



Questions and Answers about Gray Wolves in North America

SECTION A - POPULATION STATUS

A1) What is the historical range of the gray wolf in the contiguous United States?

Before the arrival of European settlers, wolves ranged widely across the continent, from coast to coast and from Canada into Mexico. Two species were found in North America: the gray wolf lived throughout most of the United States, Canada, and Mexico, and the red wolf lived only in the southeastern United States.

A2) What are the current population designations of the gray wolf in the United States?

The Fish and Wildlife Service currently manages the recovery of the gray wolf by operating three separate recovery programs for the species in widely separated areas—the Eastern, Northern Rocky Mountain, and Mexican gray wolf recovery programs. The Eastern gray wolf recovery program is centered in the western Great Lakes states of Minnesota, Michigan, and Wisconsin. The geographic area covered by the Eastern gray wolf Recovery Plan also stretches through virtually the entire East, however, wolf recovery is not considered feasible in most portions of this densely populated area. The Northern Rocky Mountain gray wolf recovery program consists of two re-introduced populations of wolves in Wyoming (Yellowstone) and central Idaho, and a third population of naturally occurring wolves in northwestern Montana. Individual wolves are also periodically observed in the Cascade Mountains of Washington and in the eastern portion of that State and Oregon. The boundary of the Northern Rocky Mountain gray wolf recovery program includes parts of the states of Idaho, Montana, Wyoming, Oregon, Washington, Utah, and Nevada. The Mexican gray wolf recovery program which recently re-introduced wolves into Arizona, includes much of Arizona, New Mexico and west Texas within its potential recovery boundary. The Service is also considering the recovery potential of additional gray wolf populations in the northeastern states that could include New York and Maine, and possibly Vermont and New Hampshire, as well as the potential reintroduction of wolves to the Olympic Peninsula of western Washington.

A3) How many wild wolves are there currently (winter 1999-2000) in individual states?

Eastern Gray Wolf

Michigan - Upper Peninsula	216
- Isle Royale	29
Minnesota	2445 (1998 estimate*)
Wisconsin	about 250

*Minnesota does not conduct an annual survey.

Northern Rocky Mountain Gray Wolf

Northwest Montana	63
-------------------	----

Northern Rocky Mountain Gray Wolf - Experimental Populations

Central Idaho	141
Yellowstone (Idaho/Wyoming/Montana)	118

Mexican Gray Wolf - Experimental Population

Arizona & New Mexico	43 - released; 22 - current (4/00)
----------------------	------------------------------------

A4) How are population estimates made for wolves?

Biologists monitor wolves and make population estimates using a combination of techniques. The primary methods are radio-telemetry, surveys for sign (tracks, scat, and snow urinations), and incidental observations. With radio telemetry, biologists attach a radio-signal transmitting collar to at least one individual in a pack. That wolf is subsequently located from an airplane, a ground station or a satellite; the number of wolves that are traveling with it are counted, and the pack's territory can be accurately mapped.

Because of the expense, it is not feasible to radio-collar a wolf in every pack, so population trend surveys are also conducted. Trend surveys are based on ground and aerial tracking for sign in snow; counting visits to scent stations; counting packs by simulating howling to get a response; interviewing hunters, trappers, and resource professionals; and studying and mapping trends in livestock depredations.

Because of the size and expanding distribution of the Minnesota population, the Minnesota DNR uses these techniques and a population model. Their population model used the 1988-89 survey results, new estimates of wolf range, recruitment, and mortality to provide the 1996 estimate of 2,000 to 2,200 wolves state-wide. During the winter of 1997-98, Minnesota conducted a survey based on more than 3,400 winter wolf observations to estimate the wolf population in the State to be 2,445.

A5) What is the status of wolf recovery for the Eastern gray wolf, the Northern Rocky Mountain gray wolf, and the Mexican gray wolf?

Naturally-occurring, wild gray wolf populations are found currently in the Great Lakes states of Michigan, Wisconsin, Minnesota, and also in northwestern Montana and Northern Idaho. Reintroduced experimental populations occur in Montana, Idaho, Wyoming, and Arizona.

The Service has reintroduced wolves into areas with the greatest potential to sustain wild wolves. The overall goal of Service recovery programs is to recover gray wolves to the extent that they are no longer threatened with extinction in the Lower 48 States. Because of high human population densities in many states, particularly in the East, some states that historically supported wolves are no longer suitable for wolf recovery.

► Eastern Gray Wolf

(Includes gray wolf or timber wolf populations east of the Mississippi River and Minnesota)

The Minnesota Department of Natural Resources estimated the State wolf population at 2,445 animals during the winter of 1997-98. This represents an average annual increase of four to five percent since the previous statewide survey was conducted in the winter of 1988-89. The State is working on a State wolf management plan that will determine how the wolf will be managed in Minnesota if and when the wolf is federally delisted.

After extirpation, wolves re-established themselves in Wisconsin during the late 1970s as a result of wolves dispersing from Minnesota. The Wisconsin DNR has monitored the wolf population since 1979. During the mid-1980s wolf numbers in Wisconsin declined due to an epidemic of canine parvovirus. An experimental vaccine was developed, but it was never administered to wild wolves because the population apparently developed some degree of natural immunity. Wisconsin DNR has provided wolf population estimates (late winter counts) annually for 1995 through 1999. Counts of 83, 99, 148, 178 and 197 wolves have been recorded comprising 18, 28, 32, 47 and 54 packs, respectively. About 250 wolves were present in Wisconsin during the winter of 1999-2000. The Wisconsin DNR has completed a State management plan for the wolf which recommends maintaining a population of at least 350 wolves.

As wolves began re-establishing themselves in northern Wisconsin, the Michigan Department of Natural Resources began reporting single wolf occurrences at various locations in the Upper Peninsula of Michigan. In the late 1980s a wolf pair was verified and these wolves produced pups in 1991. Since that time wolf packs spread throughout the Upper Peninsula, with immigration from both Wisconsin and Ontario. The Michigan DNR annually monitors the wolf population and estimates that 80, 116, 112, 140 and 174 wolves occurred in the Upper Peninsula during late winter counts in 1995, 1996, 1997, 1998 and 1999 respectively. The late winter 1999-2000 wolf estimate is 216 animals. The Michigan DNR completed a State wolf management plan that recommends maintaining an Upper Peninsula wolf population of at least 200 animals.

Isle Royale, also a part of Michigan, has had an isolated population of gray wolves for about 50 years. Wolves are believed to have walked across frozen Lake Superior to the island from the Canadian shoreline in the winter of 1948-49. Since then, their numbers have fluctuated greatly due to a variety of factors, such as disease, the availability of moose—their chief prey on the island, and possibly a high degree of inbreeding. Their numbers peaked at 50 in 1980 but had fallen to 14 in 1982, and dropped to as low as 12 wolves in four years around 1990. In the late winter of 1997-98 there were 14 wolves on Isle Royale, but their numbers increased to 29 in late winter 1999-2000. Due to the isolated nature and small size of the population, it is not considered to be numerically significant to the recovery of the gray wolf.

The 1992 Recovery Plan for the eastern timberwolf (=eastern gray wolf) identified the Adirondack Park in upstate New York and two areas in New England as "areas with re-establishment possibilities." However, barriers such as the St. Lawrence River, separate Canadian wolf populations further north from suitable habitat in the northeastern states (Maine and New York) so that natural recolonization is unlikely. Defenders of Wildlife, a private conservation organization, has started an investigation of the biological potential and societal acceptance of restoring wolves to New York. Public opinion surveys are also on-going in Maine.

► Northern Rocky Mountain Gray Wolves

Wolves are naturally recovering in northwestern Montana where there are about 65 wolves. Those wolves re-established themselves after natural emigration from Canada into Montana. There is also evidence of re-colonization of Northern Idaho and individual wolves in the North Cascades Mountain of Washington emigrating from Canada.

Additionally, wild-trapped Canadian gray wolves were released as an experimental population in Yellowstone National Park, Wyoming and in the Frank Church River of No Return Wilderness Area in Idaho in 1995 and 1996 and have done very well. Family groups of wolves were released in Yellowstone and individuals were released in central Idaho. An estimated 118 wolves now live in the Yellowstone area and at least 141 wolves in central Idaho.

► Mexican Gray Wolves

A captive breeding program has been established with 39 captive breeding facilities in the United States and Mexico contributing to recovery. Eleven wolves were transferred to remote sites in Apache National Forest beginning in January 1998. After undergoing acclimation in large enclosures for several weeks, the wolves were released in late March to disperse in a 7,000-square-mile recovery area. That area includes the Apache and Gila National Forests in Arizona and New Mexico. In April one male wolf was shot and killed by a camper. The wolf's mate and two young females that dispersed from their packs have been returned to captivity. Four wolves

were illegally shot from August to November. A fifth wolf has not been seen since September, 1998 and is presumed to be dead. Four more wolves were released into the Apache National Forest in March, 1999, bringing the total number of wolves released to 17. The two adults and their two pups joined two other wolves already in the wild from previous releases. About a week after their release, one of the 10-month-old pups was struck and killed by a vehicle on the only highway within the release area. Current authority through the experimental population rule limits direct releases of wolves from captivity to the 1000 square mile primary recovery zone within Arizona, and allows for management relocation of previously released wolves (translocation) throughout the entire recovery area, including New Mexico. About 800,000 acres of the Gila National Forest in New Mexico, primarily within the Gila Wilderness, have no active cattle grazing allotments, are roadless, uninhabited, and have good elk populations. Through coordination with the U.S. Forest Service and the New Mexico Department of Game and Fish, four sites within the Gila Wilderness have been identified as potential relocation sites for recaptured Mexican wolves. Two packs, the Mule and Pipestem Pack, have been translocated into New Mexico. To date, 43 Mexican wolves have been released into the wild, 22 of which remain free-ranging. Additional releases are planned over the next two to three years to reach the goal of a wild population of 100 wolves.

A6) What is happening with the idea of restoring gray wolves to the northeastern United States?

The Northern Forest Ecosystem, a 26 million acre forested area from the Adirondack Mountains of New York east through most of Maine, contains suitable gray wolf habitat and lies within the historical range of the gray wolf. Although two animals believed to be wolves were found in Maine during the mid-1990s, no breeding wolf population is known to occur there today. Suitable wolf habitat exists in Maine and possibly in Adirondack Park in New York. A suitable donor population for re-stocking wolves in the northeast may exist in eastern Canada. Significant progress by private conservation groups have helped to develop interest in wolf recovery in those areas. This private effort includes a habitat suitability study that is assessing the feasibility of establishing a viable wolf population in the Northeast. The Service is considering options for a recovery strategy in that area, including the protection of naturally-occurring wolves that may migrate from Canada.

A7) What is happening with the idea of reintroducing wolves to the Olympic Peninsula?

The Service was asked to consider the feasibility of reintroducing wolves to the Olympic Peninsula of Washington. Wolves were native to the area but were extirpated by the 1930s. The Service, in cooperation with State, Federal and Tribal agencies in the area, conducted scientific studies of the area to determine the feasibility of such an action. The studies concluded that reintroduction efforts were feasible but the land secured for this effort and the prey base was not sufficient to support a viable population of wolves and would need to be augmented. These efforts are currently on hold.

A8) What is the extent of verified wolf depredation*?

- Michigan (1991 thru May 1998): 4 calves, 1 dog.
- Wisconsin (1991 thru May 1998): 29 calves killed (plus 1 injured), 9 sheep, 140 turkeys, 2 chickens, and 19 dogs (plus 6 injured).
- Minnesota (1991 thru 1998): 585 cattle, 10 horses, 3 pigs, 200 sheep, 5 goats, 7 geese, 2 ducks, 30 chickens, 4889 turkeys, 84 dogs and \$313,327 in compensation paid.
- Northwest Montana (1987 thru May 1998): 55 cattle, 42 sheep, 5 dogs and \$30,820 paid.
- Idaho (1995 thru May 1998): 5 cattle, 53 sheep, 4 dogs and \$8,946 paid.
- Yellowstone area (1995 thru May 1998): 6 cattle, 80 sheep, 4 dogs and \$17,719 paid.
- Arizona (1998): 1 miniature horse (attacked but not killed), 1 dog and \$267 paid.

For comparison to total livestock losses in 1995, the following information was taken from the National Agricultural Statistics Service, Agricultural Statistics Board, U.S. Department of Agriculture:

- Approximately 4.3 million cattle and calves died from all causes in 1995.
- 4.2 million head were lost to weather, health, theft, poison, and other causes
- All predators accounted for 117,400 cattle or 2.7 percent of the total lost (most by coyote).
- Approximately 370,000 sheep and lambs were lost to predators or 40 percent of all losses (most by coyote).
- About 60 percent of all sheep and lamb losses were due to weather, health, theft and other causes.

A9) Why are wolves killed to protect livestock when the species is endangered?

In Minnesota, the 1978 reclassification of the wolf from endangered to threatened allowed the application of a special rule (under Section 4(d) of the Endangered Species Act) that allows lethal control of depredating wolves by authorized government trappers. The wolves re-introduced in the northern Rockies and in Arizona are designated as “non-essential, experimental populations,” a designation which allows more flexibility to deal with problem wolves. Additionally, problem wolves in northwest Montana are controlled according to a specific protocol under the authority of Section 10 of the Endangered Species Act. This program has been successful in promoting recovery and dealing with depredation.

Lethal control is used because it generally is difficult to successfully translocate a “problem” wolf. Such animals may resume their depredating habits at the new location, may return to their former home range, or may be killed by resident wolves at the translocation site. Additionally, euthanizing trapped wolves is significantly quicker and far less expensive than translocation, allowing depredation control activities to be carried out more quickly so other wolves do not learn to prey on livestock, and can be accomplished with a relatively small budget.

A10) How is the Service considering gray wolf taxonomy in its review?

The Service’s approach to listing and recovering the gray wolf has changed as knowledge and views about the taxonomy changed. Originally, four subspecies of gray wolf were listed as endangered in seven states. However, in 1978 that protection was broadened to list all gray wolves (at the full species level) in the conterminous states and Mexico as endangered, except in Minnesota where they were reclassified to threatened status. Debate over wolf taxonomy continues in the scientific literature. The Service has determined that for purposes of wolf conservation under the ESA, a geographical focus for recovery purposes results in practical solutions for re-establishing wolf populations and is the proper focus for the Service’s efforts.

A11) What about red wolf recovery?

The red wolf is not affected by this current review process. Before the arrival of European settlers, wolves ranged widely across the continent, from coast to coast and from Canada into Mexico. Two species were found in North America: the gray wolf lived throughout most of the United States, Canada, and Mexico, and the red wolf lived only in the southeastern United States. A red wolf recovery plan has been prepared.

Currently there are 75 red wolves in the wild in northeast North Carolina, along with an additional 12 animals on coastal islands and 165 held in captivity.

➤ Red wolves - recovery summary

A captive breeding program has been established with 36 captive breeding facilities in the United States contributing to recovery. A total of 111 red wolves have been released since 1987 in North Carolina, and since 1991 in Great Smoky Mountains National Park. At least 140 pups have been born in the wild in North Carolina since the reintroduction program began, including approximately 90% of the free-ranging wolves currently found there. The red wolf reintroduction program into the Great Smoky Mountain National Park has been terminated due to low pup survival.

Specific objectives for ensuring viable populations into the foreseeable future are identified in the recovery plan.

➤ Red wolf

- Maintain a captive population of approximately 330 animals while establishing a self-sustaining, disjunct wild population of approximately 220 animals.

A12) How many wolves are there in Alaska?

Alaska (not protected by ESA) 6,000-8,000

SECTION B - ENDANGERED SPECIES ACT PROCESS

B1) Why were wolves added to the federal Endangered Species List if there were large populations of them in Canada and Alaska?

The Endangered Species Act defines “species” as a species, subspecies, or distinct population segment of a vertebrate species. The ability to list and separately protect individual populations provides the flexibility to use the Act’s conservation measures selectively for populations of a species that are currently in trouble while leaving other, healthy populations of the same species unregulated. The Service may recognize an international boundary for a population where a significant difference occurs in the management, status, or exploitation of a species. Avoiding the extirpation of significant local populations of a species is important because a series of such local extirpations frequently leads to endangerment of the species as a whole. Also populations can be important because of the aesthetic, ecological, recreational, and other values such populations provide in their localities. In the case of the gray wolf, the species was extirpated from all the Lower 48 States, except for several hundred wolves in northeastern Minnesota and a small population on Isle Royale, Michigan, at the time it was listed as endangered.

B2) What is the current Federal designation for gray wolves in the United States?

The species “gray wolf (*Canis lupus*)” is federally designated as threatened in Minnesota and endangered in the remaining Lower 48 States. The gray wolf is also listed as endangered in Mexico. However, the re-introduced wolves in the northern Rocky Mountains and in Arizona and New Mexico are designated as non-essential, experimental populations, which lessens some of the protections normally afforded to endangered animals. Wolves in northwest Montana and Northern Idaho have naturally immigrated from Canada and are fully protected as endangered.

B3) What is the difference between “threatened” and “endangered” and “non-essential, experimental?”

The definitions of endangered and threatened are:

Endangered: Any species which is in danger of extinction throughout all or a significant portion of its range.

Threatened: Any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.

Non-essential, experimental: A reintroduced population believed not to be essential for the survival of the species, but important for its full recovery and eventual removal from the endangered and threatened list. These populations are treated as “threatened” species except that the Act’s Section 7 regulations (requiring consultation to reduce adverse impacts from Federal actions) do not apply (except when the species occurs within National Parks or National Wildlife Refuges) and critical habitat cannot be designated.

The Endangered Species Act recognizes that “threatened” species may not need all the protections that “endangered” species do. Therefore, special rules can be developed for threatened species which allow greater flexibility in management, as long as the increased flexibility will promote the conservation of the species. This special rule process is authorized under section 4(d) of the Endangered Species Act. It is such a special rule that spells out the conditions under which Minnesota wolves preying on domestic animals may be controlled.

B4) What is the Service’s goal for the gray wolf?

The Service’s goal for the gray wolf is to increase its numbers and distribution to the extent that protection of the Endangered Species Act is no longer necessary. Protection provided by the Act will no longer be needed when the conterminous U.S. populations of gray wolves are determined to be viable for the foreseeable future.

Current objectives for ensuring viable populations into the foreseeable future are identified in the recovery plans.

- Eastern Timber Wolf (=Western Great Lakes gray wolf population)
 - The Minnesota population must be stable or growing and its continued survival assured.
 - A second population outside of Minnesota and Isle Royale must be re-established, having at least 100 wolves in late winter if located within 100 miles of the Minnesota wolf population or having at least 200 wolves if located beyond that distance.
 - Maintain the above-mentioned population levels (in the population outside of Minnesota) for five consecutive years (that is, for six annual wolf surveys).
 - A Wisconsin-Michigan population of 100 is considered viable because continued immigration of Minnesota wolves will supplement it demographically and genetically for the foreseeable future.
- Northern Rocky Mountain Gray Wolf (=Western gray wolf population)
 - Ten breeding pairs in each of three recovery areas for three years
 - The recovery areas are northwestern Montana, central Idaho, and the Yellowstone Ecosystem
- Mexican gray wolf
 - Maintain the captive breeding program while establishing a self-sustaining wild population of at least 100 animals in the species’ historical range. This recovery objective is currently under review.

B5) What is a “viable population”?

Viable means that the population will continue to breed and maintain itself over time (i.e, the number of young produced is equal to or greater than the number that die). A viable population must be sufficiently large to prevent genetic problems such as inbreeding. The population must also be large enough and distributed across a large enough area that catastrophic events such as disease or severe weather will not likely eliminate the entire population.

B6) What is meant by “recovery,” “reclassification,” and “delisting?”

- ▶ *Recovery* is the goal of the Endangered Species Act. Recovery is a process of management and protection of a species so that its population(s) can increase and expand and/or the factors threatening it have been significantly reduced. When a species has been “recovered” it means that the species’ population is strong enough that protection under the Endangered Species Act is no longer needed.
- ▶ *Delisting* is taking a species off the list of threatened and endangered species when the population has recovered. Delisting is a formal rulemaking process that requires publication of a proposal to delist in the *Federal Register*, followed by a public comment period. The information received during the public comment period is reviewed and a decision is made whether to delist, and the decision is published in the *Federal Register*. Species are also delisted if they become extinct or were originally listed in error.
- ▶ *Reclassification* is a process of changing the status of a listed species from endangered to threatened or vice versa. It is a formal rulemaking process that requires that a proposal to reclassify be published in the *Federal Register* followed by a public comment period. Information received during the public comment is then evaluated and a determination on whether to reclassify is made and published.

B7) How were the reclassification and recovery (i.e., delisting) criteria for the wolf developed?

Recovery criteria for the wolf were developed by members of each recovery team, who are wolf experts or representatives of agencies managing wolf habitat. The recovery teams considered many factors including: their personal knowledge of the species, the amount of habitat available, the quality of the habitat, whether populations are isolated, data on the population dynamics of the species, and data on minimum viable population size. Using this information, the team developed criteria that, when reached, would indicate that the species is healthy enough to be reclassified from endangered to threatened. They also developed recovery criteria that would indicate when protections of the Endangered Species Act are no longer needed. The wolf recovery criteria focus on numbers of wolves, numbers of populations, distribution of populations, and the likelihood of adequate future management capability. The Service will evaluate how well the wolf has met the recovery criteria, but also of critical importance, is how the wolf’s future status will be determined by the five categories of threats the Service must evaluate in making listing determinations.

B8) What will happen when the wolf numbers and distribution meet the reclassification or delisting criteria identified in the recovery plan?

When a species approaches or achieves its reclassification or delisting criteria the Service begins a review of the species’ biological status to determine if a change should be made in its federal protective status. The Service looks at the criteria in the recovery plan, as well as the five categories of threats identified in the Endangered Species Act.

B9) If the wolf has met reclassification and/or delisting criteria does the Service have to reclassify and/or delist ?

Reaching the reclassification and delisting criteria is a trigger for the Fish and Wildlife Service to evaluate whether reclassification from endangered to threatened or delisting the wolf is appropriate. The action of reclassification and delisting is a formal process that includes publishing a proposal to reclassify or delist in the Federal Register, opening a public comment period, holding public hearings if requested, reviewing all data including any new data provided during the comment period, and then making a decision. The final decision is published in the Federal Register. It is possible that the Service may decide not to delist or reclassify a species, even if the criteria have been met.

B10) How will the U.S. Fish and Wildlife Service determine if reclassifying and/or delisting the wolf is appropriate?

The reclassification and delisting criteria spelled out in the recovery plan are a yardstick used to measure whether the species is no longer endangered or threatened. But those criteria are not the only yardstick. The Endangered Species Act identifies five factors that the Fish and Wildlife Service will consider to determine if listing, reclassification, and/or delisting is appropriate:

1. Threats to, or actual destruction of, the habitat needed by the species;
2. Threats from the over-use of the species for commercial, recreational, scientific, or educational purposes;
3. Threats from disease or predation;
4. The amount of protection of the species or its habitat provided by other laws and regulations; and
5. Any other natural or manmade factors affecting the continued existence of the species.

In effect, the achievement of the recovery plan's delisting criteria triggers the Service to formally re-evaluate the species in terms of these five factors. This evaluation includes an assessment of whether these factors are likely to increase and re-endanger the wolf if it is delisted.

B11) How will the Service reclassify/delist the wolf?

The process by which a species is listed as endangered or threatened, and eventually reclassified or delisted, is called a rulemaking. The Federal rulemaking process is designed to promote public input into the decision-making process, and to provide an explanation of the decision when it is announced. For Endangered Species Act listings, reclassifications, and delistings, the rule-making process has a minimum of four steps:

- The Service publishes a proposal in the *Federal Register* which describes the proposed change and the rationale behind it. This proposal is publicized in a variety of ways to ensure that all interested individuals and organizations are aware of it. It is the policy of the Service to solicit the expert opinion of independent specialists regarding the scientific or commercial data in proposed listings.
- A subsequent public comment period of at least 60 days provides an opportunity for any interested party to provide data or other comments relevant to the proposed action. If requested, the Service will hold one or more public hearings to receive oral comments.
- After the public comment period closes, the Service reviews all new data and comments received during the comment period and reconsiders the proposed action. Alternate actions or modifications of the proposal are also considered.
- The final decision is published in the *Federal Register*, announcing the effective date of the

action. In some cases the final decision may be to withdraw the proposed action or to adopt a modified version of the proposed action. A final decision on the wolf would be made within one year of the publication of the proposed rule.

B12) What is a 4(d) rule for a threatened species, and how are such rules applied to the wolf?

Endangered species are provided the full protections of the Act (these protections are described in Section 9 of the Act). However, threatened species can be provided the full protections under Section 9 or the Service can develop special rules (under section 4(d) of the Act) that are less restrictive and allow for more flexibility in management, as long as there is a demonstrated conservation benefit. A 4(d) rule was published for the wolf in Minnesota that allows lethal control of depredating wolves by government personnel in most of MN to reduce conflicts with domestic animals. This control program minimizes the number of wolves that may otherwise be illegally killed by individuals believing they have no recourse but to "take things into their own hands."

B13) What is the Service's schedule for changing the status of the gray wolf under the Endangered Species Act?

Based upon a review of the recovery status of gray wolf populations in the United States, the Service developed and published a proposed rule during July 2000 with a four-month public comment period following publication of the proposal.

B14) Why has the Service changed its mind about delisting wolves in the western Great Lakes states?

When we consider delisting a species we have to look at it from two standpoints. First we look at the species' recovery plan and the recovery (or delisting) criteria the plan contains, to see if the criteria have been met or closely approached. But the Act also requires that we look into the future and analyze the threats that the species is likely to face if Federal protection is removed. The Act specifies five categories of threats that we have to consider. One of those categories covers the laws and regulations that would be used to manage and protect the species after delisting; another category includes all forms of human use of the species. This "future threats analysis" is as important to our delisting decision as is the achievement of the recovery criteria.

The wolf is a species that historically has been perceived by many as causing conflicts with human activities and threatening human safety. In the past, this perception led to laws and bounties that eradicated the wolf from most of its range and directly resulted in its listing as endangered. Because this perception still exists, we believe it is very important to have a clear picture of how this species will be managed and protected in Minnesota – still the core of the species' range and the source population for Wisconsin and Michigan wolf recovery – after Federal delisting. The lack of an approved Minnesota wolf management plan leaves us with a great deal of uncertainty on future wolf management and protection; any analysis of future threats would be based largely on speculation, rather than on facts and data. Thus, without a clearer idea of where wolf management is headed in Minnesota, we can't satisfy the Act's requirement that we evaluate the future threats to wolves in Minnesota.

When we announced in June of 1998 that we were moving toward a proposal to delist wolves in the western Great Lakes states, including Minnesota, the Minnesota Department of Natural Resources (DNR) was actively developing a wolf management plan. Twelve public meetings had been held statewide to gather input, and a citizens' roundtable had been appointed and had already held several meetings to develop wolf management recommendations for the DNR. The DNR planned to use those recommendations to develop a wolf management plan that was to be taken to the Legislature for approval

in early 1999. The progress already made in wolf management planning at the time of our announcement, and the expected Legislative approval of the resulting plan in early 1999, led us to believe that we soon would be able to evaluate the future threats to Minnesota wolves. However, the 1999 Legislature's failure to approve a wolf management plan caused us to defer any proposal to delist wolves in the western Great Lakes states and move forward with a proposal to reclassify wolves in Michigan, Wisconsin and the Dakotas.

B15) What will happen if a wolf plan is developed and approved soon in Minnesota?

Once we have published a proposal to reclassify endangered Western Great Lakes wolves to threatened status (that means no change for Minnesota wolves, as these already have been reclassified to threatened) we are committed to completely processing that proposal. We will open a comment period for it, hold public hearings, and come to a final decision on that proposal.

If a wolf management plan is completed by the State of Minnesota, we will ask our Eastern Timber Wolf Recovery Team to review it and provide their recommendation on the likelihood that it will provide for a viable Minnesota wolf population for the foreseeable future. Following that review and recommendation, we may develop and publish a separate proposal to delist gray wolves in the western Great Lakes states. That proposal would be separate from, and independent of, the proposal to reclassify Western Great Lakes wolves to threatened status. A delisting proposal would have its own comment period, separate public hearings, and its own final decision. Because these would be separate and independent actions, a Western Great Lakes delisting proposal might be published before we make our final decision on the reclassification proposal. However, to avoid the confusion that might result from having two related and similar proposals active at the same time, we might delay our work on a Western Great Lakes delisting proposal until we have completed action on the proposed reclassification of Western Great Lakes wolves.

SECTION C - GENERAL WOLF ECOLOGY

C1) What types of areas (habitat) do wolves use?

The gray wolf is equally at home in the deserts of Israel, the deciduous forests of Wisconsin, and the frozen Arctic of Siberia. Within North America, gray wolves formerly ranged from coast to coast and inhabited almost all habitat types; prairie, forest, mountains, and wetlands. Today, they are found in the more remote forested lands of Minnesota, Wisconsin, and Michigan. However, the wolf has expanded in Minnesota and Wisconsin to areas that are a mix of forest and agriculture. Additionally, through natural emigration from Canada and reintroduction efforts, wolves now live in portions of the Rocky Mountains in Idaho, Montana, and Wyoming. The Mexican gray wolf has been reintroduced into the mountains of the Apache National Forest in Arizona and translocated into the Gila National Forest in New Mexico.

C2) Do wolves need wilderness areas to survive?

It was thought that gray wolves were a wilderness species and could only survive there. But the recent expansion of wolves in Minnesota has shown they are more adaptable and can tolerate more human disturbance than previously thought. Wolves are expanding into areas once thought incapable of supporting them. It now appears that wolves can survive anywhere there is sufficient food and human tolerance to allow their existence.

C3) Can wolves survive near urban areas?

From a biological standpoint, we know that wolves can and do survive near urban areas. Ultimately however, whether wolves survive near urban areas in the long-term will be dependent on humans rather

than wolves. There are areas near large cities and urban areas that have a sufficient prey base to support wolves. However, wolves are predators and will kill livestock and domestic animals. These conflicts, along with urban hazards such as vehicle traffic, will likely limit the establishment of wolf populations in urban areas.

C4) How far do wolves travel?

Wolf packs usually hunt within a specific territory. Territories may be as large as 50 square miles or even extend to 1,000 square miles depending on food availability. Wolves often cover large areas to hunt, traveling as far as 30 miles a day. Although they trot along at five mph, wolves can attain speeds as high as 45 mph. Most wolves disperse from the pack they were born into by age 3. Dispersing wolves have traveled as far as 550 miles.

C5) What do wolves eat?

Within the Great Lakes region, wolves eat mainly white-tailed deer but they also eat moose, beaver, snowshoe hare, and other animals. In the Rocky Mountains, wolves feed on elk, mule deer, beaver, and other small mammals. Wolves even eat some insects, nuts, and berries. They may not eat for a week or more but are capable of eating 20 pounds of meat in a single meal.

C6) How many deer do wolves kill?

Within the Great Lakes region, each wolf kills an average of 15 to 19 deer a year in addition to beaver and other prey.

C7) How many deer are killed by hunting and other factors?

While the deer harvest by hunting varies from state to state, in Minnesota, hunters typically harvest between 100,000-200,000 deer a year. Thousands of deer are also killed by automobile collisions, although accurate records are not available because many of these collisions are not reported. Domestic dogs also kill a few deer each year.

C8) If wolf numbers get too high will deer be eliminated?

No. The health of the wolf population is dependent on the health of its prey base. In the western Great Lakes states, wolves are dependent on deer as their main prey species. If deer numbers were to decline over an extended period of time (generally due to severe winter conditions or habitat changes), wolf productivity (the number of young produced) and survival would also decline. Thus, wolf numbers would decline before their prey could be eliminated.

C9) How do wolves in an area affect deer hunting?

In general, wolves help to maintain a healthy deer herd by removing old and sick animals. This culling supports a healthy deer population and corresponding good deer hunting opportunities because deer populations tend to stay at or near the carrying capacity of the available habitat. However, when weather events occur which reduce the ability of the habitat to support deer (like deep snowfalls, drought, etc.) then wolves will reduce their numbers even further. For example, since wolves have been protected in northern Minnesota, there has been a high and even increasing harvest of deer by hunters since the mid-1970s. But two consecutive hard winters (1995-96 and 1996-97) reduced the size of the State's northern deer herd, which in turn resulted in much lower deer harvests. Likely, wolves were accountable for a portion of the lower deer numbers and, in turn, the lower deer harvest. Subsequent mild winters have now resulted in a rebounding of the deer herd, despite the increasing wolf population.

C10) Do wolves really take the old, young, sick, and weak deer?

It is well-documented that wolves tend to take mainly old, young, fat-depleted, starving, or injured prey. Hunting and bringing down big game is dangerous work for a wolf. In the wild they cannot afford to be injured, therefore, they go after the easiest animals to kill.

C11) Does the presence of wolves affect numbers of animals other than deer?

Yes. As one of the top predators in the food chain, wolves make a definite impact on their ecosystem. Yellowstone National Park and the surrounding area have provided a good opportunity to document the effect that wolves can have on other animals. Within two years of the wolf reintroduction, researchers found that wolves had killed half the coyotes in the area, forced elk to become more vigilant and provided many opportunities for scavengers to share their kills. Because there are fewer coyotes, rodents are more plentiful, a boon for predators like hawks and bald eagles, and overall biodiversity has sharply increased.

C12) Do wolves mate for life?

Sometimes. A wolf pair may mate until one dies and then the living mate will find another mate. If the surviving mate is old, it may be supplanted as the alpha animal by a younger wolf.

C13) What is a wolf pack?

The wolf pack is an extended family unit that usually includes a dominant male and female. These animals are referred to as the alpha pair. The pack also contains the young wolves born that year, perhaps last year's young and sometimes a few older wolves that may or may not be related to the alpha pair.

C14) How many wolves are in a pack?

Pack sizes vary considerably, depending on the size of the wolf population in a particular area and the amount of food available. In the Western Great Lakes, average pack size varies from four to eight during winter with records of up to 16. Pack size can be as high as 30 or more in parts of Canada and Alaska.

C15) What happens to a pack when the alpha male or female are killed?

In a study of a protected population, the death of one or both members of the alpha pair led to dissolution of the pack or the pack survived with existing pack members becoming alpha animals. Packs sometimes adopt unrelated dispersing wolves that can also become alpha members of the pack. When packs dissolved after the death of an alpha animal, new packs formed in those areas.

C16) How long do wolves live?

Gray wolves are known to live up to 13 years in the wild and 15 years in captivity.

C17) In protected populations, what kills wolves?

In natural situations wolves die from pup starvation and adults killing members of neighboring packs. Mortality of adults can also come from starvation if the prey base is not adequate. Diseases, such as canine parvovirus and mange, also kill wolves.

C18) Do wolves usually kill more than they can eat?

Sometimes deep snow or other conditions occur which allow wolves to kill more than they can eat, although this occurs infrequently. Even then, they tend to return to these kills.

C19) Are wolves a threat to humans, especially small children?

Any wild animal can be dangerous if it is cornered, injured or sick, or has become habituated to humans through artificial feeding at campgrounds, etc. However, aggressive behavior from wild wolves towards humans is extremely rare. Wild wolves are generally shy of humans and avoid contact with them whenever possible. In contrast, several humans are killed by domestic dogs, pet wolves, and wolf-dog hybrids every year in North America. Wolves and wolf-dog hybrids kept as pets can be unpredictable and dangerous.

C20) Is there any danger from wolves to my pets?

Pets should always be carefully monitored by their owners in areas such as national forests or parks where they may encounter native wildlife, to protect both pets and the wildlife. Unsupervised dogs which stray from their owner's homes or from their handlers into wolf territories are definitely at risk. Wolves will treat dogs as interlopers on their territories and may attack them.

C21) How can I learn more about wolves and the things that are going on right now that will effect their future?

The Service has established a mailing list that will be used to alert interested parties of the status of the gray wolf and the progress being made to reclassify or delist it. Individuals and organizations can join this mailing list by either writing to: U.S. Fish and Wildlife Service, Gray Wolf Review, 1 Federal Drive, Fort Snelling, MN 55111-4056, by e-mailing to graywolfmail@fws.gov, or calling the Gray Wolf Line at 612-713-7337.

In addition, the Service will post information on the wolf and potential changes in federal protection on the Web at <http://midwest.fws.gov/wolf>. The Service also posts information at <http://www.r6.fws.gov/wolf> and <http://ifw2es.fws.gov/wolf/>.