolf and the taxonomy of the wolf in the conterminous United States is the subject of substantial scientific debate. As pointed out in the April 2003 final reclassification (68 FR 15804) and by Brewster and Fritts (1995), wolf systematics is a continually evolving science. During the 1800s and through the mid-1900s, which Brewster and Fritts (1995) refer to as the ''descriptive era,'' wolf taxonomies were based on physical attributes such as color, weight, and size. During the ''multivariate analysis era'' (1950s to present), alternative wolf taxonomies were based on statistical analyses of multiple morphometric data, particularly cranial measurements. Lastly, recent advances in molecular taxonomy (1970s to present) have made it possible to compare phylogenic relatedness between closely related species and subspecies and to characterize their differences. Proponents of each alternative wolf taxonomy offer a different view of the range of wolf species and subspecies in North America.

The coyote is the dominant canid in the northeastern United States at present, although wolf genetic material is also present in these animals (Wilson *et al.* 2004). It is extremely difficult to determine the genetic identity of the wolf (or wolves) that occurred in the Northeast before European settlement. The ranges of specific forms of wolf may have changed over time or intermingled along contact zones, and scientific consensus on one ancestral form of wolf for the Northeast may not be possible. We, however, encourage additional research on the identity of the historical wolf of the northeast region, the taxonomy and phylogeny of contemporary wolves in southeastern Canada, and new information on the occurrence of wolves in the northeastern United States and southeastern Canada. Due to the extreme uncertainty over wolf taxonomy, at this time we are adopting no final position on the identity of the wolf (or wolves) that historically existed in the northeastern United States. As announced in the final reclassification rule (68 FR 15804, April 1, 2003), we are treating gray wolves in the northeastern United States as part of the EDPS.

C. Historical Range of the Gray Wolf

Until the molecular genetics studies of the last few years, the range of the gray wolf before European settlement was generally believed to include most of North America. The only areas that were believed to have lacked gray wolf populations are southern and interior Greenland, the coastal regions of Mexico, all of Central America south of Mexico, coastal and other parts of California, the extremely arid deserts and the mountaintops of the western United States, and parts of the eastern and southeastern United States (Young and Goldman 1944, Hall 1981, Mech 1974, Nowak 1995). (Some authorities, however, question the reported historical absence of gray wolves from parts of California (Carbyn *in litt.* 2000, Mech, U.S. Geological Survey, *in litt.* 2000)). Authors are inconsistent on their views of the precise boundary of historical gray wolf range in the eastern and southeastern United States. Some use Georgia's southeastern corner as the southern extent of gray wolf range (Young and Goldman 1944, Mech 1974); others believe gray wolves did not occur at all in the southeastern U.S. (Hall 1981) or only to a limited extent, primarily at relatively high elevations (Nowak 1995). The southeastern and mid-Atlantic States have generally been recognized as being within the historical range of the red wolf; the extent of overlap between the ranges of these competing canids is unknown. Recent morphological work (Nowak 2002, 2003) supports extending the historical range of the red wolf into southern New England or even further north. This suggests that the historical range of the gray wolf in the eastern United States may have been more limited than previously believed, although the ranges of the wolf species may have expanded and contracted after the last ice age.

The results of recent molecular genetic (Wilson *et al.* 2000) and morphometric studies (Nowak 1995, 2002) may help explain some of the past difficulties in determining the southern boundary of the gray wolf's range in the eastern United States. Unless additional data demonstrate that gray wolves did not historically occur in the northeastern U.S., we have defined the historical range of the gray wolf as including those areas north of the Ohio River, the southern borders of Pennsylvania and New Jersey, and southern Missouri; and west from central Texas and Oklahoma (68 FR 15804). This boundary is a reasonable compromise of several published accounts, being somewhat south of that shown by Nowak (2002) and north of the range boundary shown by Young and Goldman (1944) and Mech (1974). The historical range boundary we used to establish the southern boundary of the EDPS in 50 CFR 17.11(h) most closely approximates that shown in Hall (1981).

While the historical range and taxonomy of the wolf in the northeastern United States continues to be debated, the fact that wolves were indigenous to that region is well established in historical accounts and bounty records. As early as 1645, the Massachusetts Court complained of ''the great losse and damage'' suffered by the colony because wolves killed settlers' cattle (Cronon 1983). Cronon (1983) reports that such complaints persisted in newly settled areas throughout the colonial period. Young and Goldman (1944) recount the early years of wolf bounties offered on Long Island, New York, where in 1663 it was agreed that settlers be provided bushels of Indian corn in exchange for wolf heads. In 1794, Samuel Williams recorded in *The Natural and Civil History of Vermont* that, ''One of the most common and noxious of all our animals, is the Wolf.'' A review of wolf bounty records in Maine revealed documentation for well over 100 bounties paid, primarily during the 1800s (R. Joseph, USFWS, *in litt.* 2000). In the Proceedings of the Portland Society of Natural History (1930), it is reported that wolves were numerous in the Portland, Maine, region, and existed at least until 1740 in

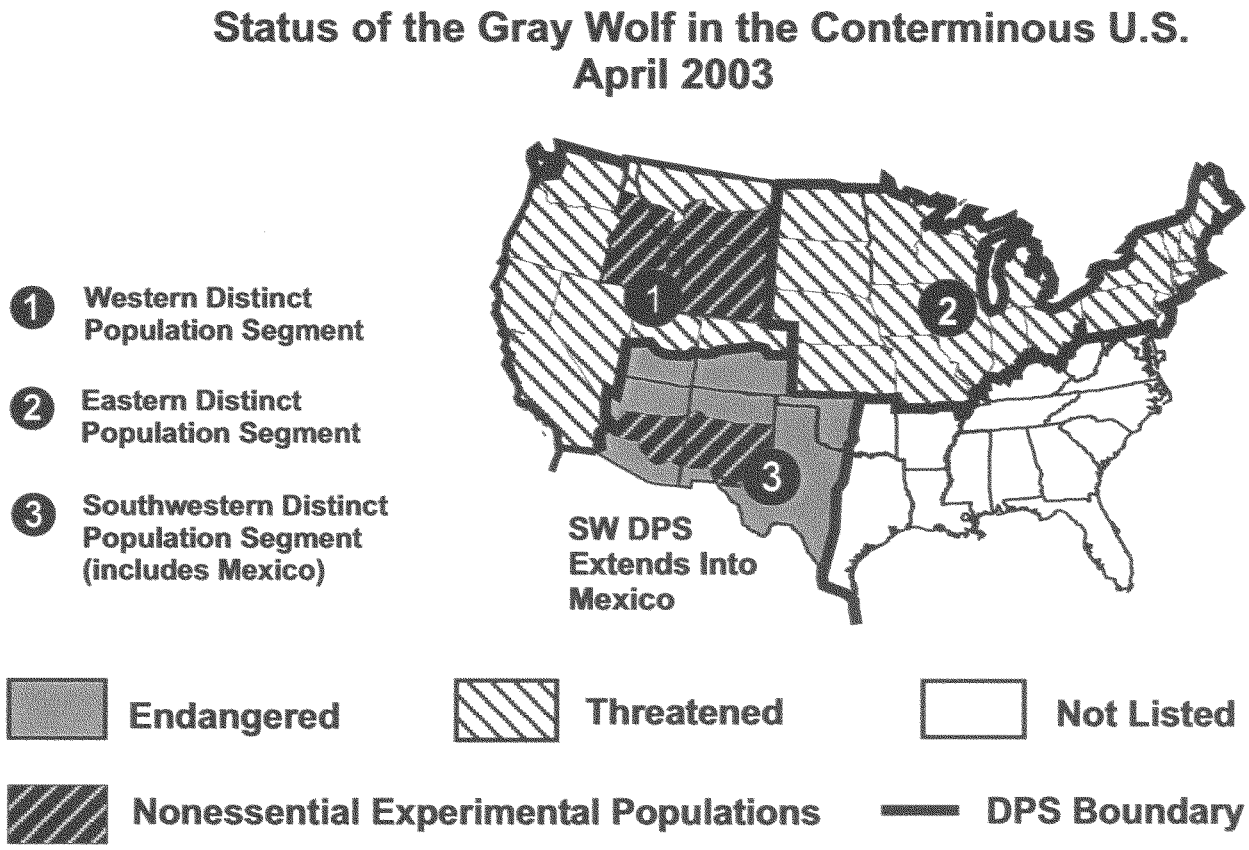
the immediate vicinity of the present city.

From the first reward offered by the Massachusetts Bay Colony in 1630, wolf bounties became a common means of addressing livestock losses to wolf predation in colonial America. By the early eighteenth and into the nineteenth centuries, bounties on the wolf were common throughout the United States. Wolf populations in the northeastern United States were strongly affected as colonial settlement progressed and activities such as forest clearing, hunting, and trapping reduced the wolf's natural habitat and prey (ungulates and beaver). Remaining wolf populations were largely eliminated by the bounties, and by 1900, the wolf was considered extirpated from the northeastern United States (Nowak 2002). Hamilton (1943) noted that where the wolf formerly ranged widely throughout the eastern States, persistent hunting, trapping, and poisoning resulted in its extermination in Pennsylvania, New York, and New England well before the close of the nineteenth century.

D. Previous Federal Action

On April 1, 2003, we published a final rule (68 FR 15804) that reclassified and delisted gray wolves, as appropriate, across their range in the 48 conterminous United States and Mexico. In that final rule (on page 15806), we included a detailed summary of the previous Federal actions completed prior to publication of that final rule.

The first part of the April 1, 2003, final rule delisted gray wolves in parts or all of 16 southern States because that area is outside the historical range of the species. The second part of the final rule separated the remainder of the 32 States and Mexico into three gray wolf DPSs, and it gave each DPS a separate listing under the Act as threatened or endangered (see Figure 1 below). Additionally, new special regulations under section 4(d) of the Act were established for portions of the Western and Eastern Gray Wolf DPSs.



On March 1, 2000, we received a petition from Mr. Lawrence Krak of Gilman, Wisconsin, and on June 28, 2000, we received a petition from the Minnesota Conservation Federation. Mr. Krak's petition requested the delisting of gray wolves in Minnesota, Wisconsin, and Michigan. The Minnesota Conservation Federation requested the delisting of gray wolves in a Western Great Lakes DPS. Because the data reviews resulting from the processing of these petitions would be a subset of the review begun by our July 13, 2000, proposal (65 FR 43450) to revise the current listing of the gray wolf across most of the conterminous United States, we did not initiate separate reviews in response to those two petitions. This proposed rule constitutes both our 90-day finding that the petitioned actions may be warranted and our 12-month finding that the actions are warranted.

On April 1, 2003, we also received a petition from Defenders of Wildlife, Sierra Club, RESTORE: The North Woods, and The Wildlands Project requesting that we list a DPS of wolves in the northeastern United States. As explained in the April 1, 2003, reclassification rule (68 FR 15804) and our September 12, 2003, response to the petitioners, the absence of a wolf population in the Northeast precluded us from designating that entity as a separate DPS. Instead, the EDPS includes New Hampshire, Maine, Vermont, and New York; any gray wolves that may exist in or disperse into these States continue to be protected as threatened under the Act until a final delisting of the EDPS is published.

E. Purpose and Definitions of the Act

The primary purpose of the Act is to prevent the endangerment and extinction of animal and plant species. The Act requires the Service to identify species that meet the Act's definitions of endangered or threatened, to add those species that meet either of these definitions to the Federal Lists of Endangered and Threatened Wildlife and Plants (50 CFR 17.11 and 17.12, respectively), and to plan and implement conservation actions to improve their status to the point at which they no longer need the protections of the Act. When that protection is no longer needed, we take steps to remove (delist) the species from the Federal lists. If a species is listed as endangered, we may first reclassify it to threatened status as an intermediate step, if the species has met the downlisting criteria outlined in its recovery plan before its eventual delisting; reclassification before delisting, however, is not required.

Section 3 of the Act provides the following definitions that are relevant to this rule:

Endangered species—any species which is in danger of extinction throughout all or a significant portion of its range;

Threatened species—any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range; and

Species—includes any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature. (For further information on DPSs, see our February 7, 1996, DPS policy (61 FR 4722) or the April 1, 2003, final gray wolf reclassification rule (68 FR 15804)).

Understanding the Service's strategy for gray wolf recovery also requires an understanding of the meaning of ''recover'' and ''conserve'' under the Act. ''Conserve'' is defined in the Act itself (section 3(3)) whereas ''recovery'' is defined in the Act's implementing regulations at 50 CFR 402.02.

Conserve—defined, in part as ''the use of all measures and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this Act are no longer necessary.''

Recovery—improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in section 4(a)(1) of the Act. Essentially, ''recover'' and ''conserve'' both mean to bring a species to the point at which it no longer needs the protections of the Act because the species is no longer threatened or endangered.

The Service will determine whether a species is endangered or threatened only after assessing its status throughout all or a significant portion of its range. A species does not have to be recovered throughout all of its historical range before it can be delisted; however, within its current range it must no longer be in danger of extinction or likely to become endangered in the foreseeable future.

F. Recovery Planning and Recovery Criteria for the Eastern Timber Wolf

The Eastern Gray Wolf DPS was established on April 1, 2003 (68 FR 15804). It is important to note that a DPS is a listed entity under the Act, and is treated the same as a listed species or subspecies. It is listed, protected, subject to interagency consultation, and recovered just as any other threatened or endangered species or subspecies. A DPS will have its own recovery plan and its own recovery goals. As with a species or subspecies, we are not required to seek restoration of the animal throughout the entire geographic area of the DPS, but only to the point at which it no longer meets the definition of a threatened or endangered species.

Section 4(f) of the Act directs us to develop and implement recovery plans for listed entities: Species, subspecies, or DPS. In some cases, we appoint recovery teams of experts to assist in the writing of recovery plans and to provide advice to the Service on subsequent recovery efforts. Recovery plans contain criteria that trigger our consideration of the need to either reclassify (from endangered to threatened) a species due to improvements in its status or to delist the species due to its recovery under the Act. Reclassification and recovery criteria are based on factors that can be measured or otherwise objectively evaluated to document improvements in a species' status. Examples of the type of criteria typically used are numbers of individuals, numbers and distribution of subgroups or populations of the species, rates of productivity of individuals or populations, protection of habitat, and reduction or elimination of specific threats to the species and its habitat.

We initiated recovery programs for the originally listed gray wolf subspecies by appointing recovery teams and developing and implementing recovery plans. In addition to containing the criteria to assess a species' progress toward recovery, recovery plans describe and prioritize specific actions necessary to achieve the recovery criteria and objectives and identify appropriate parties to implement each action.

Once a species has met its delisting criteria and no longer meets the definition of endangered or threatened, it is considered to be recovered and should be delisted. The restoration of a species throughout its historical range, or even throughout the entire remaining suitable habitat, may not be necessary for a species to be delisted. Recovery plans generally do not require restoration of the species throughout its historical range to achieve recovery under the Act.

The 1978 Recovery Plan for the Eastern Timber Wolf (Recovery Plan) was approved on May 2, 1978, (USFWS 1978) and revised and approved on January 31, 1992 (USFWS 1992a). The 1978 Recovery Plan and its 1992 revision were intended to recover the eastern timber wolf, *Canis lupus lycaon*, thought at that time to be the gray wolf subspecies that historically inhabited the United States east of the Great Plains. Thus, this Recovery Plan covers a geographic triangle extending from Minnesota to Maine and into northeastern Florida, an area consistent with the geographic coverage of the EDPS (when corrected for the lack of historical gray wolf range in the southeastern United States). The Recovery Plan was based on the best available information on wolf taxonomy at the time of its original publication and subsequent revision. Since the publication of those recovery plans, various studies have produced conflicting results regarding the identity of the wolf that historically occupied the eastern States. Because this conflict is still unresolved, this recovery program has continued its original focus on recovering the gray wolf population that survived in, and has expanded outward from, northeastern Minnesota, regardless of its subspecific identity. (See the *Taxonomy of Gray Wolves in the Northeastern United States* section above).

G. Recovery of the Eastern Gray Wolf

The 1978 and the 1992 revised Recovery Plans each have two delisting criteria. The first delisting criterion states that the survival of the wolf in Minnesota must be assured. We, and the Eastern Timber Wolf Recovery Team (Rolf Peterson, Eastern Timber Wolf Recovery Team, *in litt.* 1997, 1998, 1999a, 1999b), believe that this first delisting criterion remains valid. It identifies a need for reasonable assurances that future State, tribal, and

Federal wolf management practices and protection will maintain a viable recovered population of gray wolves within the borders of Minnesota for the foreseeable future. The Recovery Plan's subgoal for Minnesota is 1,251 to 1,400 wolves (USFWS 1992a).

The second delisting criterion in the Recovery Plan states that at least one viable wolf population should be reestablished within the historical range of the eastern timber wolf outside of Minnesota and Isle Royale, Michigan. The Recovery Plan provides two options for reestablishing this second viable wolf population. If it is located more than 100 miles from the Minnesota wolf population, the second population should consist of at least 200 wolves for at least 5 years (based upon late-winter population estimates) to be considered viable. Alternatively, if the second population is located within 100 miles of a self-sustaining wolf population (for example, the Minnesota wolf population), a reestablished second population having a minimum of 100 wolves for at least 5 years would be considered viable.

The Recovery Plan does not specify where in the eastern United States the second population should be reestablished. Therefore, the second population could be located anywhere within the triangular Minnesota-Maine-Florida area covered by the Recovery Plan, except on Isle Royale (Michigan) or within Minnesota. The 1978 Recovery Plan identified potential gray wolf restoration areas throughout the eastern United States, including northern Wisconsin and Michigan and extending as far south as the Great Smoky Mountains and adjacent areas in Tennessee, North Carolina, and Georgia. The revised 1992 Recovery Plan, however, dropped from consideration the more southern potential restoration areas, because recovery efforts for the red wolf were being initiated in those areas (USFWS 1978, 1992a). The recovery criteria do not suggest that either the restoration of the gray wolf throughout all or most of its historical range in the eastern United States are necessary to achieve recovery under the Act.

In 1998, the Eastern Timber Wolf Recovery Team clarified the delisting criterion for the second population (*i.e.*, the wolves in northern Wisconsin and the adjacent Upper Peninsula of Michigan) (Rolf Peterson, Eastern Timber Wolf Recovery Team, *in litt.* 1998). It stated that the numerical delisting criterion for the Wisconsin-Michigan population will be achieved when 6 consecutive late-winter wolf surveys documented that the population equaled or exceeded 100 wolves (excluding Isle Royale wolves) for the 5 consecutive years between the 6 surveys (Rolf Peterson, *in litt.* 1998). The Wisconsin-Michigan wolf population was first known to have exceeded 100 wolves in the late-winter 1993–94 survey and the numerical delisting criterion was satisfied in early 1999, based upon late-winter 1998–99 data (Beyer *et al.* 2001, Wydeven *et al.* 1999).

The Recovery Plan has no goals or criteria for the gray wolf population on 546 km^2 (210 mi^2) Isle Royale, Michigan. The wolf population of Isle Royale National Park, Michigan, is not considered to be an important factor in the recovery or long-term survival of wolves in the EDPS. This population is small, varying from 12 to 29 animals over the last 20 years, and is almost completely isolated from other wolf populations (Peterson *et al.* 1998, pers. comm. 1999, Peterson and Vucetich 2004). For these reasons, the Eastern Plan does not include these wolves in its recovery criteria and recommends only the continuation of research and complete protection for these wolves (USFWS 1992a). Unless stated otherwise in this proposal, subsequent discussions of Michigan wolves do not refer to wolves on Isle Royale.

Minnesota

During the pre-1965 period of wolf bounties and legal public trapping, wolves persisted in the more remote northeastern areas of Minnesota, but were eliminated from the rest of the State. Estimated numbers of Minnesota wolves before their listing under the Act in 1974 include 450 to 700 in 1950–53 (Fuller *et al.* 1992, Stenlund 1955), 350 to 700 in 1963 (Cahalane 1964), 750 in 1970 (Leirfallom 1970), 736 to 950 in 1971–72 (Fuller *et al.* 1992), and 500 to 1,000 in 1973 (Mech and Rausch 1975). Although these estimates were based upon different methodologies and are not directly comparable, each estimates pre-listing abundance of wolves in Minnesota at 1,000 or less. This was the only significant population in the United States outside Alaska during those time-periods.

After the wolf was listed as endangered under the Act, population estimates in Minnesota indicated increasing numbers in the State (see Table 1 below). L. David Mech estimated the population to be 1,000 to 1,200 in 1976 (USFWS 1978); Berg and Kuehn (1982) estimated that there were 1,235 wolves in 138 packs in the winter of 1978–79. In 1988–89, the Minnesota Department of Natural Resources (MN DNR) repeated the 1978–79 survey and also used a second method to estimate wolf numbers in the State. The resulting independent estimates were 1,500 and 1,750 wolves in at least 233 packs (Fuller *et al.* 1992).

TABLE 1.—GRAY WOLF POPULATION IN MINNESOTA, WISCONSIN, AND MICHIGAN FROM 1976 THROUGH 2004

[Note that there are several years between the first three Minnesota surveys.]

Year	Minnesota	Wisconsin	Michigan
1976	1,000–1,200		
1978–79	1,235		
1988–89	1,500–1,750		
1993–94		57	57
1994–95		83	80
1995–96		99	116
1996–97		148	112
1997–98	2,445	178	140
1998–99		205	174
1999–2000		248	216
2000–01		257	249
2001–02		327	278
2002–03		335	321
2003–04	Pending*	373	360

*Minnesota DNR conducted another survey of the State's wolf population and range during the winter of 2003–04. A preliminary population estimate may be available for review by mid-July 2004.

During the winter of 1997–98, a statewide wolf population and distribution survey was repeated by MN DNR, using methods similar to those of the two previous surveys. Field staff of Federal, State, Tribal, and county land management agencies and wood products companies were queried to identify occupied wolf range in Minnesota. Data from five concurrent radio telemetry studies tracking 36 packs, representative of the entire Minnesota wolf range, were used to determine average pack size and territory area. Those figures were then used to calculate a statewide estimate of pack numbers and the overall wolf population in the occupied range, with single (non-pack) wolves factored into the estimate (Berg and Benson 1999).

The 1997–98 survey concluded that approximately 2,445 wolves existed in about 385 packs in Minnesota during that winter period. This figure indicates the continued growth of the Minnesota wolf population at an average rate of about 3.7 percent annually. The Minnesota wolf population has shown approximately this average annual rate of increase since 1970 (Berg and Benson 1999, Fuller *et al.* 1992). No rigorous survey of the Minnesota wolf population has been conducted since the winter of 1997–98, but biologists generally accept that the population has increased (Mech 1998, Paul 2001).

As wolves increased in abundance in Minnesota, they also expanded their distribution. During 1948–53, the major wolf range was estimated to be about 31,080 km^2 (11,954 mi^2) (Stenlund 1955). A 1970 questionnaire survey resulted in an estimated wolf range of 38,400 km^2 (14,769 mi^2) (calculated by Fuller *et al.* 1992 from Leirfallom 1970). Fuller *et al.* (1992), using data from Berg and Kuehn (1982), estimated that Minnesota primary wolf range included 36,500 km^2 (14,038 mi^2) during winter 1978–79. By 1982–83, pairs or breeding packs of wolves were estimated to occupy an area of 57,050 km^2 (22,000 mi^2) in northern Minnesota (Mech *et al.* 1988). That study also identified an additional 40,500 km^2 (15,577 mi^2) of peripheral range, where habitat appeared suitable but no wolves or only lone wolves existed. The 1988–89 study produced an estimate of 60,200 km^2 (23,165 mi^2) as the contiguous wolf range at that time in Minnesota (Fuller *et al.* 1992), an increase of 65 percent over the primary range calculated for 1978–79. The 1997–98 study concluded that the contiguous wolf range had expanded to 88,325 km^2 (33,971 mi^2), a 47 percent increase in 9 years (Berg and Benson 1999). Thewolf population in Minnesota had recovered to the point that its contiguous range covered approximately 40 percent of the State during 1997–98.

Minnesota DNR conducted another survey of the State's wolf population and range during the winter of 2003–04 using methodology similar to that used in 1988–89 and 1997–98 (John Erb, MN DNR, pers. comm. 2003). A preliminary population estimate may be available for review by mid-July 2004. The final results of that survey will be posted on our web site (*http://midwest/fws.gov/wolf*) as soon as they are available. Those results will be used in our final decision on this proposal.

Wisconsin

Wolves were considered to have been extirpated from Wisconsin by 1960. No formal attempts were made to monitor the State's wolf population from 1960 until 1979. From 1960 through 1975, individual wolves and an occasional wolf pair were reported. There is no documentation, however, of any wolf reproduction occurring in Wisconsin, and the wolves that were reported may have been dispersing animals from Minnesota.

Wolf population monitoring by the WI DNR began in 1979 and estimated a statewide population of 25 wolves at that time. This population remained relatively stable for several years, then declined slightly to approximately 15 to 19 wolves in the mid-1980s. In the late 1980s, the Wisconsin wolf population began an increase that has continued into 2004.

Wisconsin DNR intensively surveys its wolf population annually using a combination of aerial, ground, and satellite radio telemetry, complemented by snow tracking and wolf sign surveys (Wydeven *et al.* 1995, 2003). Wolves are trapped from May through September and fitted with radio collars, with a goal of having at least one radio-collared wolf in about half of the wolf packs in Wisconsin. Aerial locations are obtained from each functioning radio collar about once per week, and pack territories are estimated from the movements of the individuals who exhibit localized patterns. From December through March, the pilots make special efforts to visually locate and count the individual wolves in each radio-tracked pack. Snow tracking is used to supplement the aerial sighting-based counts and to provide pack size estimates for packs lacking a radio-collared wolf. Tracking is done by assigning survey blocks to trackers who then drive snow-covered roads in their blocks and follow all wolf tracks they encounter. Snowmobiles are used to locate wolf tracks in more remote areas with low road density. The results of the aerial and ground surveys are carefully compared to properly separate packs and to avoid over-counting (Wydeven *et al.* 2003). The number of wolves in each pack is estimated based on the aerial and ground observations made of the individual wolves in each pack over the winter.

During the winter of 2002–03, 43 of Wisconsin's 94 wolf packs (46 percent) had members carrying active radio transmitters much of the season. Thirty-nine of the 66 monitored wolves were located 20 or more times during the mid-September to mid-April period, providing excellent information on home range boundaries and pack territory size (Wydeven *et al.* 2003). Minimum wolf population estimates (late-winter counts) for 1994 through 2003 increased from 57 to 335 animals, comprising 14 to 94 packs respectively (Wydeven *et al.* 2003) (see Table 1 above). An estimated 373 to 410 wolves in 109 packs, including 12 wolves on Native American reservations, were in the State in 2004, representing an 11 percent increase from 2003 (WI DNR 2004).

Because the monitoring methods focus on wolf packs, it is believed that lone wolves are undercounted in Wisconsin, and, as a result, these population estimates are probably slight underestimates of the actual wolf population within the State during the late-winter period. Also, these estimates are made at the low point of the annual wolf population cycle—late-winter surveys produce an estimate of the wolf population at a time when most winter mortality has already occurred, but the birth of pups has yet to take place. The wolf population increases dramatically when pups are born, then decreases rapidly due to pup mortality, and with a subsequent slower decline as other mortality factors continue throughout the year. Thus, Wisconsin wolf population estimates are conservative in two respects: they undercount lone wolves and the count is made at the annual low point of the population. However, the recovery criteria established in 1992 are consistent with existing methodology, establishing numerical criteria based on late-winter surveys.

In 1995, wolves were first documented in Jackson County, Wisconsin, an area well to the south of the northern Wisconsin area occupied by other Wisconsin wolf packs. The number of wolves in this central Wisconsin area has dramatically expanded since that time. During the winter of 2003–04, there were approximately 57 wolves in 16 to 17

packs in central Wisconsin (Wydeven pers. comm. 2004).

During the winter of 2002–03, 7 wolves occurred on Native American reservations in Wisconsin (Wydeven *et al.* 2003), and this increased to 12 wolves in the winter of 2003–04 (WI DNR 2004). These animals were on the Bad River (10) and Lac Courte Oreilles Reservations (2) (Wydeven *in litt.* 2004). There also is evidence of individual wolves on the Lac du Flambeau and Menominee Reservations, with a high likelihood of wolf packs developing on these reservations in the near future (Wydeven pers. comm. 2002). Additionally, the Red Cliff and Stockbridge-Munsee Reservations and scattered Potawatomi and Ho-Chunk lands will likely support wolves in the near future (Wydeven *in litt.* 2003).

In 2002, wolf numbers in Wisconsin alone surpassed the goal for a second population, as identified in the Recovery Plan (*i.e.*, 100 wolves within 100 miles for a minimum of 5 consecutive years, as measured in 6 consecutive late-winter counts). The Wisconsin wolf population continues to increase, although the slower rates of increase seen in the 2001 and 2003 surveys (3.6 and 2.4 percent, respectively, above the previous year) may be the first indications that the State's wolf population growth and geographic expansion are beginning to level off. The much higher rates of growth seen in 2000 and 2002 (20.9 and 27.2 percent, respectively), however, indicate that it is too soon to conclude that wolf numbers in Wisconsin have reached a plateau. Over the last 10 years, the Wisconsin wolf population grew at an annualized rate of 24 percent.

Michigan

Michigan wolves were extirpated as a reproducing population long before they were listed as endangered in 1974. Prior to 1991, and excluding Isle Royale, the last known breeding population of wild Michigan wolves occurred in the mid-1950s. As wolves began to reoccupy northern Wisconsin, the MI DNR began noting single wolves at various locations in the Upper Peninsula of Michigan. In the late 1980s, a wolf pair was verified in the central Upper Peninsula, and it produced pups in 1991. Since that time, wolf packs have spread throughout the Upper Peninsula, with immigration occurring from both Wisconsin on the west and Ontario on the east. They now are found in every county of the Upper Peninsula.

The MI DNR annually monitors the wolf population in the Upper Peninsula by intensive late-winter tracking surveys that focus on each pack. The Upper Peninsula is divided into seven monitoring zones, and specific surveyors are assigned to each zone. Pack locations are derived from previous surveys, citizen reports, and ground and aerial tracking of radio-collared wolves. During the winter of 2002–03 at least 68 wolf packs were resident in the Upper Peninsula. Approximately 30 to 35 percent of these packs had members with active radio-tracking collars (Dean Beyer, MI DNR, pers. comm. 2004). Care is taken to avoid double-counting packs and individual wolves, and a variety of evidence is used to distinguish adjacent packs and accurately count their members (Beyer *et al.* 2003). Surveys along the border of adjacent monitoring zones are coordinated to avoid double-counting of wolves and packs occupying those border areas. In areas with a high density of wolves, ground surveys by four to six surveyors with concurrent aerial tracking are used to accurately identify adjacent packs and count their members (Potvin *et al.* submitted).

From 1994 through 2003, annual surveys have documented minimum late-winter estimates of wolves occurring in the Upper Peninsula as increasing from 57 wolves in 1994 to 321 in 2003 (see Table 1 above). Over the last 10 years the annualized rate of increase has been 27 percent (MI DNR 1997, 1999a, 2001, 2003). In 2004, the late winter population was at least 360 wolves, up 12 percent from last year (MI DNR 2004b). The Michigan Upper Peninsula wolf population by itself has surpassed the recovery goal for a second population of 100 wolves within 100 miles for a minimum of 5 consecutive years (6 late-winter estimates), as specified in the Recovery Plan.

In 2003–04, no wolf packs were known to be primarily using tribal-owned lands in Michigan (Beyer pers comm. 2004). Native American tribes in the Upper Peninsula of Michigan own small, scattered blocks of land. As such, no one tribal property would likely support a wolf pack. However, as wolves occur in all counties in the Upper Peninsula and range widely, tribal land is likely utilized periodically by wolves.

As mentioned previously, the wolf population of Isle Royale National Park, Michigan, is not considered to be an important factor in the recovery or long-term survival of wolves in the EDPS. This small and isolated wolf population is not expected to make a significant numerical contribution to gray wolf recovery, although long-term research on this wolf population has added a great deal to our knowledge of the species.

Although there have been reports of wolf sightings in the Lower Peninsula of Michigan, including a winter 1997 report of 2 large canids believed to be wolves on the ice west of the Mackinaw Bridge, there is no evidence that there are resident wolves in the Lower Peninsula. Recognizing, however, the likelihood that small numbers of gray wolves will eventually move into the Lower Peninsula, MI DNR has begun a revision of its Wolf Management Plan to incorporate provisions for wolf management there.

When the wolf population estimates of Wisconsin and Michigan are combined, the total population has exceeded the second population recovery goal of 200 wolves for 5 consecutive years for a geographically isolated wolf population. The two-State wolf population, excluding Isle Royale wolves, has exceeded 200 wolves since late-winter 1995–96.

Northeastern United States

Wolves were extirpated from the northeastern United States by 1900. Few credible observations of wolves were reported in the Northeast during most of the 20th century. There has been a small number of remains or salvages of either wolves or wolf-like canids in the northeastern United States since 1993. Observations of ''wolves'' cannot be verified without physical evidence, because wolves may be confused with other canids such as large eastern coyotes, wolf-dog hybrids, and large domestic and feral dogs. As mentioned earlier and in the final reclassification rule (68 FR 15804), gray wolf-dog hybrids are not provided protection of the Act, regardless of the geographic location of the capture of their pure wolf ancestors. Therefore, only recent wolf or wolf-like canid remains in the northeastern United States and adjacent Quebec are summarized here.

Recent reports and analyses confirmed the presence of four wolf-like canids in the northeastern United States and one in Canada just north of the United States border. Three of these wolves (including the Canadian wolf) were determined to be gray wolves, whereas the other two have been found to be hybrids of various lineages. Of the three gray wolf-like canids, two showed genetic linkages with wolves in Canada's Algonquin Provincial Park area. However, there is no evidence of the presence of a self-sustaining wolf population in the northeastern United States.

In 1993, a 63-pound female canid was killed in northwestern Maine. The Maine Department of Inland Fisheries and Wildlife concluded that this animal

was of captive origin because it reportedly visited a campsite the day before its death. The Service, however, found no evidence that this animal was captive held and determined it to be a gray wolf (consistent with DNA from an Algonquin Provincial Park area wolf). The animal was tested for distemper vaccine and evidence of vaccination was not found. Additionally, it had calloused foot pads typical of a wild animal.

In 1996, an 86-pound male canid was killed in Aurora, Maine. The Service conducted a genetic evaluation to establish species identity, which was inconclusive. Canadian geneticist Dr. Brad White (*in litt.* 1999) states that, based on his analysis, the animal appeared 75 percent southeastern Canadian wolf (*lycaon* type) and 25 percent coyote. The animal tested negative for routine vaccinations, exhibited worn foot pads, had beaver remains in its stomach, and otherwise appeared to be of wild origin. The Maine Department of Inland Fisheries and Wildlife initially referred to this canid as a ''probable wolf,'' but subsequently described it as a coyote (K. Elowe, *in litt.* August 2003). In 1997, the Maine Department of Inland Fisheries and Wildlife placed infrared cameras at carcasses and conducted howling surveys in this area. No further evidence of other large canids was obtained. We concluded that this animal was a hybrid between a coyote and southeastern Canadian wolf.

In 1997, a 72-pound canid was shot in Glover, Vermont. Samples were sent to three labs for genetic analyses: The Service's lab in Ashland, Oregon; the University of California at Los Angeles (UCLA); and the Wildlife Forensic DNA Lab at MacMaster University in Ontario, Canada. Thus far, results from UCLA indicate that the canid's mitochondrial DNA match that of a wolf (*Canis lupus lycaon*); however, because this analysis only identifies maternal ancestry, it does not rule out the possibility that the animal may have been sired by a coyote or domestic dog. In contrast, the Service's Ashland lab typed the animal using mitochondrial DNA as coyote, whereas the nuclear DNA suggests coyote/Alaskan malamute dog. The Service concluded that the animal was likely of hybrid origin.

In 2001, a male animal reported to be 85 pounds was killed in Day (near Edinburg), Saratoga County, New York. The skin, carcass, and skull were examined by Dr. Robert Chambers (formerly of the College of Environmental Science and Forestry and authority on New York coyotes), who reported that the animal's head was atypical in shape for either a coyote or a wolf. Dr. Chambers also noted that its teeth were not typical for a wild canid and more consistent with that of a domestic dog. The Service's Ashland forensic lab, however, recently completed mitochondrial DNA and nuclear DNA analyses on this animal and determined that it was a gray wolf. No evidence was found to indicate that the animal was of captive origin.

In 2002, a 64-pound male, wolf-like canid was trapped and killed north of the United States border near Sante-Marguerite-de-Lingwick in southern Quebec Province, Canada. Mitochondrial DNA samples were consistent with *Canis l. lycaon/C. latrans* and the microsatellite genotype showed 95 percent ancestry with Eastern wolves from Algonquin Provincial Park (Villemure and Jolicoeur submitted 2003). The authors describe this animal as the first confirmed occurrence of a wolf, *C. Lupus*, [in Canada] south of the St. Lawrence River in over 100 years.

For the past decade, the Service, the State of Maine, the National Wildlife Federation, and several other private organizations have conducted surveys and responded to sightings of large canids in an attempt to document the presence of wolves or wolf-like canids in the northeastern United States. These efforts have not documented the occurrence of wolves or wolf-like canids in addition to those discussed above, nor have they found evidence that a population of wolves is breeding in the northeastern United States.

While the northeastern United States may contain a large area of historical range not currently occupied by breeding wolves, recovery of the EDPS is not contingent on a secure population of wolves being established in this area. It is appropriate to delist the EDPS even if a substantial amount of the historical range remains unoccupied if the population in its current range is recovered. For this reason, we believe that gray wolf recovery in the eastern United States has been achieved by restoring the species to its core areas within the EDPS, consisting of Minnesota, Wisconsin, and Michigan. Although we believe that additional wolf restoration is not necessary within the eastern United States before delisting the EDPS, delisting will not preclude States and Tribes from undertaking additional wolf restoration programs.

Other Areas in the Eastern DPS

The increasing numbers of wolves in Minnesota and the accompanying expansion of their range westward and southwestward in the State have led to an increase in dispersing, mostly young wolves that have been documented in North and South Dakota in recent years. No surveys have been conducted to document the number of wolves present in North Dakota or South Dakota. The North Dakota Fish and Game Department (Phil Mastrangelo pers. comm. 2004), USDA Wildlife Services (John Paulson pers. comm. 2004), and the Service estimate the number of wolves in North Dakota to be 10 to 20 animals; in South Dakota, single wolves have been sighted, but no resident wolves have been documented.

An examination of skull morphology of North and South Dakota wolves indicates that of eight examined, seven likely had dispersed from Minnesota; the eighth probably came from Manitoba, Canada (Licht and Fritts 1994). Genetic analysis of an additional gray wolf killed in 2001 in extreme northwestern South Dakota indicates that it, too, originated from the Minnesota-Wisconsin-Michigan wolf population (Straughan and Fain 2002).

Additionally, wolves from the Minnesota-Wisconsin-Michigan population are traveling to other States in the EDPS. In October 2001, a wolf was killed in north-central Missouri by a farmer who stated that he thought it was a coyote. The wolf's ear tag identified it as having originated from the western portion of Michigan's Upper Peninsula, where it had been captured as a juvenile in July 1999. Another wolf was shot and killed in Marshall County, Illinois, in December 2002, and in that same month a wolf was mistaken for a coyote and shot near Spalding, Nebraska. A fourth Great Lakes wolf was found dead in Randolph County in east-central Indiana (about 12 miles from the Ohio border) in June 2003. That wolf originated in Jackson County, Wisconsin.

Wolf dispersal is expected to continue as wolves travel from the core recovery populations into areas where wolves are extremely sparse or absent. Unless they return to a core recovery population and join or start a pack there, they are unlikely to contribute to wolf recovery. Although it is possible for them to encounter another wolf, mate, and reproduce outside the core wolf areas, the lack of large expanses of unfragmented public land will make it difficult for wolf packs to persist in these areas.

Gray wolf recovery in the eastern United States has been achieved by restoring the species to its core recovery areas within the EDPS, consisting of Minnesota, Wisconsin, and Michigan, to the point where it is not in danger of

extinction now or in the foreseeable future. We do not need to recover the wolf in other areas of the eastern United States to delist the EDPS. Once protection of the Act is removed, States and Tribes may undertake additional wolf recovery programs if they are interested. The Service does not intend to undertake any additional wolf recovery efforts within the States that are part of the EDPS, before or after delisting. We may, however, provide technical assistance to States and tribes who wish to develop wolf recovery plans beyond those that have already been undertaken.

H. Principles of Conservation Biology

Representation, resiliency, and redundancy are three principles of conservation biology that are generally recognized as being necessary to conserve the biodiversity of an area (Shaffer and Stein 2000). These principles apply when establishing goals for individual species' recovery under the Act.

The principle of representation is the need to preserve ''some of all available''—every species, every habitat, and every biotic community—so biodiversity can be maintained. At the species level, it also calls for preserving the genetic diversity that remains within a species to maximize its ability to adapt to its environment.

Redundancy and resiliency both deal with preserving ''enough to last,'' but they address it at distinctly different levels. Redundancy addresses the need for a sufficient number of populations of a species, whereas resiliency deals with the necessary size and geographic range of individual populations necessary to ensure the species' persistence over time. Resiliency increases in relation to the geographic range of a population. Therefore, populations with a broad geographic range are more likely to persist in the face of environmental changes and other threats to their existence. The redundancy provided by multiple populations of a species provides additional assurances for its survival. For example, a threat to one population may not affect other populations. If that threat leads to the extirpation of a population, the species would still persist due to the occurrence of more than one population that was not affected by the same set of factors.

Due to the vast array of life forms that are potentially subject to the protections of the Act and the variety of physical, biological, and cultural factors acting on them, these three principles should be applied on a species-by-species basis to determine the appropriate recovery goals. For example, addressing the need for redundancy and resiliency for nonmotile organisms, species of limited range (for example, island or insular species), or those species restricted to linear features of the environment (stream or shoreline species) should be expected to result in recovery goals that are quite different from goals developed for habitat generalist, widely distributed, and/or highly mobile species like the gray wolf.

I. Application of Conservation Biology Principles to the Eastern Gray Wolf DPS

In this proposed rule, we evaluate the current conditions and the conditions in the foreseeable future to determine whether the DPS still warrants listing under the Act. This includes an assessment of progress made to date toward the recovery of the Eastern Gray Wolf DPS. Because the wolf currently resides in only a portion of the DPS, we will determine if recovery has been achieved across a significant portion of the DPS to ensure long-term viability in the DPS. We use the principles of conservation biology discussed above and focus on the size, number, composition, distribution, and threats to wolves in the EDPS to answer the following key question: is the gray wolf in danger of extinction, or likely to become so in the foreseeable future, throughout all or a significant portion of its range within the EDPS?

The original Recovery Plan for the Eastern Timber Wolf and the 1992 revision of that plan (USFWS 1978, 1992a) included criteria to identify whether long-term population viability of gray wolves would be assured in the eastern United States. The 1978 Recovery Plan embodied conservation biology tenets in its recovery criteria that the 1992 revised recovery plan carried forward. The Eastern Timber Wolf Recovery Team (Eastern Team) reviewed these criteria in 1997 and found them to be adequate and sufficient to ensure long-term population viability (Peterson *in litt.* 1997).

The principles of representation, resiliency, and redundancy are fully incorporated into the recovery criteria developed by the Eastern Team. Maintenance of the Minnesota wolf population is vital because the remaining genetic diversity of gray wolves in the eastern United States was carried by the several hundred wolves that survived in the State into the early 1970s. The Eastern Team insisted that the remnant Minnesota wolf population be maintained and expanded to achieve wolf recovery in the eastern United States, and the successful growth of that remnant population has maximized the representation of that genetic diversity among gray wolves in the eastern United States. Furthermore, the Eastern Team specified that the Minnesota wolf population should increase to 1,250–1,400 animals, which would increase the likelihood of maintaining its genetic diversity over the long term, and would provide the resiliency to reduce the adverse impacts of unpredictable chance demographic and environmental events. The Minnesota wolf population currently is estimated to be double that numerical goal.

The Eastern Team members recognized the need for redundancy, and specified that this need be accomplished by establishing a second population of gray wolves in the eastern United States. They identified several potential locations for the second population, including Wisconsin, Michigan, northern New York, and northern Maine. To ensure that the second population also had sufficient resiliency to survive normal and unexpected variations in population size, the Eastern Team specified a minimum size for the second population that would have to be maintained for a minimum of 5 years. If the second population was isolated from the larger Minnesota population, the recovery criteria requires that the second population contain at least 200 wolves for a minimum of 5 years. If, however, the second population were near (*i.e.*, less than 100 miles from) the Minnesota population, the two populations would function as a ''metapopulation'' rather than as two separate and isolated populations; in that case the second population would be viable if it maintained 100 wolves for at least 5 years. Wolf populations near Minnesota were likely to be viable at this smaller size due to the potential immigration of wolves from Minnesota. Such a second wolf population has developed in Wisconsin and the adjacent Upper Peninsula of Michigan. This second population is less than 200 miles from the Minnesota wolf population, and it has had a late-winter population exceeding 100 animals since 1994.

The number of wolves in the EDPS greatly exceeds the recovery criteria (USFWS 1992a) for (1) a secure wolf population in Minnesota and (2) a second population of 100 wolves for 5 successive years; thus, based on the criteria set by the recovery team in 1992, the DPS contains sufficient numbers and distribution (resiliency and redundancy) to ensure the long-term survival of gray wolves within the DPS. The wolf's numeric and distributional recovery in the EDPS has been achieved.

Next we will consider whether the significant reduction or removal of threats to the gray wolf's continued existence within the DPS demonstrates that the species is not likely to become in danger of extinction nor likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the DPS.

Summary of Factors Affecting the Species

Section 4 of the Endangered Species Act and regulations (50 CFR Part 424) promulgated to implement the listing provisions of the Act set forth the procedures for listing, reclassifying, and delisting species. Species may be listed as threatened or endangered if one or more of the five factors described in section 4(a)(1) of the Act threaten the continued existence of the species. A species may be delisted, according to 50 CFR 424.11(d), if the best scientific and commercial data available substantiate that the species is neither endangered nor threatened because of (1) extinction, (2) recovery, or (3) error in the original data, or the data analysis, used for classification of the species. A determination of recovery must be based upon the same five threat factors specified in section 4(a)(1).

For species that are being considered for delisting, this analysis of threats is primarily an evaluation of the threats that would, with a reasonable degree of likelihood, affect the species in the foreseeable future after its delisting and the consequent removal of the Act's protections. This may include currently existing threats whose impacts are sufficiently low so that recovery has been achieved despite their impacts; or they may be threats that are no longer existent, but that may have significant adverse effects after delisting. Although the latter threats are more difficult to identify and evaluate, their potential impacts may preclude the long-term viability of a species.

Our evaluation of the threats to the gray wolf in the EDPS—especially those threats to wolves in the core recovery areas that would occur after removal of the protections of the Act—is substantially based on the wolf management plans and assurances of the States and Tribes. If the gray wolf is federally delisted, State and Tribal management plans will be the major determinant of wolf protection, will set and enforce limits on human take of wolves (*e.g.*, for depredation control), and will determine the overall regulatory framework for the conservation and/or exploitation of gray wolves.

A. The Present or Threatened Destruction, Modification, or Curtailment of Its Habitat or Range

A popular perception is that wolves inhabit only remote portions of pristine forests or mountainous areas, where human developments and other activities have produced negligible change to the natural landscape. Their extirpation south of Canada and Alaska, except for the heavily forested portions of northeastern Minnesota, reinforced this popular belief. Wolves, however, survived in those areas not because those were the only places with the necessary habitat conditions, but because only in those remote areas were they sufficiently free of the human persecution that elsewhere killed wolves faster than the species could reproduce (Mech 1995).

In the upper Great Lakes region, wolves in the densely forested northeastern corner of Minnesota have expanded into the more agricultural portions of central and northwestern Minnesota, northern and central Wisconsin, and the entire Upper Peninsula of Michigan. Habitats currently being used by wolves span the broad range from the mixed hardwood-coniferous forest wilderness area of northern Minnesota, through sparsely settled, but similar habitats in Michigan's Upper Peninsula and northern Wisconsin, and into more intensively cultivated and livestock-producing portions of central and northwestern Minnesota and central Wisconsin; wolves even approach the fringes of the St. Paul, Minnesota, and Madison, Wisconsin, suburbs. Wolves also travel from Minnesota into the agricultural landscape of North and South Dakota in increasing numbers (Licht and Fritts 1994, Straughan and Fain 2002). Similarly, a radio-collared wolf from the Upper Peninsula of Michigan was recently mistaken for a coyote and killed in north-central Missouri, presumably traveling through expanses of agricultural land along the way (Missouri Department of Conservation 2001). A wolf originating from the Minnesota-Wisconsin-Michigan population was shot and killed in central Illinois, and a young wolf from central Wisconsin was shot in extreme eastern Indiana, and likely traveled through areas of heavy human use as it journeyed south and east around the highly developed land bordering the southern tip of Lake Michigan. Similar long-distance movement of wolves is expected to continue from core areas as these animals attempt to disperse into unoccupied areas. These movements may result in the expansion of the population's range when the wolves locate areas with sufficient prey and potential mates and where human-caused mortality is not too high to preclude their persistence.

Wolf research and the expansion of wolf range over the last three decades have shown that wolves can successfully occupy a wide range of habitats, and they are not dependent on wilderness areas (*i.e.*, areas essentially free of human disturbance) for their survival (Mech 1995). In the past, gray wolf populations occupied nearly every type of habitat north of mid-Mexico that contained large ungulate prey species, including bison, elk, white-tailed deer, mule deer, moose, and woodland caribou. An inadequate prey density and a high level of human persecution apparently are the only factors that limit wolf distribution (Mech 1995). Therefore, virtually any area that has sufficient prey and adequate protection from human-caused mortality could be considered potential gray wolf habitat.

Wisconsin and the Upper Peninsula of Michigan contain large tracts of wolf habitat, estimated at 15,052 km^2 (5,812 mi^2) and 29,348 km^2 (11,331 mi^2), respectively (Mladenoff *et al.* 1995; WI DNR 1999a). In those States, much of the suitable habitat is on public lands (national, State, and county forest lands).

Hearne *et al.* (2003), determined that a viable wolf population (that is, having less than 10 percent chance of extinction over 100 years) should consist of at least 175 to 225 wolves, and they modeled various likely scenarios of habitat conditions in the Upper Peninsula of Michigan and northern Wisconsin through the year 2020 to determine whether future conditions would support a wolf population of that size. Most scenarios of future habitat conditions resulted in viable wolf populations in each State through 2020. When the model analyzed the future conditions in the two States combined, all scenarios produced a viable wolf population through 2020.

Three comparable surveys of wolf numbers and range in Minnesota have been carried out since 1979. These surveys estimated that there were 1,235, 1,500–1,750, and 2,445 wolves in Minnesota in 1979, 1989, and 1998, respectively (Berg and Kuehn 1982, Fuller *et al.* 1992, Berg and Benson 1999) (see Table 1 above). Based on these surveys, wolf numbers in Minnesota increased at annual rates of about 3 percent between 1979–89 and by about 4 to 5 percent between 1989–98. As of the 1998 survey, the number of wolves in Minnesota was

approximately twice the planning goal for Minnesota, as specified in the Eastern Recovery Plan. (Refer to the *Recovery of the Eastern Gray Wolf* section above, for additional details on the increase in numbers and range of Minnesota wolves.)

The MN DNR, in cooperation with the MN Department of Agriculture, completed a Wolf Management Plan (Minnesota Plan) in early 2001 (MN DNR 2001). The Minnesota Plan's stated goal is ''to ensure the long-term survival of wolves in Minnesota while addressing wolf-human conflicts that inevitably result when wolves and people live in the same vicinity.'' It establishes a minimum goal of 1,600 wolves, with provisions to monitor the population and to take prompt corrective action, including habitat protection, if wolf numbers drop below that threshold. The Minnesota Plan divides the State into two wolf management zones—Zones A and B (see Figure 2 below). Zone A corresponds to wolf management zones 1 through 4 (an approximately 30,000 mi^2 area in northeastern Minnesota) in the Service's Eastern Recovery Plan, whereas Zone B constitutes zone 5 in the Eastern Recovery Plan. Within Zone A, wolves would receive strong protection by the State, unless they were involved in attacks on domestic animals. The rules governing the take of wolves to protect domestic animals in Zone B would be less protective than in Zone A.

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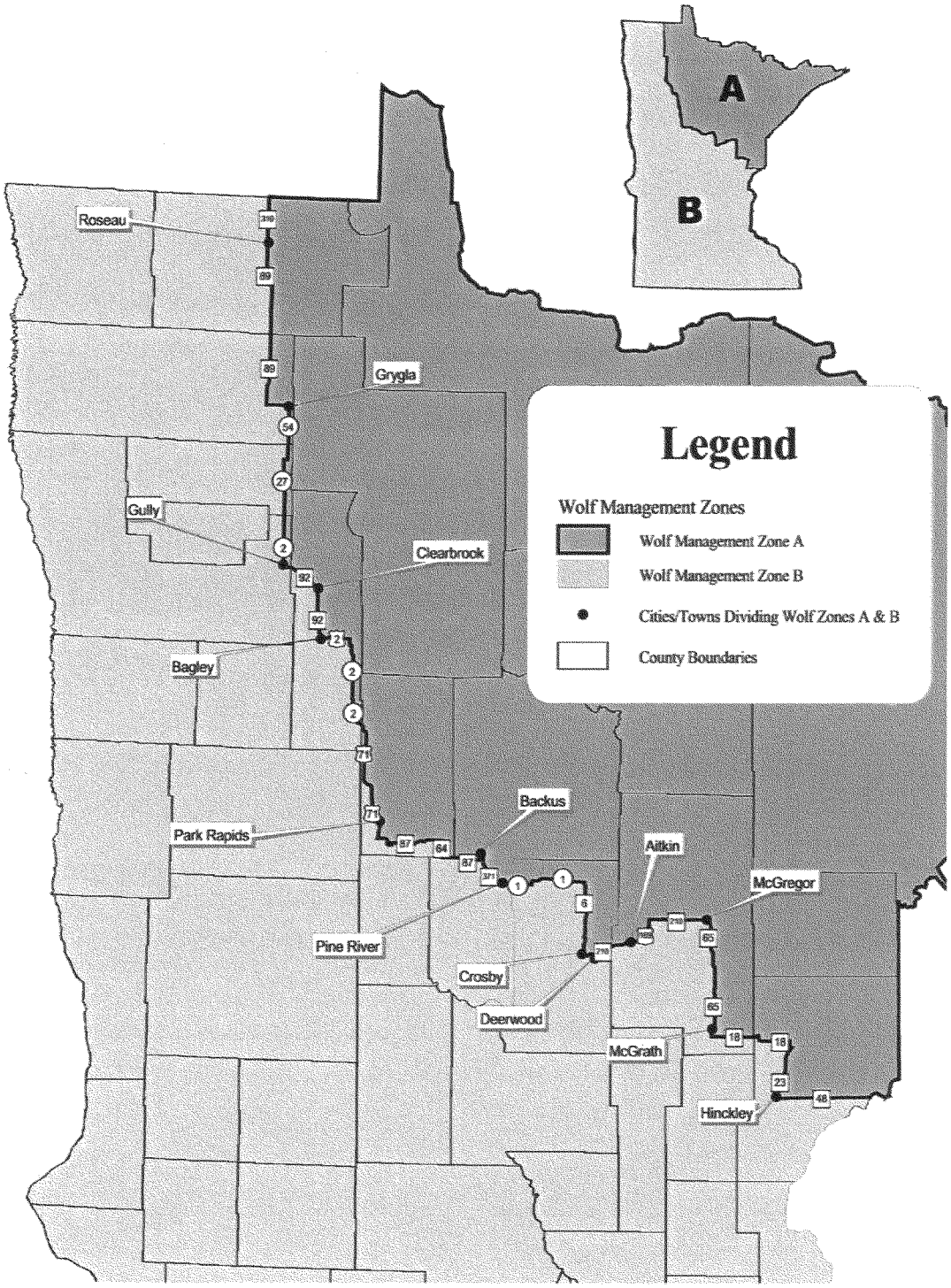
Figure 2. Minnesota wolf management zones.



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The Wisconsin wolf population has increased at an average annual rate of 18 percent since 1985. Wisconsin had at least 335 wild gray wolves in early 2003 (Wydeven *et al.* 2003b), and an estimated 373–410 wolves in the State in 2004, an 11 percent increase from 2003 (*WI DNR* 2004). The Michigan wolf population (excluding Isle Royale) has increased at an average annual rate of about 19 percent between 1995 and 2002 and the 2003 wolf population was at least 321 wolves (Huntzinger *et al.* 2003). The early 2004 wolf population was at least 360 wolves, up 12 percent from last year (MI DNR 2004b). Wolf survey methods in both States focus on wolf packs and may miss many lone individuals, thus underestimating the actual wolf populations. It is safe to say, however, that the combined gray wolf population in the two States (excluding Isle Royale, MI) was over 700 animals in late-winter 2003–04.

Final State wolf management plans for Michigan and Wisconsin have identified habitat protection as one of their top priorities for maintaining a viable wolf population. Both State wolf management plans emphasize the need to manage human access to wolf areas by avoiding increasing road densities, protecting habitat corridors between larger tracts of wolf habitat, avoiding disturbance and habitat degradation in the immediate vicinity of den and rendezvous sites, and maintaining adequate prey species for wolves by suitable habitat and prey harvest regulations.

Both the Michigan Plan and the Wisconsin Plan establish wolf population goals that exceed the viable population threshold identified in the Federal recovery plan for isolated wolf populations, that is, a population of 200 or more wolves for 5 consecutive years (USFWS 1992a). Each State adopted this ''isolated population'' approach to ensure the continued existence of a viable wolf population within its borders regardless of the condition or existence of wolf populations in adjacent States or Canada. (For more information on State Management Plans, see the *Summary of Factors Affecting the Species* section, factor ''D. *The adequacy or inadequacy of existing regulatory mechanisms*'' section, below.)

Tribal Lands

Native American tribes and multi-tribal organizations have indicated to the Service that they will continue to conserve wolves on most, and probably all, Native American reservations in the core recovery areas of the EDPS. The wolf retains great cultural significance and traditional value to many tribes and their members (Eli Hunt, Leech Lake Tribal Council, *in litt.* 1998; Mike Schrage, Fond du Lac Resource Management Division, *in litt.* 1998a). Some Native Americans view wolves as competitors for deer and moose, whereas others are interested in harvesting wolves as a furbearer (Schrage, *in litt.* 1998a). Many tribes intend to sustainably manage their natural resources, wolves among them, to ensure that they are available to their descendants. Traditional natural resource harvest practices, however, often include only a minimum amount of regulation by the tribal government (Hunt *in litt.* 1998).

To retain and strengthen cultural connections, some tribes oppose unnecessary killing of wolves on reservations and on ceded lands, even if wolves were to be delisted in the future. For example, because of the strong cultural significance of the wolf to their culture, the Ojibwe people support its protection (James Schlender, Great Lakes Indian Fish and Wildlife Commission, *in litt.* 1998). (For detailed discussion on tribal management of wolves in the EDPS, see the *Summary of Factors Affecting the Species* section, factor ''D. *The adequacy or inadequacy of existing regulatory mechanisms*'' section, below.)

Although no tribes have completed wolf management plans, based on communications with tribes and tribal organizations, wolves are likely to be adequately protected on tribal lands. Furthermore, the numerical recovery criteria in the Recovery Plan would be achieved (based on the numbers and range of off-reservation wolves) even without the protection of wolves on tribal lands.

Federal Lands

National forests, and the prey species found in their various habitats, are important to wolf conservation and recovery in the core areas of the EDPS. There are five national forests with resident wolves (Superior, Chippewa, Chequamegon-Nicolet, Ottawa, and Hiawatha National Forests) in Minnesota, Wisconsin and Michigan. Their wolf populations range from approximately 20 on the Nicolet portion of the Chequamegon-Nicolet National Forest in northeastern Wisconsin to an estimated 300–400 on the Superior National Forest in northeastern Minnesota. Nearly half of the wolves in Wisconsin currently use the Chequamegon portion of the Chequamegon-Nicolet National Forest. All of these national forests are operated in conformance with standards and guidelines in their management plans that follow the 1992 Recovery Plan's recommendations for the Eastern Timber Wolf (USFWS 1992a). Delisting is not expected to lead to an immediate change in these standards and guidelines; in fact, the Regional Forester for U.S. Forest Service Region 9 is expected to maintain the classification of the gray wolf as a sensitive species for at least 5 years after Federal delisting (Regional Forester, U.S. Forest Service, *in litt.* 2003). The continuation of current national forest management practices will be important in ensuring the long-term viability of gray wolf populations in Minnesota, Wisconsin, and Michigan.

Gray wolves regularly use four units of the National Park System in the EDPS and may occasionally use three or four other units. Although the National Park Service (NPS) has participated in the development of some of the State wolf management plans in this area, NPS is not bound by States' plans. Instead, the NPS Organic Act and the NPS Management Policy on Wildlife authorize the agency to conserve natural and cultural resources and the wildlife present within the parks. Generally, National Park Service management policies require that native species be protected against harvest, removal, destruction, harassment, or harm through human action, although certain parks may allow some harvest in accordance with State management plans. Management emphasis in National Parks after delisting would continue to minimize the human impacts on wolf populations. Thus, because of their responsibility to preserve all wildlife, units of the National Park System can be more protective of wildlife than are State plans and regulations. In the case of the gray wolf, the NPS Organic Act and NPS policies will continue to provide protection even after Federal delisting has occurred.

Voyageurs National Park, along Minnesota's northern border, has a land base of nearly 882 km^2 (340 mi^2). There are 40 to 55 wolves within 7 to 11 packs that exclusively or partially reside within the park. Management and protection of wolves in the park is not likely to change after delisting. The park's management policies require that ''native animals will be protected against harvest, removal, destruction, harassment, or harm through human action.'' To reduce human disturbance, temporary closures around wolf denning and rendezvous sites will be enacted whenever they are discovered in the park. Sport harvest of wolves within the park will be prohibited,

regardless of what may be allowed beyond park boundaries (Barbara West, National Park Service, *in litt.* 2004). A radiotelemetry study conducted between 1987–91 of wolves living in and adjacent to the park found that all mortality inside the park was due to natural causes (*e.g.*, killing by other wolves), whereas all mortality outside the park was human induced (*e.g.*, shooting and trapping) (Gogan *et al.* 1997). If there is a need to control depredating wolves outside the park, which seems unlikely due to the current absence of agricultural activities adjacent to the park, the park would work with the State to conduct control activities where necessary (West in *litt.* 2004).

The wolf population in Isle Royale National Park is described above (*see* the *Recovery of the Eastern Gray Wolf* section). The NPS has indicated that it will continue to closely monitor and study these wolves. This wolf population is very small and isolated from the other EDPS gray wolf populations; it is not considered to be significant to the recovery or long term viability of the gray wolf (USFWS 1992a).

Two other units of the National Park System, Pictured Rocks National Lakeshore and St. Croix National Scenic Riverway, are regularly used by wolves. Pictured Rocks National Lakeshore is a narrow strip of land along Michigan's Lake Superior shoreline; lone wolves periodically use, but do not appear to be year-round residents of, the Lakeshore. If denning occurred after delisting, the Lakeshore would protect denning and rendezvous sites at least as strictly as the MI Plan recommends (Karen Gustin, Pictured Rocks National Lakeshore, *in litt.* 2003). Harvesting wolves on the Lakeshore may be allowed (*i.e.*, if the Michigan DNR allows for harvest in the State), but trapping would not be allowed. The St. Croix National Scenic Riverway, in Wisconsin and Minnesota, is also a mostly linear ownership. At least 18 wolves from 6 packs use the Riverway. The Riverway is likely to limit public access to denning and rendezvous sites and to follow other management and protective practices outlined in the respective State wolf management plans, although trapping will not be allowed on NPS lands except possibly by Native Americans (Robin Maercklein, National Park Service, *in litt.* 2003).

In the EDPS, we currently manage seven units within the National Wildlife Refuge System with wolf activity. Primary among these are Agassiz National Wildlife Refuge (NWR) and Tamarac NWR in Minnesota, Seney NWR in the Upper Peninsula of Michigan, and Necedah NWR in central Wisconsin. Agassiz NWR has had as many as 20 wolves in 2 to 3 packs in recent years, but in 1999 mange and illegal shootings reduced them to a single pack of five wolves and a separate lone wolf. Since 2001, however, two packs with a total of 10 to 12 wolves have been using the refuge. Tamarac NWR has 2 packs, with approximately 18 wolves, using that refuge. In 2003, Seney NWR had one pack with two adults and two pups on the refuge. Necedah NWR currently has 3 packs with a total of 13 to 15 wolves in the packs. Rice Lake NWR, in Minnesota, has one pack of nine animals using the refuge in 2004; other single or paired wolves pass through the refuge frequently (M. Stefanski, USFWS, pers. comm. 2004). In the past ten years, Sherburne and Crane Meadows NWRs in central Minnesota have reliably had intermittent observations and signs of individual wolves each year. To date, no established packs have been documented on either of those refuges. The closest established packs are within 15 miles of Crane Meadows NWR at Camp Ripley Military Installation and 30 miles of Sherburne NWR at Mille Lacs State Wildlife Management Area (J. Holler, USFWS, pers. comm. 2004).

Gray wolves occurring on NWRs in the eastern United States will be monitored and refuge habitat management will maintain the current prey base for them for a minimum of 5 years after delisting. Trapping or hunting by government trappers for depredation control will not be authorized on NWRs. Because of their relatively small size, however, most or all of these packs and individual wolves also spend significant amounts of time off of these NWRs.

Gray wolves also occupy the Fort McCoy military installation in Wisconsin. In 2003, one pack containing five adult wolves occupied a territory that included the majority of the installation; in 2004, the installation had one pack with two adults. Management and protection of wolves on the installation will not change significantly after Federal and/or State delisting. Den and rendezvous sites would continue to be protected; non-deer hunting seasons (*i.e.* coyote) would be closed during the gun-deer season; and current surveys would continue, if resources are available. Fort McCoy has no plans to allow a public harvest of wolves on the installation. (Danny Nobles, Department of the Army, *in litt.* 2004).

The protection afforded to resident and transient wolves, their den and rendezvous sites, and their prey by five national forests, four National Parks, and numerous National Wildlife Refuges in Minnesota, Wisconsin, and Michigan would further ensure the conservation of wolves in the three States after delisting.

In summary, we find that the risk of gray wolf habitat destruction or degradation, a reduction in the range of the gray wolf, or related factors that may affect gray wolf abundance, will not by themselves or in combination with other factors cause the EDPS of the gray wolf likely to become in danger of extinction in the foreseeable future. Ongoing effects of recovery efforts over the past decade, which resulted in a significant expansion of the range of wolves in the EDPS, in conjunction with State, Tribal, and Federal agency wolf management will be adequate to ensure the conservation of the EDPS. These activities are likely to maintain an adequate prey base, preserve denning sites and dispersal corridors, and keep wolf populations well above the numerical recovery criteria established in the Federal Recovery Plan for the Eastern Timber Wolf (USFWS 1992a).

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Since their listing under the Act, no gray wolves have been legally killed or removed from the wild in the conterminous 48 States for either commercial or recreational purposes. Some wolves may have been illegally killed for commercial use of the pelts and other parts, but we think that illegal commercial trafficking in wolf pelts or parts and illegal capture of wolves for commercial breeding purposes is rare.

We do not expect the use of wolves for scientific purposes to increase in proportion to total wolf numbers in the EDPS after delisting. Before delisting, the intentional or incidental killing, or capture and permanent confinement, of endangered or threatened gray wolves for scientific purposes has only legally occurred under permits issued by us (for example, under section 10(a)(1)(A) and 10(a)(1)(B) of the Act), under an incidental take statement issued by us in conjunction with a biological opinion completed under section 7(a)(2), under an incidental take permit issued by us pursuant to section 10(a)(1)(B), or by a State agency operating under a cooperative agreement with us pursuant to section 6 of the Act (50 CFR 17.21(c)(5) and 17.31(b)). Although exact figures are not available, throughout the coterminous 48 States, such removals of wolves from the wild have been very limited and probably

comprise an average of fewer than two animals per year since the species was first listed as endangered. In the EDPS, these animals were either taken from the Minnesota wolf population during long-term research activities (about 15 gray wolves) or were accidental takings as a result of research activities in Wisconsin (4 to 5 mortalities and 1 long-term confinement) (William Berg, MN DNR, *in litt.* 1998; Mech, *in litt.* 1998; Wydeven 1998).

The Minnesota DNR plans to encourage the study of wolves with radio-telemetry after delisting, with an emphasis on areas where they expect wolf-human conflicts and where wolves are expanding their range (MN DNR 2001). The handling of animals, including the administration of drugs, may result in some accidental deaths of wolves. We assume that radio-telemetry will not increase significantly above the level observed before delisting in proportion to wolf abundance; adverse effects to wolves associated with such activities has been minimal (see below) and would not constitute a threat to the EDPS.

We believe that no wolves have been legally removed from the wild for educational purposes in recent years. Wolves that are used for such purposes are the captive-reared offspring of wolves that were already in captivity for other reasons.

Refer to the *Depredation Control Programs* section under the *Summary of Factors Affecting the Species* section, factor D. *The adequacy or inadequacy of existing regulatory mechanisms,* below, for discussions of additional wolf mortalities associated with wolf depredation control programs. For a discussion on commercial and recreational hunting and trapping, refer to the *Predation* section under the *Summary of Factors Affecting the Species* section, factor *C. Disease or predation,* below.

C. Disease or Predation

Disease. Many diseases and parasites have been reported for the gray wolf, and several of them have had significant impacts during the recovery of the species in the 48 conterminous United States (Brand *et al.* 1995). These diseases and parasites, and perhaps others, may significantly threaten gray wolf populations in the future. Thus, to avoid a decline caused by diseases or parasites, States and their partners will have to diligently monitor the prevalence of these pathogens and respond to significant outbreaks.

Canine parvovirus (CPV) is a relatively new disease that infects wolves, domestic dogs, foxes, coyotes, skunks, and raccoons. Recognized in the United States in 1977 in domestic dogs, it appeared in Minnesota wolves (based upon retrospective serologic evidence) live-trapped as early as 1977 (Mech *et al.* 1986). Minnesota wolves, however, may have been exposed to the virus as early as 1973 (Mech and Goyal 1995). Serologic evidence of gray wolf exposure to CPV peaked at 95 percent for a group of Minnesota wolves live-trapped in 1989 (Mech and Goyal 1993). In a captive colony of Minnesota wolves, pup and yearling mortality from CPV was 92 percent of the animals that showed indications of active CPV infections in 1983 (Mech and Fritts 1987), demonstrating the substantial impacts this disease can have on young wolves. It is believed that the population impacts of CPV occur via diarrhea-induced dehydration leading to abnormally high pup mortality (WI DNR 1999a).

There is no evidence that CPV has caused a population decline or has had a significant impact on the recovery of the Minnesota gray wolf population. Mech and Goyal (1995), however, found that high CPV prevalence in the wolves of the Superior National Forest in Minnesota occurred during the same years in which wolf pup numbers were low. Because the wolf population did not decline during the study period, they concluded that CPV-caused pup mortality was compensatory, that is, it replaced deaths that would have occurred from other causes, especially starvation of pups. They theorized that CPV prevalence affects the amount of population increase and that a wolf population will decline when 76 percent of the adult wolves consistently test positive for CPV exposure. Their data indicate that CPV prevalence in adult wolves in their study area increased by an annual average of 4 percent during 1979–93 and was at least 80 percent during the last 5 years of their study (Mech and Goyal 1995). Additional unpublished data gathered since 1995 indicate that CPV reduced wolf population growth in that area from 1979 to 1989, but not since that period (Mech *in litt.* 1999). These data provide strong justification for continuing population and disease monitoring.

Canine parvovirus probably stalled wolf population growth in Wisconsin during the early and mid-1980s when numbers there declined or were static and 75 percent of 32 wolves tested positive for CPV. During the following years (1988–96) of population increase, only 35 percent of the 63 wolves tested positive for CPV (WI DNR 1999a). Exposure rates for CPV were 50 percent in live-captured Wisconsin wolves in 1995–96 (WI DNR 1999a). Of the 13 Wisconsin wolves that died and were examined in 2000, none of the deaths were attributed to CPV (Wydeven *et al.* 2001a). Similarly, CPV was not noted for the 22 wolves with a suspected cause of death identified in 2001 (WI DNR unpublished data). Recently, CPV has been confirmed as the cause of death for some pups (Wydeven pers. comm. 2004) and the difficulty of discovering CPV-killed pups, however, must be considered.

Canine parvovirus is considered to have been a major cause of the decline of the isolated Isle Royale, Michigan, population in the mid and late 1980s. The Isle Royale gray wolf population decreased from 23 and 24 wolves in 1983 and 1984, respectively, to 12 and 11 wolves in 1988 and 1989, respectively. The wolf population remained in the low to mid-teens through 1995. Factors other than disease, however, may be causing, or contributing to, a low level of reproductive success, including a low level of genetic diversity and a prey population composed of young healthy moose that may make it difficult to secure sufficient prey for pups.

There are no data showing any CPV-caused population impacts to the larger gray wolf population on the Upper Peninsula of Michigan (Peterson *et al.* 1998, Hammill pers. comm. 2002, Beyer pers. comm. 2003). Mortality data is primarily collected from collared wolves, however, which until recently received CPV inoculations. Therefore, mortality data for the Upper Peninsula should be interpreted cautiously.

Sarcoptic mange is caused by a mite infection of the skin. The irritation caused by the feeding and burrowing mites results in scratching and then severe fur loss, which in turn can lead to mortality from exposure during severe winter weather. In a long-term Alberta, Canada, wolf study, higher wolf densities were correlated with increased incidence of mange, and pup survival decreased as the incidence of mange increased (Brand *et al.* 1995).

From 1991 to 1996, 27 percent of live-trapped Wisconsin wolves exhibited symptoms of mange. During the winter of 1992–93, 58 percent showed symptoms, and a concurrent decline in the Wisconsin wolf population was attributed to mange-induced mortality (WI DNR 1999a). Seven Wisconsin wolves died of mange from 1993 through October 15, 1998, and severe fur loss affected five other wolves that died from other causes. During that period, mange was the third largest cause of death in Wisconsin wolves,

behind trauma (usually vehicle collisions) and shooting (Nancy Thomas *in litt.* 1998).

The prevalence of mange and its impacts on the wolf population have increased in Wisconsin. During the 12-month period from April 2002 through March 2003, mange caused the death of 7 of the 63 Wisconsin wolves that were found dead, and 1 wolf was euthanized because of the disease. (Depredation control took 17 Wisconsin wolves during this same period, while 17 died from motor vehicle collisions, 15 were shot, 1 drowned, and 1 was killed by other wolves.) Wolves nearing death from mange generally crawl into dense cover and are difficult to discover if they are not radio-tracked (Shelley and Gehring 2002). During the winter of 2002–03, approximately 36 percent of the radio-collared wolves being tracked by WI DNR died from mange (Wydeven *et al.* 2003a, 2004). Other observations showed that some mangy wolves are able to survive the winter (Wydeven *et al.* 2000b, 2001a).

Pup survival during their first winter is believed to be strongly affected by mange. Wolf mortality from mange in Wisconsin was fairly high in 2003 and may have had more severe effects on pup survival than in previous years. The prevalence of the disease may have contributed to the relatively small population increase in 2003 (2.4 percent in 2003 as compared to the average 18 percent since 1985). So far, though, mange has not caused a decline in the State's wolf population, and even though the rate has slowed in recent years, the wolf population continues to increase despite the continued prevalence of mange in Wisconsin wolves (Wydeven *et al.* 2003b). Although mange mortality may not be the primary determinant of wolf population growth in the State, the impacts of mange in Wisconsin need to be closely monitored as identified in the State wolf management plan.

At least seven wild Michigan wolves died from mange during 1993–97, making it the most common disease of Michigan wolves. From 1999–01, mange-induced hypothermia killed all seven Michigan wolves whose cause of death was attributed to disease (Hammill *in litt.* 2002). Before 2004, MI DNR treated all captured wolves with Ivermectin if they showed signs of mange. In addition, MI DNR vaccinated all captured wolves against CPV and canine distemper virus (CDV), and administered antibiotics to combat potential leptospirosis infections. These inoculations will be discontinued in 2004 to provide more natural biotic conditions and to provide biologists with an unbiased estimate of disease-caused mortality rates in the population (Beyer per. comm. 2004).

Wisconsin wolves similarly had been treated with Ivermectin and vaccinated for CPV and CDV when captured, but the practice was stopped in 1995 to allow the wolf population to experience more natural biotic conditions. Since that time, Ivermectin has been administered only to captured wolves with severe cases of mange. In the future, Ivermectin and vaccines will be used sparingly on Wisconsin wolves, but will be used to counter significant disease outbreaks (Wydeven *in litt.* 1998).

Mange has not been documented to be a significant disease problem in Minnesota. Several packs in the Ely and Park Rapids areas, however, are known to suffer from mange, and at Agassiz NWR in northwestern Minnesota wolves were reduced from as many as 20 animals in 2 to 3 packs in the early 1990s to a single pack of 5 wolves and a separate single wolf in 1999, primarily as a result of mange.

Lyme disease, caused by a spirochete, is another relatively recently recognized disease, first documented in New England in 1975; it may have occurred in Wisconsin as early as 1969. It is spread by ticks that pass the infection to their hosts when feeding. Host species include humans, horses, dogs, white-tailed deer, white-footed mice, eastern chipmunks, coyotes, and wolves. The prevalence of Lyme disease in Wisconsin wolves averaged 70 percent of live-trapped animals in 1988–91, but dropped to 37 percent during 1992–97. Although there are no data showing wolf mortalities from Lyme disease, it may be suppressing population growth through decreased wolf pup survival.

Other diseases and parasites, including rabies, canine distemper, canine heartworm, blastomycosis, bacterial myocarditis, granulomatous pneumonia, brucellosis, leptospirosis, bovine tuberculosis, hookworm, dog lice, coccidiosis, and canine hepatitis, have been documented in wild gray wolves, but their impacts on future wild wolf populations are not likely to be significant (Brand *et al.* 1995, Hassett *in litt.* 2003, Johnson 1995, Mech and Kurtz 1999, Thomas *in litt.* 1998, WI DNR 1999a). Continuing wolf range expansion, however, likely will provide new avenues for exposure to several of these diseases, especially canine heartworm, rabies, and bovine tuberculosis (Thomas *in litt.* 2000), further emphasizing the need for disease monitoring programs.

In aggregate, diseases and parasites were the cause of 9 percent of the diagnosed mortalities of radio-collared wolves in Michigan from 1992 through 2003 (MI DNR unpublished data 2004a) and 26 percent of the diagnosed mortalities of radio-collared wolves in Wisconsin from 1979 through June 2003 (Hassett *in litt.* 2003).

Several of the diseases and parasites are known to be spread by wolf-to-wolf contact. Therefore, their incidence may increase as wolf densities increase in newly colonized areas. Because wolf densities generally are relatively stable following the first few years of colonization, wolf-to-wolf contacts will not likely lead to a continuing increase in disease prevalence (Mech *in litt.* 1998).

Disease and parasite impacts may increase because several wolf diseases are carried and spread by domestic dogs. This transfer of diseases and parasites from domestic dogs to wild wolves may increase as gray wolves continue to colonize non-wilderness areas (Mech *in litt.* 1998). Heartworm, CPV, and rabies are the main concerns (Thomas *in litt.* 1998).

Disease and parasite impacts are a recognized concern of the Minnesota, Michigan, and Wisconsin State DNRs. The Michigan Gray Wolf Recovery and Management Plan states that necropsies will be conducted on all dead wolves, and that all live wolves that are handled will be examined, with blood, skin, and fecal samples taken to provide disease information (MI DNR 1997). Similarly, the Wisconsin Wolf Management Plan states that as long as the wolf is State-listed as a threatened or endangered species, the WI DNR will conduct necropsies of dead wolves and test a sample of live-captured wolves for diseases and parasites. The goal will be to capture and screen 10 percent of the State wolf population for diseases annually. After State delisting, disease monitoring will be scaled back because the percentage of the wolf population that is live-trapped each year will decline. The State will continue to test for disease and parasite loads through periodic necropsy and scat analyses. The plan also recommends that all wolves live-trapped for other studies should have their health monitored and reported to the WI DNR wildlife health specialists (WI DNR 1999a).

The Minnesota Wolf Management Plan (MN DNR 2001) states that MN DNR ''will collaborate with other investigators and continue monitoring disease incidence, where necessary, by examination of wolf carcasses obtained through depredation control programs, and also through blood/tissue physiology work conducted by DNR and the U.S. Geological Survey. DNR will

also keep records of documented and suspected incidence of sarcoptic mange.'' In addition, it will initiate ''(R)egular collection of pertinent tissues of live captured or dead wolves'' and periodically assess wolf health ''when circumstances indicate that diseases or parasites may be adversely affecting portions of the wolf population.'' Unlike Michigan and Wisconsin, Minnesota has not established minimum goals for the proportion of its wolves that will be assessed for disease nor does it plan to treat any wolves, although it does not rule out these measures. Minnesota's less intensive approach to disease monitoring and management seems warranted in light of its much greater abundance of wolves than in the other two States.

In summary, several diseases have had significant impacts on wolf population growth in the Great Lakes region in the past. These impacts have been both direct, resulting in mortality of individual wolves, and indirect, by reducing longevity and fecundity of individuals or entire packs or populations. Canine parvovirus stalled wolf population growth in Wisconsin in the early and mid-1980s and has been implicated as a contributing factor in declines of the isolated Isle Royale population in Michigan. Sarcoptic mange has affected wolf recovery in Michigan's Upper Peninsula and in Wisconsin over the last ten years, and is recognized as a continuing problem. Despite these and other diseases and parasites, however, the overall trend for wolf populations in the EDPS is upward. Wolf management plans for Minnesota, Michigan, and Wisconsin include disease monitoring that we expect to identify future disease and parasite problems in time to allow corrective action to avoid a significant decline in overall population viability. We conclude that disease will not prevent the continuation of wolf recovery in these States. Delisting wolves in the EDPS will not change the incidence or impacts of disease on these wolves.

Predation. No wild animals habitually prey on gray wolves. Large prey, such as deer or moose (Mech and Nelson 1989), or other predators, such as mountain lions (*Felis concolor*), occasionally kill wolves, but this has only been rarely documented. Humans, however, are highly effective predators of gray wolves.

Wolves kill other wolves, most commonly when packs encounter and attack a dispersing wolf as an intruder or when two packs encounter each other along a territorial boundary. This form of mortality is likely to increase as more of the available wolf habitat becomes saturated with wolf pack territories, as is the case in northeastern Minnesota. From October 1979 through June 1998, 7 (13 percent) of the diagnosed mortalities of radio-collared Wisconsin wolves resulted from wolves killing wolves (Wydeven 1998). Gogan *et al.* (1997) studied 31 radio-collared wolves from 1987–91 and found that 3 (10 percent) were killed by other wolves. This behavior is normal in healthy wolf populations and indicates that the wolf population is at, or approaching, its carrying capacity for the area.

Humans have functioned as highly effective predators of the gray wolf. We attempted to eliminate the wolf entirely in earlier times and the United States Congress passed a wolf bounty that covered the Northwest Territories in 1817. Bounties on wolves subsequently became the norm for States across the species' range. In Michigan, an 1838 wolf bounty became the ninth law passed by the First Michigan Legislature; this bounty remained in place until 1960. A Wisconsin bounty was instituted in 1865 and then repealed about the time wolves were extirpated from the State in 1957. Minnesota maintained a wolf bounty until 1965.

Subsequent to the gray wolf's listing as a federally endangered species, the Act and State endangered species statutes prohibited the killing of wolves except under extenuating circumstances, such as in defense of human life, for scientific or conservation purposes, or under several special regulations intended to reduce wolf depredations of livestock. This reduction in human-caused mortality is the main cause of the wolf's reestablishment in parts of its historical range. It is clear, however, that illegal killing of wolves continued.

If delisted, wolves in Minnesota, Wisconsin, and Michigan will continue to receive protection from general human persecution by State laws and regulations. In Michigan, wolves would continue to be protected under the State's Endangered Species Protection Law after Federal delisting. Michigan has met the criteria established in their management plan for State delisting, and, during that delisting process, intends to amend the Wildlife Conservation Order to grant ''protected animal'' status to the gray wolf. That status would ''prohibit take, establish penalties and restitution for violations of the Order, and detail conditions under which lethal depredation control measures could be implemented'' (Rebecca Humphries, MI DNR, *in litt.* 2004). Following State delisting in Wisconsin, the wolf will be classified as a ''protected wild animal,'' with protections that provide for fines of $1,000 to $2,000 for unlawful hunting. Minnesota DNR will consider population management measures, including public hunting and trapping, but not sooner than five years after Federal delisting (MN DNR 2001). In the meantime, wolves could only be legally taken in Minnesota for depredation management or public safety and Minnesota plans to increase its capability to enforce laws against take of wolves (MN DNR 2001).

Illegal killing of wolves occurs for a number of reasons. Some of these killings are accidental (*e.g.*, wolves are hit by vehicles, mistaken for coyotes and shot, or caught in traps set for other animals); some of these accidental killings are reported to State, Tribal, and Federal authorities. Most illegal killings, however, likely are intentional and are never reported to authorities. Radiotelemetry studies (*e.g.*, Gogan *et al.* 1997) are necessary to accurately estimate illegal mortality (Fuller 1989).

In Wisconsin, human-caused mortalities accounted for 58 percent of the diagnosed mortalities on radio-collared wolves from October 1979 through June 1998. One-third of all the diagnosed mortalities, and 55 percent of the human-caused mortalities, were from shooting. Another 12 percent of all the diagnosed mortalities resulted from vehicle collisions. Vehicle collisions have increased as a percentage of radio-collared wolf mortalities. During the October 1979 through June 1995 period, only 1 of 27 known mortalities was from that cause; but from July 1995 through June 1998, 5 of the 26 known mortalities resulted from vehicle collisions (WI DNR 1999a, Wydeven 1998); and from April 2000 through March 2001, 10 of 23 known mortalities were from that cause (Wydeven *et al.* 2000b, 2001a). Only 2 of those 23 mortalities were from shootings, but an additional 4 Wisconsin wolves were shot during the State's 2001 deer hunting season (WI DNR 2001).

In the Upper Peninsula of Michigan, human-caused mortalities accounted for 75 percent of the diagnosed mortalities, based upon 34 wolves recovered from 1960 to 1997. Twenty-eight percent of all the diagnosed mortalities and 38 percent of the human-caused mortalities were from shooting. In the Upper Peninsula during that period, about one-third of all the known mortalities were from vehicle collisions (MI DNR 1997). During the 1998 Michigan deer hunting season, 3 radio-collared wolves were shot and killed, resulting in one arrest and conviction (Hammill *in litt.* 1999,

Michigan DNR 1999b). During the subsequent 3 years, 8 additional wolves were killed in Michigan by gunshot, and the cut-off radio-collar from a ninth animal was located, but the animal was never found. These incidents resulted in 6 guilty pleas, with 3 cases remaining open. Data from 1992 to 2002 show that human-caused mortalities still account for the majority of the diagnosed mortalities (66 percent) in Michigan. Deaths from vehicular collisions, however, now greatly outnumber shootings. Twenty-four percent of the diagnosed mortalities were from shootings (37 percent of the human-caused mortalities), while 41 percent of the diagnosed Michigan mortalities were from vehicular collisions (Beyer *in litt.* 2004). When viewing these figures, it is important to remember that there is a much greater likelihood of finding a vehicle-killed wolf than there is of finding a wolf that has been illegally shot, unless the animal was being radio-tracked.

A continuing increase in wolf mortalities from vehicle collisions, both in actual numbers and as a percent of total diagnosed mortalities, is expected as wolves continue their colonization of areas with more human developments and a denser network of roads and vehicle traffic.

Minnesota (MN DNR 2001) plans to reduce or control illegal mortality of wolves through education, increased enforcement of the State's wolf laws and regulations, by discouraging new road access in some areas, and by maintaining a depredation control program that includes compensation for livestock losses. MN DNR plans to use a variety of methods to encourage and support education of the public about the effects of wolves on livestock, wild ungulate populations, and human activities and the history and ecology of wolves in the State (MN DNR 2001:30–31). These are all measures that have been in effect for years in Minnesota, although ''increased enforcement'' of State laws against take of wolves (MN DNR 2001) would replace enforcement of the Endangered Species Act's take prohibitions. We do not expect the State's efforts to reduce illegal take of wolves from existing levels, but these measures may be crucial in ensuring that illegal mortality does not increase.

The likelihood of illegal take increases in relation to road density and human population density, but changing attitudes towards wolves may allow them to survive in areas where road and human densities were previously thought to be too high (Fuller *et al.* 2003). MN DNR does not plan to reduce current levels of road access, but would encourage managers of land areas large enough to sustain one or more wolf packs to ''be cautious about adding new road access that could exceed a density of one mile of road per square mile of land, without considering the potential effect on wolves' (MN DNR 2001).

MN DNR acknowledges that increased enforcement of the State's wolf laws and regulations would be dependent on increases in staff and resources, additional cross-deputization of tribal law enforcement officers, and continued cooperation with Federal law enforcement officers. They specifically propose the addition of three Conservation Officers ''strategically located within current gray wolf range in Minnesota'' whose priority duty would be to implement the gray wolf management plan (MN DNR 2001). In 2000, MN DNR had 78 conservation officer stations in the State's wolf range (MN DNR *in litt.* 2000).

Two Minnesota studies provide insight into the extent of human-caused wolf mortality before and after the species' listing. On the basis of bounty data from a period that predated wolf protection under the Act by 20 years, Stenlund (1955) found an annual human-caused mortality rate of 41 percent. Fuller (1989) provided 1980–86 data from a north-central Minnesota study area and found an annual human-caused mortality rate of 29 percent, a figure which includes 2 percent mortality from legal depredation control actions. Drawing conclusions from comparisons of these two data sets, however, is difficult due to the confounding effects of habitat quality, exposure to humans, prey density, differing time periods, and vast differences in study design. Although these figures provide support for the contention that human-caused mortality decreased after the wolf's protection under the Act, it is not possible at this time to determine if human-caused mortality (apart from mortalities from depredation control) has significantly changed over the 25-year period that the gray wolf has been listed as threatened or endangered.

Interestingly, when compared to his 1985 survey, Kellert's 1999 public attitudes survey showed an overall increase in the number of northern Minnesota residents who reported having killed, or knowing someone who had killed, a wolf. However, members of groups that are more likely to encounter wolves—farmers, hunters, and trappers—reported a decrease in the number of such incidents (Kellert 1985, 1999). Because of these apparently conflicting results, and differences in the methodology of the two surveys, drawing any clear conclusions on this issue is difficult.

It is important to note that, despite the difficulty in measuring the extent of illegal killing of wolves, all sources of wolf mortality, including legal (*e.g.*, depredation control) and illegal human-caused mortality, have not been of sufficient magnitude to stop the continuing growth of the wolf population. Since 1993, wolf numbers have increased annually by about 4 percent in Minnesota and by about 28 percent in Wisconsin and Michigan. This indicates that total gray wolf mortality continues to be exceeded by wolf recruitment (that is, reproduction and immigration) in these areas.

The wolf population in Wisconsin and Michigan will stop growing at some point when it has saturated the suitable habitat and is checked in less suitable areas by depredation management, incidental mortality (*e.g.*, road kill), illegal killing, and other means. At that time, we should expect to see population declines in some years that reflect short-term fluctuations in birth and mortality rates. Adequate wolf monitoring programs, however, as described in the Michigan, Wisconsin, and Minnesota wolf management plans are likely to identify mortality rates and/or low birth rates that are high enough to warrant corrective action. The goals of all three State wolf management plans are to maintain wolf populations well above the numbers recommended in the Federal Eastern Recovery Plan to ensure long-term viable wolf populations (the State management plans recommend a minimum wolf population of 1,600 in Minnesota, 350 in Wisconsin, and 200 in Michigan).

In Wisconsin and Michigan, the rapidly expanding wolf population is beginning to cause more depredation problems. From 1979 through 1989, there were only 5 cases (an average of 0.4/year) of verified wolf depredations in Wisconsin. Between 1990 and 1997, there were 27 depredation incidents in the State (an average of 3.4/year), and 82 incidents (an average of 16.4 per year) occurred from 1998–02. Data from Michigan show a similar increase in confirmed wolf depredations on livestock and dogs: 1 in 1996, 3 in 1998, 3 in 1999, 5 in 2000, 6 in 2001, and 22 in 2003 (MI DNR unpublished data).

The WI DNR compensates livestock and pet owners for confirmed losses to depredating wolves. The compensations have been funded from the endangered resources tax check-off and sales of the endangered resources license plates. Likewise, in Michigan, livestock owners are compensated when they lose

livestock as a result of a confirmed wolf depredation. Currently there are two compensation programs in Michigan, one implemented by Michigan Department of Agriculture (MI DA) and another set up through donations and held by the International Wolf Center (IWC), a non-profit organization. From the inception of the program to 2000, MI DA paid 90 percent of full market value of depredated livestock value at the time of loss. The IWC account was used to pay the remaining 10 percent from 2000 to 2002 when MI DA began paying 100 percent of the full market value of depredated livestock. This MI DA program is funded annually through State appropriations. The MI DNR plans to continue cooperating with MI DA and other organizations to maintain the wolf depredation compensation program (Pat Lederle, MI DNR, pers. comm. 2004).

Under a Minnesota statute, the Minnesota Department of Agriculture (MDA) compensates livestock owners for full market value of livestock that wolves have killed or severely injured. A university extension agent or conservation officer must confirm that wolves were responsible for the depredation. The agent or officer also evaluates the livestock operation for conformance to a set of Best Management Practices (BMPs) designed to minimize wolf depredation and provides operators with an itemized list of any deficiencies relative to the BMPs. The Minnesota statute also requires MDA to periodically update its BMPs to incorporate new practices that it finds would reduce wolf depredation.

Wolves were largely eliminated from the Dakotas in the 1920s and 1930s and were rarely reported from the mid-1940s through the late 1970s. Ten wolves were killed in these two States from 1981 to 1992 (Licht and Fritts 1994). Six more were killed in North Dakota since 1992, with four of these mortalities occurring in 2002 and 2003; in 2001, one wolf was killed in Harding County in extreme northwestern South Dakota. The number of reported sightings of gray wolves in North Dakota is increasing. From 1993–98, six wolf depredation reports were investigated in North Dakota, and adequate signs were found to verify the presence of wolves in two of the cases. A den with pups was also documented in extreme north-central North Dakota near the Canadian border in 1994. From 1999–2003, 16 wolf sightings/depredation incidents in North Dakota were reported to USDA/APHIS-Wildlife Services, and 9 of these incidents were verified. Additionally, one North Dakota wolf sighting was confirmed in early 2004. USDA/APHIS-Wildlife Services also confirmed a wolf sighting along the Minnesota border near Gary, South Dakota, in 1996, and a trapper with the South Dakota Game, Fish, and Parks Department sighted a lone wolf in the western Black Hills in 2002. Several other unconfirmed sightings have been reported from these States, including two reports in South Dakota in 2003. Wolves killed in North and South Dakota are most often shot by hunters after being mistaken for coyotes, or were killed by vehicles. The 2001 mortality in South Dakota and one of the 2003 mortalities in North Dakota were caused by M–44 ''coyote getter'' devices that had been legally set in response to complaints about coyotes.

Additional discussion of past and future wolf mortalities in the EDPS arising from depredation control actions is found under the *Summary of Factors Affecting the Species* section, factor D, *The inadequacy of existing regulatory mechanisms.*

Despite human-caused mortalities of wolves in Minnesota, Wisconsin, and Michigan, these wolf populations have continued to increase in both numbers and range. If wolves in the EDPS are delisted, as long as other mortality factors do not increase significantly and monitoring is adequate to document, and if necessary counteract, the effects of excessive human-caused mortality, the Minnesota-Wisconsin-Michigan wolf population will not decline to nonviable levels in the foreseeable future as a result of human-caused killing or other forms of predation.

D. The Adequacy or Inadequacy of Existing Regulatory Mechanisms

Human activities may affect wolf abundance and population viability by degrading or reducing the wolf habitat and range (Factor A); by excessive mortality via commercial or recreational harvest (Factor B); by acting as a predator of wolves and killing them for other reasons such as depredation control, to reduce perceived competition for wild ungulates, or in the interests of human safety (Factor C); by acting as a vector for wolf-impacting diseases or parasites (Factor C); and in other ways (Factor E). Following Federal delisting under the Act, however, many of these human activities would be regulated or prohibited by various regulatory mechanisms. Therefore, with only a few exceptions, human activities with the potential to impact wolf populations are primarily discussed under this factor.

State Wolf Management Planning. In late 1997 the Michigan Wolf Management Plan was completed and received the necessary State approvals. The Wisconsin Natural Resources Board approved the Wisconsin Wolf Management Plan in October 1999. Our biologists have participated on the teams that developed these two State plans and will continue to participate in revising the plans, so we are familiar with their evolution and likely future direction. We think these plans provide sufficient information for us to analyze the future threats to the gray wolf population in Wisconsin and Michigan after Federal delisting.

The MN DNR prepared a Wolf Management Plan and an accompanying legislative bill in early 1999 and submitted them to the Minnesota legislature. The legislature, however, failed to approve the Minnesota Plan in the 1999 session. In early 2000, the MN DNR drafted a second bill that would result in somewhat different wolf management and protection than the 1999 bill. The legislature did not pass the 2000 Minnesota wolf management bill, but instead passed separate legislation directing the DNR to prepare a new management plan based upon various new provisions that addressed wolf protection and the take of wolves. The MN DNR completed the Minnesota Wolf Management Plan (MN Plan) in early 2001 (MN DNR 2001). Although the Minnesota legislation and the MN Plan were not available in time to play a role in our 2003 reclassification, they were carefully evaluated in preparation of this proposal to delist gray wolves in the EDPS.

The MN Plan is based, in part, on the recommendations of a wolf management roundtable and on a State wolf management law enacted in 2000. This law and the Minnesota Game and Fish Laws constitute the basis of the State's authority to manage wolves. Key components of the plan are population monitoring and management, management of wolf depredation of domestic animals, management of wolf habitat and prey, enforcement of laws regulating take of wolves, public education, and increased staffing.

MN DNR plans to allow wolf numbers and distribution to naturally expand and if any winter population estimate is below 1,600 wolves it would take actions to ''assure recovery'' to 1,600 wolves. MN DNR will continue to monitor wolves in Minnesota to determine whether such intervention is necessary. It is currently conducting a statewide population survey (winter of 2003–04) and plans to repeat the survey in the fifth year after delisting and at subsequent five-year intervals. Preliminary results of the 2003–04 survey may be available in early summer 2004 (J. Erb, MN DNR, pers. comm. 2004).

Following delisting, Minnesota's management of wolves would differ from their current management under the Act. To guide wolf management under the Act, the Service divided Minnesota into five zones and established specific population goals for each of Zones 1–4 (The 1992 Recovery Plan's numeric goal for Minnesota was 1,251–1,400); the Service's goal for Zone 5, which consists of all of Minnesota outside of Zones 1–4, was ''no wolves'' (USFWS 1992a:28). Currently no control of depredating wolves is allowed in Zone 1, whereas in Zones 2–5 employees or agents of the Service or MN DNR may take wolves in response to depredations of domestic animals within one-half mile of the depredation site. Young-of-the-year captured on or before August 1 of that year must be released. The regulations that allow for this take [50 CFR 17.40(d)(2)(i)(B)(*4*)] do not specify a maximum duration for depredation control, but USDA-Wildlife Services follows informal guidelines under which they trap for no more than 10–15 days, except at sites with repeated or chronic depredation, where they may trap for up to 30 days (William Paul, USDA/APHIS-Wildlife Services, pers. comm., 2004).

The Minnesota plan divides the State into Zones A and B. Zone A comprises the current Zones 1–4 and Zone B is identical to the current Zone 5 (*i.e.*, it comprises the rest of the State). The most recent statewide survey conducted during the winter of 1997–98 found that there were approximately 2,025 wolves in Zone A and 425 in Zone B (M. DonCarlos, MN DNR, *in litt.* 2000).

Government control of wolf depredation would be modified under Minnesota's Wolf Management Plan, especially in Zone B. In Zone A, if DNR verifies that a wolf destroyed any livestock, domestic animal, or pet, trained and certified predator controllers may take wolves within a one-mile radius of the depredation site for up to 60 days. In Zone B, predator controllers may take wolves for up to 214 days after MN DNR opens a depredation control area, depending on the time of year. The DNR may open a control area in Zone B anytime within five years of a verified depredation loss.

The Minnesota plan would also allow for private wolf depredation control. Statewide, persons may shoot or destroy a gray wolf that poses an immediate threat to their livestock, guard animals, or domestic animals on lands that they own, lease, or occupy. Immediate threat is defined as ''stalking, attacking, or killing.'' To protect their domestic animals in Zone B, however, persons do not have to wait for an immediate threat to take wolves. At anytime in Zone B, persons who own, lease, or manage lands may take wolves on those lands. They may also employ a predator controller to trap a gray wolf on their land or within one mile of their land to protect their livestock, domestic animals, or pets. The State will continue to provide compensation for livestock taken by wolves. The MN Plan would also allow persons to harass wolves anywhere in the State within 500 yards of ''people, buildings, dogs, livestock, or other domestic pets or animals'' (MN DNR 2001:23). Harassment may not include physical injury to a wolf. Owners of domestic pets may also kill wolves posing an immediate threat to pets under their supervision on lands that they do not own or lease, although such actions are subject to local ordinances, trespass law, and other applicable restrictions. MN DNR will investigate any private taking of wolves in Zone A.

In summary, the key differences between the current management of wolves in Minnesota under the ESA and their proposed management under MN DNR's wolf plan are:

- Activities to control depredating wolves would be allowed within one mile of depredation sites instead of one-half mile of these sites.
- Persons would be allowed to harass wolves within 500 yards of persons, buildings, and domestic animals anywhere in the State.
- Persons would be allowed to destroy wolves posing an immediate threat to domestic animals on lands that they own, manage, or lease.
- Persons would be allowed to destroy wolves posing an immediate threat to domestic pets under the supervision of the owner statewide, subject to other restrictions.
- Persons may destroy wolves in absence of an immediate threat in Zone B to ''protect their domestic animals.''
- Minnesota DNR will consider population management measures, including public hunting and trapping, but not sooner than five years after Federal delisting.

The Wisconsin Wolf Management Plan (WI Plan) sets a management goal of 350 wolves, well above the 200 wolves specified in the Federal recovery plan for a viable isolated wolf population. The WI Plan allows for differing levels of management within four separate management zones (see figure 3 below). The two zones that now contain most of the wolf population would be managed to allow limited lethal control on problem wolves when the population exceeds 250, but generally lethal control would not be exercised on wolves inhabiting large blocks of public land. In the other two zones, liberal controls would be allowed for problem wolves, with the least restrictive zone allowing for almost no protections; one of these zones had five packs of wolves in 2003, and the other had only lone wolves confirmed. Other components of the WI Plan include monitoring, education, reimbursement for depredation losses, citizen stakeholder involvement, habitat management, coordination with the Tribes, and the development of new legal protections. If the population exceeds 350, a proactive depredation control program would be allowed in all four zones, and public harvest would be considered.

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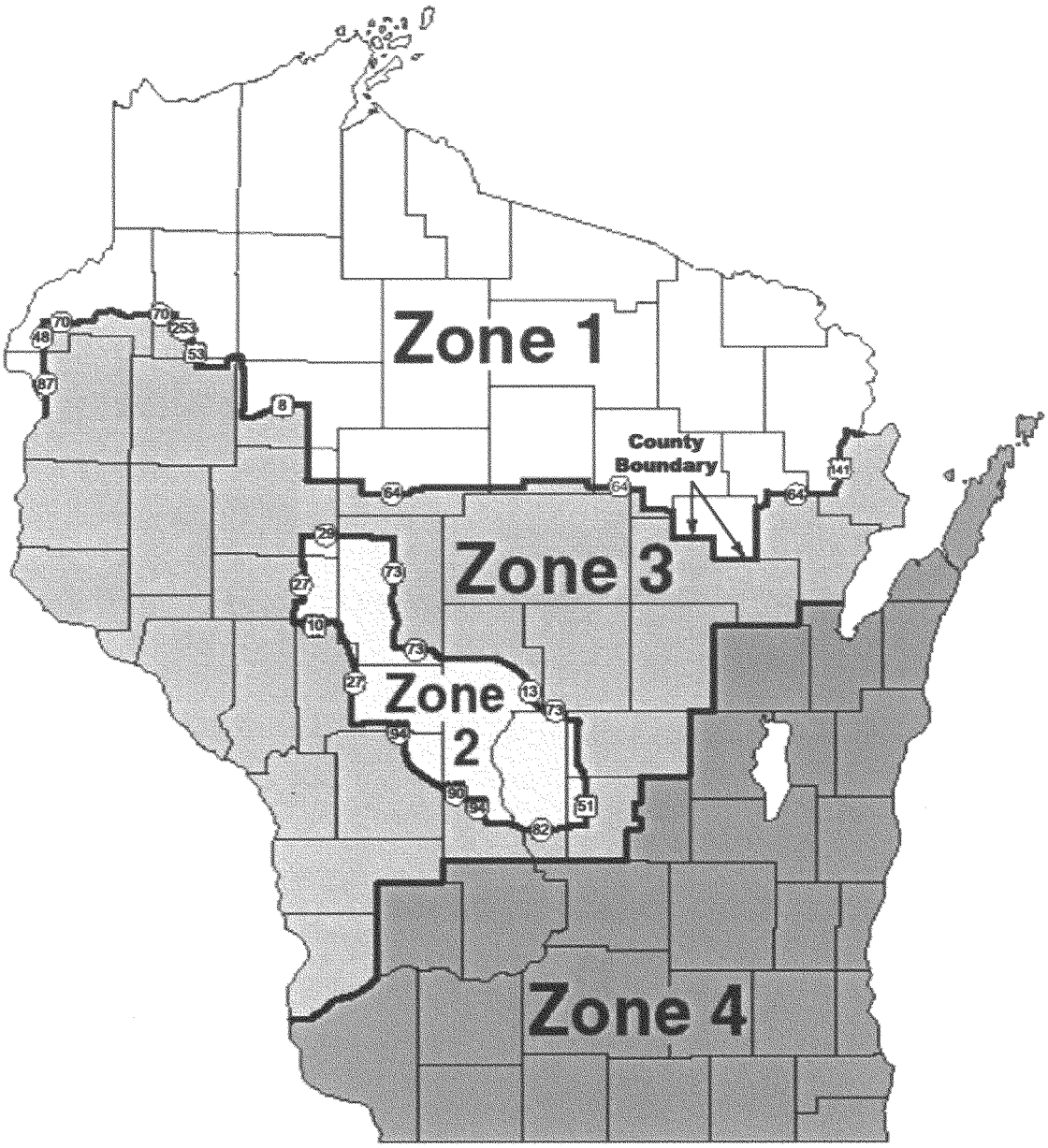
Figure 3. Wisconsin wolf management zones.



The Wisconsin Plan sets a goal of 250 wolves as the trigger for State delisting, a process that is nearly complete. The Plan calls for re-listing as State threatened if the population falls to less than 250 for three years, and reclassification as endangered if the population falls below 80 for one year. Given the likely decline and ultimate termination in Federal funding for monitoring in the future, it is imperative that an effective, yet cost-efficient method for detecting wolf population changes be put in place. A methodology similar to that implemented in Minnesota was tested in Wisconsin during the winter of 2003–04, but its efficacy remains unknown at this time.

Some members of the Wisconsin public have already advocated that the wolf be subject to public harvest following State and Federal delisting. The Wisconsin Plan indicates that any public harvest would require a separate action by the Wisconsin State legislature, and significant public input. The fact that the Wisconsin Plan calls for State listing as threatened if the population falls to less than 250 for three years provides reasonable assurance that public harvest is not likely to threaten the persistence of the population.

The Michigan Gray Wolf Recovery and Management Plan (MI Plan) details wolf management actions needed and wolf recovery goals in Michigan. Necessary wolf management activities detailed in the plan include wolf education and outreach, population and health monitoring, research, depredation control, and habitat management. The MI Plan contains a long-term minimum goal of 200 wolves (excluding Isle Royale wolves) and identifies 800 wolves as the estimated carrying capacity of suitable areas on the Upper Peninsula (MI DNR 1997). (''Carrying capacity'' is the number of animals that an area is able to support over the long term; for wolves it is primarily based on the availability of prey animals and competition from other wolf packs.) Under the MI Plan, wolves in the State would be considered recovered when a minimal sustainable population of 200 wolves is maintained for 5 consecutive years. The Upper Peninsula has had more than 200 wolves since the winter of 1999–2000. Therefore, the gray wolf is eligible for State delisting under the MI Plan in 2004. In Michigan, however, State delisting cannot occur until after Federal delisting. During the State delisting process, Michigan intends to amend its Wildlife Conservation Order to grant ''protected animal'' status to the gray wolf. That status would ''prohibit take, establish penalties and restitution for violations of the Order, and detail conditions under which lethal depredation control measures could be implemented'' (Rebecca Humphries, MI DNR, *in litt.* 2004). Population management, except for depredation control, is not addressed in the MI Plan beyond statements that the wolf population may need to be controlled by lethal means at some future time, when the cultural carrying capacity is reached or approached. The MI Plan calls for re-evaluation of the plan at 5-year intervals. The MI DNR is currently evaluating the Plan's direction and developing recommendations for revisions (Beyer pers. comm.).

The complete text of the Wisconsin, Michigan, and Minnesota wolf management plans, as well as our summaries of those plans, can be found on our Web site (*see* **FOR FURTHER INFORMATION CONTACT** section above).

Depredation Control Programs in the Core Recovery Areas. Wolves that are injuring and/or killing domestic animals in the core recovery areas have been controlled in different ways, depending upon their listing status under the Act and their importance to our gray wolf recovery programs. In Minnesota, depredating wolves have been lethally controlled under a special regulation since they were listed as threatened in 1978. (Details on the Minnesota depredation control program are provided later in this subsection.)

Until 2003, when wolves in Wisconsin and Michigan were reclassified to threatened (and therefore eligible for a section 4(d) special regulation), depredating wolves in those States had been trapped and released in a suitable and unoccupied area some distance from the depredation location. Lethal depredation control is now in effect in Wisconsin and Michigan under special management regulations and section 4(d) of the Act (68 FR 15804). The decreasing effectiveness of, and increasing opposition to, translocation of depredating wolves, as well as the high monetary and labor costs of such attempts, led to the adoption of lethal control.

With the Wisconsin and Michigan (Upper Peninsula) late-winter wolf populations at about 250–350 wolves in each State, in our April 2003 final reclassification rule (68 FR 15804) we estimate that an average of about 2 to 3 percent of those wolves will be taken annually through lethal depredation control actions in response to attacks on livestock. This will be about 6 to 10 adult and subadult wolves in each State. Given the average annual population increases of 19 to 24 percent over recent years in each of these States, the effect of such levels of lethal depredation control will not prevent the continued growth of the wolf population in either State and will probably be so small that it does not noticeably slow that growth over the next few years. Wolf recovery will not be affected in either State. Reporting (within 15 days) and monitoring requirements in State management plans will ensure that the level of lethal depredation control is evaluated promptly and can be curtailed if necessary. Therefore, we think that lethal depredation control will not be a significant threat to the future of wolves in either Michigan or Wisconsin and that it will not result in a need to reclassify those wolves back to threatened or endangered status in the foreseeable future.

In recent years the number of dogs attacked by gray wolves in Wisconsin has increased, with 33 dogs killed and 9 dogs injured in 2001–03. In almost all cases, these have been hunting dogs that were being used for, or being trained for, hunting bears and bobcats at the time they were attacked. It is believed that the dogs entered the territory of a wolf pack and may have been close to a den, rendezvous site, or feeding location, thus triggering an attack by wolves defending their territory or pups. The Wisconsin Wolf Management Plan states that ''generally only wolves that are habitual depredators on livestock will be euthanized'' (WI DNR 1999a). Furthermore, the State's guidelines for conducting depredation control actions on wolves currently listed as federally threatened say that no control trapping will be conducted on wolves that kill ''dogs that are free-roaming or roaming at large.'' Lethal control will only be conducted on wolves that kill dogs that are ''leashed, confined, or under the owner's control on the owner's land'' (Wisconsin Wolf Technical Committee 2002). Because of these State-imposed limitations, we do not believe that lethal control of wolves depredating on hunting dogs will be a significant additional source of mortality in Wisconsin.

Michigan has not experienced as high a level of attacks on dogs by wolves, although a slight increase in such attacks has occurred over the last decade. The number of dogs killed in the State was one in 1996, one in 1999, three in 2001, four in 2002, and eight in 2003. Similar to Wisconsin, MI DNR has guidelines for their depredation control program. The Michigan guidelines state that lethal control will not be used when wolves kill dogs that are free-roaming, hunting, or training on public lands. Lethal control of wolves,

however, would be considered if wolves have killed confined pets and remain in the area where more pets are being held (MI DNR 2003).

Between the time that wolves were protected under the Act and downlisted to threatened in 2003, only one wolf was killed for depredation control purposes in Wisconsin and Michigan. That adult wolf was killed by the WI DNR in 1999, under the provisions of a permit that we issued to deal with that specific instance. This was done to end a chronic depredation problem at a private deer farm after the failure of extensive efforts to live-trap and remove the wolf (WI DNR 1999b). Since the 2003 downlisting and implementation of the 4(d) rule, which allows some lethal take in those States, a total of 17 wolves have been killed in Wisconsin and 4 in Michigan in response to depredations. Nine of the 17 Wisconsin wolves were adults, whereas the remaining 8 were juveniles. The four Michigan wolves, all from one pack, were killed near Engadine where chronic depredation problems had occurred. A fifth pack member, identified for removal, was killed as the result of a vehicle collision (Donald Lonsway, Michigan Wildlife Service, pers. comm. 2004). These four individuals represented about one percent of the Michigan wolf population in 2003. Despite the recent implementation of the 4(d) rule allowing lethal control of depredating wolves, preliminary estimates indicate that wolf populations in Wisconsin and Michigan have continued to increase (Wydeven per. comm. 2004, Beyer pers. comm. 2004).

Before the 2003 downlisting of wolves to threatened, we anticipated that North Dakota and South Dakota would have potential wolf depredation problems associated with mostly single, dispersing wolves from the Minnesota and Manitoba populations. To cope with these anticipated depredations we had a ''Contingency Plan for Responding to Gray Wolf Depredations of Livestock'' in place for each State for several years, although in neither State has it been necessary to implement the control measures authorized under the contingency plans (USFWS 1992b, 1994). The implementation of the 4(d) rule in 2003 replaced the contingency plans for those States. Since 1993, three incidents of verified wolf depredations occurred in North Dakota, with the most recent occurring in September 2003. Wildlife Services attempted to remove the wolf responsible for the 2003 depredation, but the wolf was not sighted again and no further livestock losses were reported. There have been no verified wolf depredations in South Dakota in recent decades.

North Dakota and South Dakota are recognized as lacking significant potential for restoration of the gray wolf, and our Eastern Recovery Plan does not include those States in its list of possible locations for restoration of gray wolf populations (USFWS 1987, 1992a). Therefore, lethal control of depredating wolves in these two States will not adversely affect recovery in the EDPS.

During the period from 1980–2003, the Federal Minnesota wolf depredation control program euthanized from 20 (in 1982) to 216 (in 1997) gray wolves annually. Annual averages (percentage of statewide populations) were 30 (2.2 percent) wolves killed from 1980 to 1984, 49 (3.0 percent) from 1985 to 1989, 115 (6.0 percent) from 1990 to 1994, and 152 (6.7 percent) from 1995 to 1999. During the most recent 4-year period, 2000–03, an average of 132 wolves—about 5 percent of the wolf population, based on the most recent (1997–98) statewide estimate—were killed under the program annually. The lowest annual percentage of Minnesota wolves destroyed by USDA/APHIS-Wildlife Services was 1.5 percent in 1982; the highest percentage was 9.4 in 1997 (Paul 2004).

This level of wolf removal for depredation control has not halted the increase in wolf numbers or range expansion in Minnesota, although it may have slowed the increase in wolf numbers in the State, especially since the late-1980s. Minnesota wolf numbers grew at an average annual rate of nearly 4 percent between 1989 and 1998 while depredation control was in effect.

MN DNR proposes to expand the control of depredating wolves upon delisting (*see* above), but this expansion is not likely to threaten the conservation of wolves in the State. Significant changes in wolf depredation control under State management would primarily be restricted to Zone B, which is outside of the area that the Service found was necessary for wolf recovery (USFWS 1992a), and wolves may still persist in Zone B despite increased take for depredation control. The Eastern Timber Wolf Recovery Team concluded that the changes in wolf management in the State's Zone A would be ''minor'' and would not likely result in ''significant change in overall wolf numbers in Zone A.'' They found that, despite an expansion in the control area from approximately 1 to 3 square miles and an extension of the control period to 60 days, depredation control will remain ''very localized'' in Zone A. The requirement that control activities are conducted only in response to verified wolf depredation in Zone A played a key role in the team's evaluation (R. Peterson, Michigan Tech University/Eastern Timber Wolf Recovery Team Leader, *in litt.* 2001). Depredation control would be allowed throughout Zone A, which includes an area (Zone 1) where such control has not been permitted under Federal management. Depredation in Zone 1, however, has been limited to 3 to 6 reported incidents per year, mostly of wolves killing dogs (William Paul, USDA/APHIS-Wildlife Services, pers. comm. 2004), although many dog kills in this zone probably go unreported. There are few livestock in Zone 1; therefore, the number of reported depredation incidents in that zone is expected to be low.

The proposed changes in the control of depredating wolves in Minnesota under State management emphasize the need for robust post-delisting monitoring. Minnesota will continue to monitor wolf populations throughout the State and will also monitor all depredation control activities in Zone A. These and other activities contained in their plan would be essential in meeting their population goal of a minimum statewide winter population of 1,600 wolves, which exceeds the Recovery Plan's criteria of 1,251 to 1,400 wolves.

State Management and Protection of Wolves. Both the Wisconsin and Michigan Wolf Management Plans recommend managing wolf populations as isolated populations that are not dependent upon immigration of wolves from an adjacent State or Canada. Thus, even after Federal wolf delisting, each State will be managing for a wolf population at, or in excess of, the 200 wolves identified in the Federal Recovery Plan for the Eastern Timber Wolf as necessary for an isolated wolf population to be viable. We support this approach and believe it provides further assurance that the gray wolf will remain a viable component of the EDPS ecosystem in the foreseeable future.

At the time the Wisconsin Wolf Management Plan was completed, it recommended immediate reclassification from State-endangered to threatened status because the State's wolf population had already exceeded its reclassification criterion of 80 wolves for 3 years; that State reclassification has already occurred (*http://www.dnr.state.wi.us/org/land/er/working_list/taxalists/TandE.htm*). The Plan further recommends the State manage for a gray wolf population of 350 wolves outside of Native American reservations, and states that the species should be delisted by the State once the population reaches 250 animals outside

of reservations. The species was proposed for State delisting in late 2003; this process is expected to be completed in 2004. Upon State delisting, the species would be classified as a ''protected nongame species,'' a designation that would continue State prohibitions on sport hunting and trapping of the species. The Wisconsin Plan includes criteria that would trigger State relisting as threatened (a decline to fewer than 250 wolves for 3 years) or endangered (a decline to fewer than 80 wolves for 1 year). The Wisconsin Plan will be reviewed annually by the Wisconsin Wolf Advisory Committee and will be reviewed by the public every 5 years. Any public harvest could be considered only if the population exceeds 350 wolves outside of Native American reservations, and would require authorization by the legislature following major public input.

Michigan reclassified wolves to threatened in June 2002. Under the Michigan Gray Wolf Recovery and Management Plan (MI Plan), wolves in Michigan would be considered recovered when a minimum sustainable population of 200 wolves is maintained for 5 consecutive years. The Upper Peninsula has had more than 200 wolves since the winter of 1999–2000. Therefore, the wolf is eligible for State delisting under the MI Plan in 2004. In Michigan, however, State delisting cannot occur until after Federal delisting. During the State delisting process, Michigan intends to amend its Wildlife Conservation Order to grant ''protected animal'' status to the gray wolf. That status would ''prohibit take, establish penalties and restitution for violations of the Order, and detail conditions under which lethal depredation control measures could be implemented'' (Rebecca Humphries, MI DNR, *in litt.* 2004). The MI Plan will be re-evaluated at 5-year intervals. The MI DNR is currently evaluating the MI Plan's direction and developing recommendations for revisions (Beyer, pers. comm. 2004).

The Wisconsin and Michigan wolf management plans recommend similar high levels of protection for wolf den and rendezvous sites, whether on public or private land. Both State plans recommend that most land uses be prohibited at all times within 100 meters (330 feet) of active sites. Seasonal restrictions (March through July) should be enforced within 0.8 km (0.5 mi) of these sites, to prevent high-disturbance activities such as logging from disrupting pup-rearing activities. These restrictions should remain in effect even after State delisting occurs.

The Wisconsin Plan provides for legal protections of wolves following State delisting, through designation as a Protected Wild Animal in the Wisconsin Administrative Code NR 10.02(1). Penalties for illegally killing wolves would include fines in the range of $1,000 to $2,000, as well as revocation of hunting privileges for 3 to 5 years, and possibly up to 6 months imprisonment.

Tribal Management and Protection of Gray Wolves

Although the tribes with wolves that visit or reside on their Reservations do not yet have management plans specific to the gray wolf, several tribes have informed us that they have no plans or intentions to allow commercial or recreational hunting or trapping of the species on their lands after Federal delisting. We are working with the States and several tribes to assist them to develop wolf management plans for the Reservations.

The Tribal Council of the Leech Lake Band of Minnesota Ojibwe (Council) supports a recent resolution that describes the sport and recreational harvest of gray wolves as an inappropriate use of the animal (Peter White, Leech Lake Tribal Council, *in litt.* 2003). That resolution supports limited harvest of wolves to be used for traditional or spiritual uses by enrolled tribal members if it would not negatively affect the wolf population. Based on the Council's request, we will help them to obtain wolf pelts and parts that become available from other sources, such as depredation control activities. The Council is currently revising the Reservation Conservation Code to allow tribal members to harvest some wolves (P. White *in litt.* 2003). The Leech Lake Reservation is home to an estimated 65 gray wolves, the largest population of wolves on a Native American reservation in the 48 coterminous States (P. White *in litt.* 2003).

The Red Lake Band of Chippewa Indians (Minnesota) has indicated that it is likely to develop a wolf management plan that will be very similar in scope and content to the plan developed by the MN DNR. The Band's position on wolf management is ''wolf preservation through effective management,'' and the Band is confident that wolves will continue to thrive on their lands (Lawrence Bedeau, Red Lake Band of Chippewa Indians, *in litt.* 1998). The Reservation has an estimated six to eight packs within its boundaries (George King, Red Lake Band of Chippewa Indians, *in litt.* 2003).

The Fond du Lac Band (Minnesota) believes that the ''well being of the wolf is intimately connected to the well being of the Chippewa People'' (Schrage *in litt.* 2003). In 1998, the Band passed a resolution opposing Federal delisting and any other measure that would permit trapping, hunting, or poisoning of the gray wolf (Schrage *in litt.* 1998b, *in litt.* 2003). If this prohibition is rescinded, the Band's Resource Management Division will coordinate with State and Federal agencies to ensure that any wolf hunting or trapping would be ''conducted in a biologically sustainable manner'' (Schrage *in litt.* 2003).

The Red Cliff Band (Wisconsin) strongly opposes State and Federal delisting of the gray wolf. Current Tribal law protects gray wolves from harvest, although harvest for ceremonial purposes would likely be permitted after delisting (Matt Symbol, Red Cliff Natural Resources Department, *in litt.* 2003).

The Keweenaw Bay Indian Community, Michigan, will continue to list the gray wolf as a protected animal under the Tribal Code even if it is federally delisted, with hunting and trapping prohibited (Mike Donofrio, Keweenaw Bay Indian Community Biological Services, pers. comm. 1998). Furthermore, the Keweenaw Bay Community plans to develop a Protected Animal Ordinance in the next few years that will address gray wolves (Donofrio *in litt.* 2003).

Several Midwestern tribes (*e.g.*, the Bad River Band of Lake Superior Chippewa Indians and the Little Traverse Bay Bands of Odawa Indians) have expressed concern regarding the possibility of Federal delisting resulting in increased mortality of gray wolves on reservation lands, in the areas immediately surrounding the reservations, and in lands ceded by treaty to the Federal Government by the tribes (Kiogama *in litt.* 2000). At the request of the Bad River Tribe of Lake Superior Chippewa Indians, we are currently working with their Natural Resource Department and WI DNR to develop a wolf management agreement for lands adjacent to the Bad River Reservation. The tribe's intent is to reduce the threats to reservation wolf packs when they are temporarily off the reservation. Under the draft agreement, the WI DNR would consult with the tribe before using lethal depredation control methods in those areas and would defer to the tribe's recommendations for wolves known to be part of a reservation pack. This agreement is still being developed, however, so its protective measures may

change somewhat. Other tribes have expressed interest in such an agreement. If this and similar agreements are implemented they will provide additional protection to certain wolf packs in the eastern United States.

The Great Lakes Indian Fish and Wildlife Commission (GLIFWC) has stated its intent to work closely with the States to cooperatively manage wolves in the ceded territories in the core areas, and will not develop a separate wolf management plan (Schlender *in litt.* 1998).

According to the 1854 Authority, ''attitudes toward wolf management in the 1854 Ceded Territory run the gamut from a desire to see total protection to unlimited harvest opportunity.'' Because of these diverse attitudes, the management of wolves in the 1854 Ceded Territory is speculative, but the 1854 Authority would not ''implement a harvest system that would have any long-term negative impacts to wolf populations'' (Andrew Edwards, 1854 Authority Biological Services, *in litt.* 2003).

In addition, on the basis of information received from other Federal land management agencies in the eastern United States where wolves occur (as discussed in *Summary of Factors Affecting the Species* section, factor A, *The present or threatened destruction, modification, or curtailment of its habitat or range, above*), we expect National Forests, units of the National Park System, and National Wildlife Refuges will provide protections to gray wolves after delisting beyond the protections provided by State wolf management plans and State protective regulations.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Public Attitudes Toward the Gray Wolf. The primary determinant of the long-term status of gray wolf populations in the United States will be human attitudes toward this large predator. These attitudes are based on the conflicts between human activities and wolves, concern with the perceived danger the species may pose to humans, its symbolic representation of wilderness, the economic effect of livestock losses, the emotions regarding the threat to pets, the conviction that the species should never be a target of sport hunting or trapping, wolf traditions of Native American tribes, and other factors.

We have seen a change in public attitudes toward the wolf over the last few decades. Public attitude surveys in Minnesota and Michigan (Kellert 1985, 1990, 1999), as well as the citizen input into the wolf management plans of Minnesota, Wisconsin, and Michigan, have indicated strong public support for wolf recovery if the adverse impacts on recreational activities and livestock producers can be minimized (MI DNR 1997, MN DNR 1998, WI DNR 1999a). In Michigan, another public attitude survey was conducted since the wolf population has expanded. This survey suggested that the majority of Michigan residents still support wolf recovery efforts. Although Upper Peninsula residents' support for wolf recovery has gone down slightly since the 1990 Kellert survey, the majority of Upper Peninsula residents are still supportive of wolf recovery (Angela Mertig, Michigan State University, pers. comm. 2004).

The Minnesota DNR recognizes that to maintain public support for wolf conservation it must work to ensure that the people are well informed about wolves and wolf management in the State. Therefore, MN DNR plans to provide ''timely and accurate information about wolves to the public, to support and facilitate wolf education programs, and to encourage wolf ecotourism,'' among other activities. This increased public acceptance of wolves during the last 25 years also has reduced illegal persecution and killing of wolves.

It is unclear whether increased flexibility of depredation control after delisting would affect public attitudes towards wolves (*i.e.*, decrease opposition to the local presence of wolves), due to the strong influence of other factors. A survey of 535 rural Wisconsin residents, for example, found that attitudes towards wolves were largely dependent on social group, and persons who were compensated for losses to wolves were not more tolerant toward wolf presence than those refused compensation for reported losses (Naughton-Treves *et al.* 2003). Although social group was the overriding factor in determining tolerance for wolves, previous history with depredation also negatively affected tolerance: persons who had lost an animal to a wolf or other predator were less tolerant of wolves (Naughton-Treves *et al.* 2003). In an analysis of data collected in 37 surveys of public attitudes toward wolves, Williams *et al.* (2002) found that hunters and trappers had significantly more positive attitudes towards wolves than farmers and ranchers. In Wisconsin, however, where bear hunters have lost hounds to wolves, they were clearly less tolerant of wolves than livestock producers (Naughton-Treves *et al.* 2003). In addition to social group and previous losses of animals to wolves or other predators, education level, gender, age, rural residence, and income have all been found to influence attitudes towards wolves (Williams *et al.* 2002). Attitudes appear to have become more tolerant between about 1920–70, but appear to have stabilized since then (Williams *et al.* 2002).

Prey. Wolf density is heavily dependent on prey availability (*e.g.*, expressed as ungulate biomass, Fuller 1989), but prey availability is not likely to threaten wolves in the EDPS. Conservation of primary wolf prey in the EDPS, white-tailed deer and moose, is clearly a high priority for State conservation agencies. As Minnesota DNR points out in its wolf management plan (MN DNR 2001:25), it manages ungulates to ensure a harvestable surplus for hunters, nonconsumptive users, and to minimize conflicts with humans. To ensure a harvestable surplus for hunters, MN DNR must account for all sources of natural mortality, including loss to wolves, and adjust hunter harvest levels when necessary. For example, after severe winters in the 1990's, MN DNR modified hunter harvest levels to allow for the recovery of the local deer population (MN DNR 2001). In addition to regulation of human harvest of deer and moose, MN DNR also plans to continue to monitor and improve habitat for these species. Land management carried out by other public agencies and by private companies in Minnesota's wolf range, including timber harvest and prescribed fire, incidentally improves habitat for deer, the primary prey for wolves in the State. There is no indication that harvest of deer and moose or management of their habitat will significantly depress abundance of these species in Minnesota's core wolf range. Therefore, prey availability is not likely to endanger gray wolves in the foreseeable future in the State.

Chronic Wasting Disease (CWD), a nervous system disease known to affect deer and elk, was confirmed in Wisconsin in 2002 (three deer from a 2001 deer harvest tested positive). Although it is not yet known if transmission from deer and elk to other species is possible (Glenn DelGiudice, MN DNR, *in litt.* 2003), it has never been detected in predators, even in areas where the disease has been known for more than 40 years (Hassett, *in litt.* 2003). The most likely effect of the disease on gray wolves would be indirect, potentially significantly reducing the prey base in some areas. In Wisconsin, CWD has been detected in a relatively restricted area in the southern

part of the State. The Wisconsin DNR, in cooperation with landowners and other State agencies, initiated an intensive program to eradicate the disease. CWD has not spread to deer populations within wolf range; the closest packs to the CWD area in Wisconsin are located approximately 70 miles to the north (Hassett *in litt.* 2003). Minnesota DNR tests harvested deer for CWD. In 2003 it tested 9,988 deer and all were negative, although a captive elk tested positive in 2002. CWD has not been detected in Michigan, although MI DNR plans to test 60 deer from each county in 2004. The DNRs in Wisconsin, Minnesota, and Michigan will continue to monitor for outbreaks of CWD in their States.

Conclusion

While we recognize that gray wolves in the EDPS do not occupy all portions of their historical range, including what may be suitable areas with low human density and a healthy prey base within the EDPS, they no longer meet the definition of a threatened or endangered species. We have based our determinations on the current status of, and threats likely to be faced by, existing wolf populations within the EDPS. This approach is consistent with the 9th Circuit Court's decision in *Defenders of Wildlife et al.* v. *Norton et al.*, where the Court noted that ''[a] species with an exceptionally large historical range may continue to enjoy healthy population levels despite the loss of a substantial amount of suitable habitat.'' Similarly, when a threatened species has recovered to the point where it is not likely to become in danger of extinction throughout all or a significant portion of its current range in the foreseeable future, it is appropriate to delist the species even if a substantial amount of the historical range remains unoccupied if the population in its current range is secure. The wolf's recovery in numbers and distribution in the EDPS, together with the status of the threats that remain to, and are likely to be experienced by, the wolf within the DPS, indicates that the gray wolf is not likely to become in danger of extinction nor likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range within the DPS.

Since the 2003 reclassification of gray wolves in the eastern United States to threatened (68 FR 15804), we have received additional data that the conservation of gray wolves in the EDPS will be assured if delisted. Most importantly, in February 2001, the MN DNR completed their Minnesota Wolf Management Plan. With that completed plan, in addition to the previously existing plans for Wisconsin and Michigan, we were better able to assess the management of gray wolves if delisted. Furthermore, since the implementation of more flexible wolf management in Wisconsin and Michigan, resulting from the initiation of the 4(d) special rule in 2003, wolf numbers in those States have continued to increase (Wydeven per. comm. 2004, Beyer pers. comm. 2004).

After a thorough review of all available information and an evaluation of the previous five factors specified in section 4(a)(1) of the Act, as well as consideration of the definitions of threatened and endangered contained in the Act and the reasons for delisting as specified in 50 CFR 424.11(d), we conclude that removing the Eastern Gray Wolf Distinct Population Segment from the list of Endangered and Threatened Wildlife (50 CFR 17.11) is appropriate. Gray wolves have recovered in the EDPS as a result of the reduction of threats as described in the analysis of the five categories of threats.

Critical Habitat

Critical habitat is defined in section 3 of the Act as: (i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the Act, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. ''Conservation'' means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary. Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, we designate critical habitat at the time we list a species.

Critical habitat was designated for the gray wolf in 1978 (43 FR 9607, March 9, 1978). That rule (50 CFR 17.95(a)) identifies Isle Royale National Park, Michigan, and Minnesota wolf management zones 1, 2, and 3, as delineated in 50 CFR 17.40(d)(1), as critical habitat. Wolf management zones 1, 2, and 3 comprise approximately 25,500 km^2 (9,845 mi^2) in northeastern and north-central Minnesota. This proposed rule, if finalized, would remove the designation of critical habitat for gray wolves in Minnesota and on Isle Royale, Michigan.

Special Regulations Under Section 4(d) for Threatened Species

The Act and its implementing regulations found at 50 CFR 17.21 set forth a series of general prohibitions and exceptions that apply to all endangered wildlife. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to take (includes harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect; or to attempt any of these), import, export, ship in interstate commerce in the course of commercial activity, or sell or offer for sale in interstate or foreign commerce any endangered wildlife species. It is also illegal to possess, sell, deliver, carry, transport, or ship any such wildlife that has been taken illegally. Certain exceptions apply to our agents and agents of State conservation agencies.

Section 4(d) of the Act provides that whenever a species is listed as a threatened species, we shall issue regulations deemed necessary and advisable to provide for the conservation of the species. Section 4(d) also states that we may, by regulation, extend to threatened species the prohibitions provided for endangered species under section 9. The implementing regulations for threatened wildlife under the Act incorporate the section 9 prohibitions for endangered wildlife (50 CFR 17.31), except when a special regulation promulgated pursuant to section 4(d) applies (50 CFR 17.31(c)).

This proposal, if finalized, would remove the special regulations under section 4(d) of the Act for wolves in Minnesota, Michigan, Wisconsin, North Dakota, South Dakota, Nebraska, Kansas, Iowa, Missouri, Illinois, Indiana, and Ohio. These regulations are found at 50 CFR 17.40 (d) and (o).

Post-Delisting Monitoring

Section 4(g) of the Act requires post-delisting monitoring (PDM) for a minimum of five years after a species is delisted. The goal of post-delisting monitoring is to confirm that a delisted species does not require relisting as threatened or endangered after removal of the Act's protections. To do this, PDM generally focuses on evaluating (1) demographic characteristics of the species, (2) threats to the species, and (3) implementation of legal and/or management commitments that have been identified as important in reducing threats to the species or maintaining threats at sufficiently low levels. If at any time during the 5-year monitoring program data indicate that protective status under the Act should be reinstated, we can initiate listing

procedures, including, if appropriate, emergency listing.

A monitoring plan for the gray wolf EDPS is being developed to detect whether factors that might threaten its existence have arisen or increased unexpectedly after delisting. In the EDPS, PDM will be conducted in Minnesota, Wisconsin, and Michigan. These States comprise the recovery areas within the DPS and were the only States with numerical recovery criteria in the Recovery Plan for the Eastern Timber Wolf (USFWS 1992a). The monitoring plan is being developed by Service biologists and the Eastern Timber Wolf Recovery Team.

Minnesota, Wisconsin, and Michigan DNRs have monitored wolves for several decades with significant assistance from numerous partners, including the U.S. Forest Service, National Park Service, USDA/APHIS-Wildlife Services, tribal natural resource agencies, and the Service. To maximize comparability of PDM data with data obtained before delisting, all three State DNRs intend to continue their previous wolf population monitoring methodology with only minor changes. Additionally, in the winter of 2003–04, the Wisconsin and Michigan DNRs began implementing a ''Minnesota-type'' survey on a trial basis, to compare the results of that method to their current method, which is more labor-intensive. If found to be sufficiently accurate in estimating smaller wolf populations, the Minnesota-type method will be considered for adoption in Wisconsin and Michigan.

In addition to monitoring population numbers and trends, the PDM will evaluate post-delisting threats, in particular human-caused mortality, disease, and implementation of legal and management commitments. If at any time during the monitoring period we detect a significant downward change in the populations or an increase in threats to the degree that population viability may be threatened, we will evaluate and change (intensify, extend, and/or otherwise improve) the monitoring methods, if appropriate, and/or consider relisting the DPS, if warranted. Changes to the monitoring methods, for example, might include increased emphasis on a potentially important threat or a particular geographic area. At the end of the monitoring period, we will decide if relisting, continued monitoring, or ending monitoring is appropriate. If data show a significant population decline or increased threats, but not to the level that relisting is warranted, we will consider continuing monitoring beyond the specified period and may modify the monitoring program based on an evaluation of the results of the initial monitoring.

Public Comments Solicited

We intend that any final action resulting from this proposal will be as accurate and as effective as possible. Therefore, comments or suggestions from the public, other concerned governmental agencies, the scientific community, industry, or any other interested party concerning this proposed rule are hereby solicited. Comments particularly are sought concerning:

(1) Biological, commercial trade, or other relevant data concerning any current or likely future threat, or lack thereof, to gray wolves in the EDPS;

(2) Additional information concerning the range, distribution, population size, and population trends of gray wolves in the EDPS;

(3) Current or planned activities in the EDPS and their possible impacts on the gray wolf and its habitat;

(4) Information concerning the adequacy of the recovery criteria described in the 1992 Recovery Plan for the Eastern Timber Wolf;

(5) The extent of State and Tribal protection and management that would be provided to the gray wolf in the core areas of the EDPS as a delisted species;

(6) Information regarding taxonomy of canids in the northeastern United States.

If you wish to comment, you may submit your comments and materials concerning this proposal by any one of several methods (*see* **ADDRESSES** section). Please submit Internet comments to ''*egwdelist@fs.fed.us*'' in ASCII file format and avoid the use of special characters or any form of encryption. Please also include ''Attn: Gray Wolf Delisting'' in your e-mail subject header and your name and return address in the body of your message. You will receive a responding message verifying receipt of your comments; if you do not receive notification of receipt, please resend your comments by the alternative methods mentioned above. Please note that the Internet address ''*egwdelist@fs.fed.us*'' will be closed out at the termination of the public comment period.

Our practice is to make comments, including names and home addresses of respondents, available for public review. Individual respondents may request that we withhold their home addresses from the rulemaking record, which we will honor to the extent allowable by law. There also may be circumstances in which we may withhold from the rulemaking record a respondent's identity, as allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comment. We will not consider anonymous comments, however. We will make all submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public inspection in their entirety. We anticipate a large public response to this proposed rule. After the comment period closes, we will organize the comments and materials received and make them available for public inspection, by appointment, during normal business hours at the following Ecological Services offices:

- Twin Cities, Minnesota Ecological Services Field Office, 4101 E. 80th Street, Bloomington, MN.
- Green Bay, Wisconsin Ecological Services Field Office, 2661 Scott Tower Dr., New Franken, WI.
- East Lansing, Michigan Ecological Services Field Office, 2651 Coolidge Road, Suite 101, East Lansing, MI.
- Pierre, South Dakota Ecological Services Field Office, 420 South Garfield Avenue, Suite 400, Pierre, SD.
- Bismarck, North Dakota Ecological Services Field Office, 3425 Miriam Avenue, Bismarck, ND.
- Hadley, Massachusetts Regional Office, U.S. Fish and Wildlife Service, 300 Westgate Center Drive, Hadley, MA 01035–9589.

We will consider all comments and information received during the comment period on this proposed rule during preparation of a final rulemaking. Accordingly, the final decision may differ from this proposal.

Peer Review

In accordance with our joint policy published in the **Federal Register** on July 1, 1994 (59 FR 34270), we will seek the expert opinions of at least three appropriate and independent specialists regarding this proposed rule. The purpose of such review is to ensure that our delisting decision is based on scientifically sound data, assumptions, and analyses. We will send copies of this proposed rule to these peer reviewers immediately following publication in the **Federal Register**. We will invite these peer reviewers to comment, during the public comment period, on the specific assumptions and conclusions regarding the proposed delisting.

Public Hearings

We will hold public hearings throughout the geographic area of the

EDPS. The dates and locations of these hearings will be announced in the **Federal Register** and local newspapers. For a list of dates and locations, contact the Fort Snelling, MN Regional Office (*See* **ADDRESSES** section for contact information.)

Clarity of the Rule

Executive Order 12866 requires agencies to write regulations that are easy to understand. We invite your comments on how to make this proposal easier to understand including answers to questions such as the following: (1) Is the discussion in the **SUPPLEMENTARY INFORMATION** section of the preamble helpful to your understanding of the proposal? (2) Does the proposal contain technical language or jargon that interferes with its clarity? (3) Does the format of the proposal (groupings and order of sections, use of headings, paragraphing, etc.) aid or reduce its clarity? What else could we do to make the proposal easier to understand? Send a copy of any comments on how we could make this rule easier to understand to: Office of Regulatory Affairs, Department of the Interior, Room 7229, 1849 C. Street NW., Washington, DC 20240. You may also e-mail the comments to this address: *Exsec@ios.doi.gov.*

National Environmental Policy Act

We have determined that an Environmental Assessment or an Environmental Impact Statement, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244).

Paperwork Reduction Act

Office of Management and Budget (OMB) regulations at 5 CFR 1320 implement provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). The OMB regulations at 5 CFR 1320.3(c) define a collection of information as the obtaining of information by or for an agency by means of identical questions posed to, or identical reporting, recordkeeping, or disclosure requirements imposed on, 10 or more persons. Furthermore, 5 CFR 1320.3(c)(4) specifies that ''ten or more persons'' refers to the persons to whom a collection of information is addressed by the agency within any 12-month period. For purposes of this definition, employees of the Federal Government are not included. The Service may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB control number.

This rule does not include any collections of information that require approval by OMB under the Paperwork Reduction Act. As proposed under the *Post-delisting Monitoring* section above, gray wolf populations in the Eastern Gray Wolf DPS will be monitored by the States of Michigan, Minnesota, and Wisconsin in accordance with their Gray Wolf State Management Plans. We do not anticipate a need to request data or other information from 10 or more persons during any 12-month period to satisfy monitoring information needs. If it becomes necessary to collect information from 10 or more non-Federal individuals, groups, or organizations per year, we will first obtain information collection approval from OMB.

Executive Order 13211

On May 18, 2001, the President issued Executive Order 13211 on regulations that significantly affect energy supply, distribution, and use. Executive Order 13211 requires agencies to prepare Statements of Energy Effects when undertaking certain actions. As this proposed rule is not expected to significantly affect energy supplies, distribution, or use, this action is not a significant energy action and no Statement of Energy Effects is required.

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994, ''Government-to-Government Relations with Native American Tribal Governments'' (59 FR 22951), Executive Order 13175, and 512 DM 2, we have coordinated this proposed rule with the affected tribes. Throughout development of this proposed rule, we endeavored to consult with Native American tribes and Native American organizations in order both to provide them with a complete understanding of the proposed changes and also to enable ourselves to gain an appreciation of their concerns with those changes. We will fully consider all of their comments on the proposed EDPS gray wolf delisting submitted during the public comment period and will attempt to address those concerns to the extent allowed by the Act, the Administrative Procedure Act, and other Federal statutes.

References Cited

A complete list of all references cited in this document is available upon request from the Ft. Snelling, Minnesota Regional Office (*see* **FOR FURTHER INFORMATION CONTACT** section above).

Author

The primary author of this rule is Laura J. Ragan, U.S. Fish and Wildlife Service, Ft. Snelling, Minnesota Regional Office (*see* **ADDRESSES** section). Substantial contributions were also made by Service employees Ron Refsnider (Ft. Snelling, Minnesota), Phil Delphey (Bloomington, Minnesota), Joel Trick (Green Bay, Wisconsin), Christie Deloria (Marquette, Michigan), and Michael Amaral (Concord, New Hampshire).

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Proposed Regulation Promulgation

Accordingly, we hereby propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 16 U.S.C. 1531–1544; 16 U.S.C. 4201–4245; Pub. L. 99–625, 100 Stat. 3500; unless otherwise noted.

§ 17.11 [Amended]

2. Amend § 17.11(h) by removing the entry for ''Wolf, gray [Eastern Distinct Population Segment] (*Canis lupus*)'' under ''MAMMALS'' from the List of Endangered and Threatened Wildlife.

§ 17.40 [Amended]

3. Amend § 17.40 by removing and reserving paragraphs (d) and (o).

§ 17.95 [Amended]

4. Amend § 17.95(a) by removing the critical habitat entry for ''Gray Wolf (*Canis lupus*).''

Dated: June 4, 2004.

Steve Williams,

Director, Fish and Wildlife Service.

[FR Doc. 04–16535 Filed 7–16–04; 11:12 am]

BILLING CODE 4310–55–P