

WISCONSIN ENDANGERED RESOURCES REPORT #127
STATUS OF THE TIMBER WOLF IN WISCONSIN
PERFORMANCE REPORT 1 JULY 2002 THROUGH 30 JUNE 2003
By Adrian P. Wydeven and Jane E. Wiedenhoef

SUMMARY

This report covers activities conducted from 1 July 2002 through 30 June 2003, on wolf conservation in Wisconsin. The Wisconsin DNR reclassified wolves to threatened in 1999, and the U.S. Fish and Wildlife Service reclassified it to federally threatened on 1 April 2003. On 27 October 1999 the Wisconsin Natural Resources Board passed a state wolf management plan, and that plan provides the general outline for this report.

Fifty-one wolves were live captured in 2002, and radio transmitters were fitted on 49 wolves from over 20 different packs. Eighty-one radio tagged wolves were monitored during the 12 month study period. Mean territory size during winter for 28 adults was 45 square miles. The minimum count for the wolf population in winter 2002-2003 was 335 to 353 wolves in 94 packs (breeding groups of 2 or more wolves), and included 328 to 346 wolves outside of Indian reservations. Nineteen wolves being actively monitored by radio telemetry died during the period, including the following mortality factors: 7 disease, 1 other wolves, 1 drowned, 4 shootings, 3 vehicle collisions, 1 capture related and 2 unknown. A total of 59 wolves were found dead in Wisconsin and included death from the following: 13 illegal shootings, 19 vehicle collisions, 4 euthanized in control action, 1 capture related, 14 disease and starvation, 2 other wolves, 1 drowned and 5 unknown. It appeared that mange was fairly prevalent and especially acute in central Wisconsin. Reports of wolf observations by the public and agency personnel were received from 44 counties, and exceeded last year's rate of wolf reports. Twenty-four cases of wolf depredation occurred during the period, resulting in the death of 35 cattle (34 calves), 11 sheep, 3 horses and 11 dogs, as well as injury to 5 dogs. Various other strategies to implement the 1999 wolf plan were also conducted during the period.

BUREAU OF ENDANGERED RESOURCES
Wisconsin Department of Natural Resources
P.O. Box 7921
Madison, Wisconsin 53707

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Box 7921
Madison, Wisconsin 53707**

**RECOVERY OF THE TIMBER WOLF
PERFORMANCE REPORT**

1 July 2002-30 June 2003

Prepared by Adrian P. Wydeven and Jane E. Wiedenhoef

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Timber or gray wolves (*Canis lupus*) were listed as endangered in the Great Lakes region in 1967 and 1974 by the U.S. Fish and Wildlife Service (U.S. Fish and Wildlife Service 1992). The State of Wisconsin listed wolves as endangered in 1975, but reclassified them to threatened in 1999. The Wisconsin Department of Natural Resources (WDNR) has monitored wolves since 1979. A recovery plan with a reclassification goal to threatened status of 80+ wolves was completed in 1989 (Wisconsin DNR, 1989), and a management plan was completed in 1999 (Wisconsin DNR 1999). The management plan sets a state delisting goal of 250 wolves outside of Indian reservations, and a management goal of 350 wolves outside of Indian reservations. At the management goal, government trappers may conduct proactive population control activities, and public harvest of wolves may be considered. The plan included 14 management strategies that represent the general outline of this report.

The 1992 Federal Recovery Plan for the eastern timber wolf established reclassification goals of 80+ wolves for 3 years in Wisconsin, and a delisting goal of 100+ wolves for 5 years for Wisconsin and Michigan (U.S. Fish & Wildlife Service 1992). Federal delisting also required a stable population of 1251 to 1400 wolves in Minnesota, and approved management plans for each state. The Minnesota wolf population was 2450 wolves in 1998 (Berg and Benson 1999), and currently probably exceeds 2600. In 2003, Michigan and Wisconsin shared about 660 wolves, and had exceeded the 100+ threshold for 10 years. In July 2000, the U.S. Fish and Wildlife Service began the process to reclassify wolves to threatened in Wisconsin, Michigan (Minnesota has been listed as threatened since 1978), and other states, and the process was completed on 1 April 2003. The process to delist the Distinct Population Segment of wolves in the western Great Lakes region, should begin late in 2003 or early 2004, and could be completed in early 2005.

Personnel and funding: Funding for wolf conservation activity in Wisconsin was from the following: Federal Aid in Wildlife Restoration Project W-154-R; U.S. Fish and Wildlife Service, Endangered Species Grants; funds from the Nicolet-Chequamegon National Forest; Wisconsin Endangered Resources Fund (tax check-off and license plate); Timber Wolf

Alliance (TWA); Timber Wolf Information Network (TWIN); USDA-Wildlife Service research funds (John Shivik); funds from research grant for Thomas Gehring and Jason Hawley at Central Michigan University, funds for research by Ellen Heilhecker at University of Wisconsin-Stevens Point, Defenders of Wildlife, National Wildlife Federation, and donations from private individuals.

Adrian Wydeven was the ecologist in charge of the project, and was assisted by project wolf technicians Ron Schultz, Sarah Boles and Jane Wiedenhoef. DNR pilots conducting aerial monitoring of collared wolves included: John Bronson, Joe Sprenger, Mike Weinfurter, Phil Miller, Paul Anderson and Dan Cardinal. Other DNR personnel that assisted extensively on wolf monitoring included Dick Thiel, Wayne Hall, Bruce Kohn, Kerry Beheler, Dr. Julie Langenburg, Michele Windsor, Randy Jurewicz, Ken Jonas, Greg Kessler, Todd Naas, Bruce Bacon, Rich Wissink, Linda Winn, Barb Bodenstein, and Mary Singsime. Buck Follis with the USDA-Wildlife Service conducted trapping of wolves for monitoring. Dead wolves were necropsied by Dr. Nancy Thomas and others at the National Wildlife Health Center in Madison, and wolf necropsies were coordinated through Dr. Grace McLaughlin. Live trapping and field investigations of wolf depredations were conducted under the supervision of Dave Nelson and district supervisors Bob Willging and Scott Beckerman of USDA-APHIS-Wildlife Services. John Shivik (USDA-Wildlife Service research) and Adrian Treves (Conservation International) conducted research on methods for excluding wolves from specific sites. Lisa Naughton (University of Wisconsin-Madison) and graduate student Rebecca Grossberg conducted attitude surveys toward wolves in Wisconsin. Ellen Heilhecker under Dr. Eric Anderson, of UW-Stevens Point conducted research on pup mortality. Jason Hawley under Dr. Thomas Gehring of Central Michigan University is conducting research on shock collars as a means of reducing wolf depredation. Over 98 volunteers conducted winter track surveys across northern and central Wisconsin.

Job 106.1 WOLF MANAGEMENT ZONES

Four wolf management zones were created in the 1999 wolf management plan (figure 1). Wolf population and summary of wolf management activities are discussed for each zone below.

Zone 1 (18,384 square miles) represents the northern forest wolf range in Wisconsin, and in winter 2002-2003 consisted of 271-285 wolves in 75 packs, and at least 9 loners. Packs apparently occurred in 20 of the 21 counties in this zone. Public wolf reports were received from all 21 counties in the zone. Eleven dogs were killed in 8 cases in 6 counties and 4 dogs were injured in 4 cases in 2 counties in the zone. Livestock depredation in the zone included 31 cattle killed, 11 sheep killed, and 3 horses killed on 9 farms in 7 counties. Average winter deer density in this zone averaged 22.0 deer per square mile (range 8 to 34 deer per square mile) and was above the goal of 19 deer per square mile. Wolves occupied about 5100 square miles of the zone at a density of 1 wolf/19 square miles.

Zone 2 (4521 square miles) represents the central forest wolf range, and contains 36 to 40 wolves in 13 packs in winter 2002-2003. The zone contains portions of 10 counties, but mainly 7 counties, and packs occurred in all 7 counties. Public reports of wolf observations were received for 9 of the counties in the zone. No depredations on pets or livestock occurred in the zone during the study period. Winter deer density averaged 32.4 deer per square mile (range 25 to 38 deer per square mile). Wolf packs occupied about 720 square miles, at a density of 20 square miles per wolf.

Zone 3 (~18,000 square miles) represents wolf dispersal habitat of mixed forest/farmland across central and southwest Wisconsin and includes portions of 33 counties. Wolf population in this zone in winter 2002-2003 included 14 wolves in 5 packs and 3 loners; a sixth pack, the Blue Hills pack extended into part of zone 3. Only 1 of the 5 packs (groups) in the zone had apparently produced pups in the zone, the Fort McCoy pack that occurred in heavily forested areas adjacent to the central forest. Reports of wolf observations were received for 25 counties in the zone. Additional lone wolves also traveled through the zone, as indicated by the death of 4 loners in 4 different counties in zone 3. Livestock depredation occurred on 4 calves on one farm in the zone, at the edge of zone 1 where this pack mostly lived (Blue Hills pack). The Fort McCoy pack created some concerns when it traveled through a nearby farm in spring 2003, but no verified depredations occurred. Two of the 5 groups/packs in this zone represent wolves translocated from depredation sites across northern Wisconsin that moved into this zone (Long Lake pack, Oconto River pack). Wolf packs occupied about 220 square miles in the zone.

Zone 4 (~16,000 square miles) represents portions of southern and eastern Wisconsin, and includes 28 counties in portions of the state that are mostly agricultural and urban areas. No packs were known to occur in this zone. Reports of wolf observations were received from 7 counties in the zone and 2 wolves died in the zone (Door and Waukesha counties). One wolf was killed in Door County, and one or two others may still exist in the region. These wolves may be moving into Door County from northern Michigan across portions of frozen Green Bay in winter. During the period, a wolf was killed in north central Illinois in December 2002, and a tagged wolf from Jackson County, Wisconsin was found dead in eastern Indiana on 23 June 2003. Both had probably traveled through southern portions of Wisconsin in Zone 4. No wolf depredations occurred in Zone 4. No wolf depredations occurred on domestic animals in this zone.

JOB 106.2 POPULATION MONITORING AND MANAGEMENT

Fifty-one wolves were live captured in 2002, and radio transmitters were fitted on 49 wolves from over 20 different packs (Table 1). Eighteen wolves were live captured by USDA-Wildlife Services at depredation sites, 29 were captured by DNR, and 4 wolves were captured in traps of coyote trappers. Wildlife Services trapped wolves from 3 depredation sites: 9 wolves from a farm in Burnett County were released 59 to 109 miles to the east; 7 of 8 wolves from a farm in Langlade County were moved 32 miles to the southeast; and 1 wolf from Taylor County was moved 52 miles to the north. Ten of the DNR captured wolves were pups fitted with short term ear transmitters to assess pup mortality in central Wisconsin. Total captures included 9 adult males (averaged 79.5lbs for 8), one yearling male (81lbs), 9 pup males (range 15 to 46lbs.), 14 adult females (average 71.3lbs.), 9 yearling females (average 56.4lbs.) and 9 pup females (range 15 to 62lbs.). A total of 1440 trap nights were used to trap 29 wolves by DNR, or 49.7 trap nights per wolf.

Ninety-four wolf packs/groups were identified in 29 Wisconsin Counties in winter 2002-2003 (Figure 2). Fifteen packs occurred in 9 central Wisconsin counties, and 79 packs occurred across 20 northern Wisconsin counties. Radio collared wolves were monitored in 45 packs (48%) during portions of winter 2002-2003.

During the monitoring period, eighty-one radio tagged wolves were monitored in 47 (50%) packs in the state and one Minnesota pack (Table 2). One Michigan collared wolf was also found dead in Wisconsin (M6606M). Nineteen radio tagged wolves died during active monitoring, two dispersed to Michigan, and signals were lost on 17 including a pup/yearling male later found dead in Indiana (Wolf 409M). Sex-age composition of monitored wolves (age during winter 2002-2003, or at time of capture for spring 2003 live trapping) were 27 adult males, 1 yearling male, 7 male pups, 26 adult females, 11 yearling females and 9 female pups.

Mean winter territory size for 28 adult wolves with 20 or more radio locations was 45 square miles, with a range from 16 square miles for female 376F (Stella Lake pack) to 148 square miles for 336M (Bootjack Lake pack). Wolf 336M eventually dispersed, thus his home range probably exaggerates the territory of the Bootjack Lake pack. Overall average winter home range for 32 wolves in northern Wisconsin was 48 square miles, and 31 square miles for 7 wolves in central Wisconsin.

Dispersing and Translocated (Depredating) Wolves

Wolf M6606M, Adult male caught near Ewen, Ontonagon County, Michigan at a livestock site on 23 September 2001, and translocated 40 miles to northeast. He was last located in south Houghton County on 7 May 2002, and was killed illegally near Phlox, Langlade County, Wisconsin 102 miles to the south on 27 August 2002.

Wolf 250M, Yearling male disappeared from the Ghost Lake pack in Bayfield County after 30 January 2002, and was found dead 37 miles to the west in Douglas County on 5 August 2002. The wolf had been dead for several months when the carcass was found.

Wolf 295F, Alpha female of the Totagatic River pack was captured on 28 June 2002 at a beef farm in northern Burnett County, after depredation on calves. She was moved 59 miles to the east into Bayfield County, but was found dead, probably due to overheating on 2 July 2002, near the release site.

Wolf 246M, Adult male was released into northern Forest County on 27 May 1998 after depredation on a farm in Burnett County, but was lost after the release. On 28 October 2002, he was rediscovered as the mate of 300F in the Harrison Hills pack of northeast Lincoln County. This location was 42 miles southeast of the release site. When 300F died from apparent shooting in November 2002, wolf 246M roamed over a broad area across northeast Lincoln, northwest Langlade and southern Oconto Counties (Pelican Lake pack). He appeared to have abandoned the Harrison Hills area.

Wolf 249F, Yearling female was caught in the Price Creek pack of Price County in a coyote trap on 24 October 2002. She remained in the Price Creek area for the next month and a half. On 10 December 2002, 249F was located 6 miles east of her home range and disappeared thereafter. She was assumed to have dispersed.

Wolf 338M, Yearling male was caught in the Bear Bluff pack of Jackson County as a pup on 28 July 2001. Between late October and late December 2002, he made several moves to the Necedah Wildlife Refuge 7 to 13 miles east and southeast of his home range. By 27 December 2002, he had joined female 340F of the Rattail pack, 7 miles to the east.

Wolf 343M, Adult male was caught while dispersing on 12 June 2001. In winter 2001-2002, he seemed to form a territory with 341F in Seneca Township of Wood County. In winter 2002-2003, the two separated from each other and only a small portion of their home range areas overlapped. On 5 March 2003, 343M moved 22 miles eastward into Waushara County, and

his signal was lost after that. He was found dead in northwest Portage County on 22 April 2003, 22 miles north of the Seneca location.

Wolf 409M, Pup male was caught in the Wildcat Mound pack of Jackson County on 10 August 2002. He remained on the air until mid January 2003 when his transmitter was scheduled to quit. On 20 June 2003, the yearling male 409M was found shot to death in a soybean field near Winchester, Indiana, 407 miles to the southeast. Straight line distance would pass through southern Lake Michigan, thus the minimum distance probably exceeded 420 miles

Wolf 427F, Yearling female caught in the Suk Cerney pack of Juneau County on 6 July 2002. She dispersed from this pack after 13 November 2002, and her signal was lost. The wolf appeared dead in southern Marathon County, 55 miles to the north on 16 February 2003. She apparently died from mange and heartworm.

Wolf 429F, Adult female was caught on 3 June 2002 in the Wildcat Mound pack of central Jackson County. In winter 2002-2003, her home range straddled Highway 54 north of the Wildcat Mound pack and south of the Noch Hanai pack. She continued to occupy this area in spring and summer 2003.

Wolf 432F, Yearling female was removed from a farm in Burnett County, and was released into Price County on 25 July 2002. After roaming northeast Price County, the wolf gradually moved to the southeast through Lincoln, Marathon, Langlade (?), Menominee and Oconto counties. She eventually settled into the Butler Rock/Brazeau Swamp area of northeast Oconto and western Marinette Counties, after 4 December 2002. She apparently met a mate and established a territory in the area. The territory was 100 miles ESE of the release site and about 200 miles from the farm where depredation occurred.

Wolf 433M, Adult male was captured on 5 June 2002 in the Averill Creek pack of western Lincoln County. The wolf was suspected of being a wolf dog hybrid, but remained in the Averill Creek pack area until 9 December 2002. After 9 December, he dispersed, and on 20 February 2003, 433M was shot by a coyote hunter in southwest Marquette County, 109 miles to the south.

Wolf 434M, Adult male was caught in the Moose Lake pack of western Douglas County on 29 May 2002. He remained in the Moose Lake territory until 6 January 2003, when he dispersed to the southwest into Pine County, Minnesota, and by April, had settled into a home range area 34 miles from his original home.

Wolves 435F, 443F, 449M, 450F, 452F, 453M and 454F, Adult pair (453M & 454F) and 6 pups were trapped from a dairy farm in northern Langlade County from 17 July through 26 July 2002. One pup died soon after capture, but the rest of the family was held in captivity for up to 1 month. On 22 August, the adults and pups were placed in adjacent holding pens on the Menominee Indian Reservation; pups were released into the wild on 25 August and the adults were released on 2 September. The wolves initially remained near the release site, but by 12 September, the adult pair began extensive travel to the east. By 16 September, the whole pack began spending time just east of the reservation, 7 miles southeast of the release site, and eventually settled at a site along the Oconto River, 12 miles southeast of the release site. The alpha male of the pack (453M) was killed by a vehicle collision on 17 October 2002. On 7 January 2003, female pup 443F was shot. Adult female 454F disappeared after 4 February, but returned on 22 April. Female pup 435F was 12 miles to the south in eastern Shawano County on 13 February 2003, and disappeared afterwards. Female pup 450F moved 7.5 miles west into the Menominee Reservation on 17 March 2003, and disappeared thereafter. In spring and summer 2003, adult female 454F, and yearlings 449M and 452F remained in the Oconto River area.

Wolf 436F, Yearling female was caught on a beef ranch in Burnett County on 13 July 2002, and released into Vilas County 109 miles to the east on 25 July 2002. By August, the wolf had moved into the western Upper Peninsula of Michigan, and WDNR discontinued monitoring on 30 September 2002 when the wolf was near Paulding, Ontonagon County, Michigan, 51 miles northeast of her release site, and 152 miles east of the depredation site.

Wolf 440F, Yearling female was captured on 8 June 2002 in the Lake Nabagamong pack of Douglas County. She was last seen in the pack area on 6 January 2003 and on 13 January 2003 she was 26 miles to the west on the Wisconsin/Minnesota border. Her signal was lost thereafter.

Wolf 441F, Yearling female was caught on a farm in Burnett County, and released in northeast Price County on 11 July 2002. She initially traveled extensively through Price County before moving southward. By 17 September 2002, she had settled into the Mondeaux Flowage area of northern Taylor County, with two other wolves. She was shot to death in this territory prior to 2 December 2003. Her death site was about 52 miles south of the release site, and 105 miles southeast of the depredation site.

Wolf 442M, Adult male 442M was captured in the Suk Cerney pack of Juneau County on 6 July 2002. In fall 2002, he began visiting areas east of Highway 80, 4-5 miles east of his territory. By the end of 2002, it appeared that 442M, and any remaining

members of the Suk Cerney pack, were replaced by a new pack. On 27 May 2003, 442M was found dead in the Petenwell Flowage about 7 miles east of the old pack area.

Wolf 446F, Adult female was caught in the Casey Creek pack of northern Douglas County on 13 June 2002. After 23 December 2002, 446F moved southward. Between 30 December 2002 and 10 March 2003, 446F occupied an area 12 miles to the south in the Shoberg Lake pack area. After mid March, the wolf moved further south, and by 7 April 2003 had settled into northeast Washburn County, 32 miles south of her original territory. She perhaps joined another pack or established a new pack in the area of the old Frog Creek pack.

Wolf 455F, Adult female was caught on a beef ranch in Burnett County on 18 July 2002, and was released 109 miles to the east in Vilas County on 25 July 2002. From this site, the wolf headed northward, and moved into the western Upper Peninsula of Michigan. The last location monitored by WDNR was west of Gogebic Lake in Ontonagon County, Michigan, 46 miles north of the release site, and 132 miles east of the original capture site.

Wolf 456F, Yearling female was caught on a beef farm in Burnett County on 12 July 2002, and was translocated 109 miles to the east into southwest Vilas County on 25 July 2002. Initially she moved extensively through Price, Oneida and Lincoln counties. She eventually settled into the Somo River pack area of northwest Lincoln County, and 29 miles south of the release site.

Wolf 457M, Adult male was released into southwest Vilas County on 7 October 2002 after capture on a farm in Burnett County. Wolf 457M moved northwest through Iron, Ashland and Bayfield counties, and eventually moved south to northern Sawyer County. Wolf 457M settled into the Round Lake area north of Chippewa Flowage on 19 February 2003, 59 miles west of the release site and 53 miles east of the depredation site.

Wolf 458F, Yearling female was removed from a beef farm in Burnett County, and released in southwest Vilas County on 7 October 2002. She moved east through Oneida and eventually into northern Forest County, where she settled into the Giant Pine pack/Headwaters Wilderness Area. This location in the Nicolet National Forest was 53 miles east of the release site and about 166 miles from the depredation site.

Wolf 460F, Adult female was released into southwest Vilas County on 1 November 2002, after capture on a beef farm in Burnett County. Wolf 460F spent most of the winter near the release site, but gradually began moving to the southwest across Price County. In late winter and early spring she moved quickly through Rusk and Washburn counties. By 21 April 2003, 460F settled into an area southwest of Siren in southern Burnett and northern Polk counties. This location is 117 miles west of the release site and 24 miles south of the depredation site.

Waukesha County Male, Yearling or young adult male was found killed near Oconomowoc in Waukesha County on 24 April 2003. Origin of the wolf was not determined, but the nearest breeding pack was located 108 miles to the northwest in Juneau County. Possibly the wolf came from Door County to the north by way of the Kettle Moraine and wetlands of eastern Wisconsin.

Door County Male, Adult male was shot near Bailey's Harbor in Door County on 28 May 2003. Its origin was not known, but reports of one or more wolves roaming Door County have occurred since spring 2002. Possibly one or more wolves crossed frozen Green Bay from Michigan in winter, either across Chamber's Island or through islands across the northern tip of Door County.

Wolf Count Summary

Through radio telemetry monitoring of radio tagged packs, snow tracking of non radio tagged packs, and public and agency reports of wolf observations, a total statewide count was obtained of a minimum of 335-353 wolves in winter 2002-2003 (Table 3). Wolves occurred in 94 packs or groups, and at least 12 lone wolves occurred in the population. The wolf count outside of Indian reservations was 328-346 wolves. Therefore, the wolf population again exceeded the state delisting goal of 250 wolves outside of Indian reservations, and was approaching the state wolf management goal of 350 wolves outside of Indian reservations. Using the adjusted count of 327-343 for 2002, the increase was only 2.4% in 2003. The average rate of increase has been 18% since 1985 when 15 wolves occurred in Wisconsin.

Average pack size was 3.4 wolves statewide, but generally packs were larger in northern Wisconsin (mean 3.5 wolves), versus central Wisconsin (mean 2.9 wolves). Wolf territories and interstitial areas covered 6040 square miles, at a density of 1 wolf per 17.5 to 18.4 square miles. A total of 129 different wolves were counted in Wisconsin by DNR pilots on 693 radio locations of wolves, and included members of 38 packs. Non radio tagged packs were counted along 2870 miles of snow track survey by DNR trackers, 3785 miles surveyed by volunteers, and estimated by reports of wolf observations (see below). An estimate

of 92 to 129 pups survived to mid or late winter 2003. Using the midpoint of 110 pups, and assuming 80 potential breeding pairs in 2002, estimated pup survival was 26% state wide; pup survival seemed higher in northern Wisconsin (28%) compared to central Wisconsin (19%). A total of 27 packs (30%) had no surviving pups, and was especially high in the central forest where 8 of 13 packs had no surviving pups. Sarcoptic mange appeared to be a factor with pup survival, especially in central Wisconsin.

A total of 59 wolves were found dead in Wisconsin and included 22 radio tagged wolves (Table 4). One of the collared wolves was from Michigan (M6606M). Two wolves were found dead after they had been off the air for several months to several years (250M, 275F). Mortality of 19 active radio tagged wolves included the following: 7 disease (37%, including 6 sarcoptic mange and 1 distemper), 1 other wolves (5%), 1 drowned (5%), 4 shooting (21%), 3 vehicle collisions (16%), 1 capture related (5%) and 2 unknown (11%). Overall mortality of 59 dead wolves included the following causes of death: 13 illegal shootings (22%), 19 vehicle collisions (32%), 4 euthanized in control actions (7%), 1 capture related (2%), 14 disease and starvation (24%, including 1 distemper, 1 parvovirus, 1 starvation, 1 blindness and 10 sarcoptic mange), 2 other wolves (3%), 1 drowning (2%) and 5 unknown (8%). The overall rate of all mortalities was 63% human caused mortality, 29% natural mortality and 8% unknowns. We list one wolf with a blindness condition as natural, although it was euthanized by a DNR biologist.

Four wolves were euthanized in livestock depredation situations, which became possible with federal reclassification on 1 April 2003. Rates of mortality for radio tagged wolves, actively monitored, is less biased and probable more closely reflects overall mortality rates for the whole population. The radio tagged sample indicates rate of disease loss was relatively high. The radio tagged sample and overall sample were similar (21 vs. 22%) of mortality due to shooting, somewhat lower than last year (32 to 38%). Mortality of radio tagged wolves monitored by the Wisconsin DNR from 1979 through June 2003 is shown in Table 5. Of 112 radio tagged wolves for which mortality was determined, 54% were human caused, and 47% were natural mortalities. Illegal shootings and vehicle collisions were the most important forms of human caused mortalities, and disease and intraspecific strife were the most important causes of natural mortality. Shootings declined in the 1990's, but appeared to increase in the last few years.

Statewide Wolf Distribution

Reports of 372 wolf observations from private citizens and agency personnel were collected from 44 Wisconsin counties (Table 6). Only observations judged as "probable" or "possible" were reported, although some may include coyotes, wolf-dog hybrids, or wolf-like dogs. The wolf observation reporting rate exceeds last year's record count of 358 wolf reports. Wolf observations were received for all but 2 counties for which breeding packs occurred. Highest report rates were for Bayfield (43), Iron (42), Douglas (41) and Ashland (28) counties, areas where the most dense populations of wolves occurred in the state.

JOB 106.3 WOLF HEALTH MONITORING

Disease tests were not available for this report, but mortality information and examination of captured wolves provided some general assessment of wolf health. Ten (19.6%) of 51 live captured wolves examined showed sign of sarcoptic mange. Only 3 (9%) of 33 northern Wisconsin wolves showed signs of mange, including a male pup that died in captivity from canine parvovirus while waiting to be translocated. In central Wisconsin 7 (39%) of 18 wolves showed signs of mange, but all were from the Suk Cerney pack, except a male pup (408M) from the Bear Bluff pack. Mange appeared to be a factor in the cause of death of at least 10 of the 58 wolves found dead in the state, and occurred on at least 5 additional wolves that died from other causes. Mange and related conditions contributed to 32% of radio tagged wolves that had died. Other diseases that caused or contributed to the death of the 58 wolves found dead in the state included: distemper (1), parvovirus (1), and blindness from unknown disease (1, euthanized). There appears to be some increase in sarcoptic mange in Wisconsin wolves, but part of this may be due to attributes of a study by Ellen Heilhecker assessing pup mortalities. Mange seems especially prevalent in the Suk Cerney pack of central Wisconsin, but incidents seemed low in most packs. Mange did appear severe in the Siskiwit Lake pack where 3 mangy pups were killed by vehicle collisions in August 2002, and the alpha female of this pack (369F) also died with severe mange, but from a vehicle collision. Mange appears to be a factor increasing risk of mortality from other factors.

JOB 106.4 HABITAT MANAGEMENT

The project ecologist served on a WDNR panel reviewing the new plan for the Chequamegon-Nicolet National Forest, and provided recommendations on road density management to the plan to maintain suitable habitat for wolves. Input was also provided for management plans for the Brule River, Northern Highlands, and Flambeau River State Forest. Information on pack locations and wolf distribution was shared with all county forestry departments, and other land agencies.

JOB 106.5 WOLF DEPREDAATION MANAGEMENT

Twenty-four cases of wolf depredation on domestic animals occurred during the study period (Table 7). These included 12 cases of wolf depredation on pets resulting in death of 11 dogs and injury to 5 dogs. Depredation involving livestock included 7 cases involving 34 cattle, 2 cases involving 11 sheep (also 20 missing), 2 cases involving 3 horses, and 1 case on a deer farm involving 1 deer. Nine packs were involved in depredation on dogs, and 10 packs were involved in depredation on livestock. Only the Moquah pack was involved in depredation on both livestock and dogs. The Kidrick Swamp pack depredated on dogs for 5 years in a row, and the Shoberg Lake pack attacked dogs 4 years in a row. The Bootjack Lake pack had been in Wisconsin since the early 1980's, but 2002 was the first time any depredations to dogs had been caused by this pack.

Wolf depredation occurred on 10 farms and 1 deer farm. USDA-Wildlife Services conducted 7 trapping sessions on 6 farms and trapped 20 wolves from 3 farms. Fifteen captured in 2002 were translocated 32 to 109 miles from depredation sites, 1 died in captivity (parvovirus), and 4 wolves trapped in 2003 were euthanized. Of the 15 wolves translocated, 2 dispersed to Michigan, 2 were shot, 1 was killed by a vehicle collision, 2 dispersed out of range or signals were lost, 5 joined other wolves and established territories, and 3 of 7 released together continued to occupy a home range near the release site. One wolf (440F) traveled within 24 miles of the depredation site, but no wolf returned to a depredation site.

JOB 106.5 WOLF EDUCATION PROGRAMS

During the study period, the project ecologist gave 14 talks to 517 people. DNR wildlife biologists, wildlife technicians and park naturalists also gave numerous talks. Talks included training for 30 TWA volunteers in August, and about 100 volunteer carnivore trackers in fall at 3 sessions. The WDNR cooperated with TWA to sponsor Wolf Awareness Week in October 2002, and over 6000 educational posters were distributed across the state. The project ecologist attended 3 meetings with the TWA board to coordinate wolf education efforts. The Project ecologist had 80 media contacts during the period including 41 newspaper, 18 radio, 10 television, 10 magazine and 1 web producer. Major issues were wolf depredations, federal reclassification, wolf deaths, wolf count and status. Eighteen volunteers with TWA gave 110 talks to 5285 people, and spoke to >5600 people through booths at fairs and shows. A pamphlet, *Wolves and Hunting Dogs in Wisconsin: A Guide for Reducing Conflict Between Wolves and Hunting Dogs*, was developed in cooperation with USDA-APHIS-Wildlife Services, Wisconsin Bear Hunters Association, and Timber Wolf Alliance. Information about wolves in Wisconsin was updated and additional information was posted on the Wisconsin DNR website, <http://www.dnr.state.wi.us/org/land/er/mammals/wolf/>.

JOB 106.7 LAW ENFORCEMENT

Project personnel assisted federal agents and Wisconsin DNR wardens in obtaining background information, transporting wolves to National Wildlife Center in Madison, obtaining funding for rewards, and assisting in the preparation of news releases. Thirteen wolves were apparently shot in Wisconsin, and at least 2 have resulted in convictions. Reward funds were developed with Defenders of Wildlife, Timber Wolf Alliance (TWA), Environmentally Concerned Citizens of the Lakeland Area (ECCOLA), U.S. Fish and Wildlife Services, and Wisconsin DNR.

Closure of coyote hunting during the firearm deer season continued in Zone 1, but did not occur in other zones. Annual news releases were made prior to fall hunting season to warn hunters of protective status of wolves. Extra wolf flights were flown during the fall hunting seasons to attempt to detect any possible wolf mortalities.

JOB 106.8 INTERAGENCY COOPERATION AND COORDINATION

The Wisconsin Wolf Science Committee (previously Wolf Technical Advisory Committee) was reformulated during the period. The new committee includes 14 persons from WDNR, U.S. Forest Service, Great Lakes Indian Fish and Wildlife Commission (GLIFWC), U.S. Fish and Wildlife Service, USDA-Wildlife Services, County Forests, University Extension, and Department of Agriculture, Trade and Consumer Protection (DATCP). Meetings were held on 11 April and 21 May 2003.

A meeting was held with the Wisconsin Wolf Stakeholders on 12 April 2003. The committee reviewed various aspects of wolf management, made recommendations on the state delisting process, and developed a coordinating committee consisting of representatives of hunting groups, environmental groups, tribal groups and educational organizations.

Meetings to review surveys and plan future surveys were held with agency personnel on 3 October 2002 and 11 April 2003. Presentations were made to the Wisconsin Natural Resources Board on 26 March and 25 June to update the board on state wolf management issues. Other meetings were held to coordinate wolf translocations with tribes and U.S. Fish and Wildlife Service, planning wolf research, and Eastern Timber Wolf Recovery Team.

The Great Lakes Wolf Stewards met in Wakefield, Michigan on 30 April-1 May 2003. Wolf management issues were discussed with Wisconsin DNR, Michigan DNR, Minnesota DNR, U.S. Forest Service, Michigan Technological University, University of Wisconsin, Central Michigan University, International Wolf Center, GLIFWC, USDA-Wildlife Services, Wildlife Conservation Society, National Wildlife Federation, Defenders of Wildlife, Timber Wolf Alliance, Michigan State University, and other groups.

JOB 106.9 PROGRAM GUIDANCE AND OVERSIGHT

The fourth meeting was held with the Wisconsin Wolf Stakeholders on 12 April 2003. The stakeholders provided DNR with input on planning delisting, wolf depredation management concerns, and public review process for reviewing the state wolf plan. State delisting hearings will be planned for fall 2003. The U.S. Fish and Wildlife Service reclassified wolves from endangered on 1 April 2003. Wisconsin DNR continued working with U.S. Fish and Wildlife Service to complete the federal delisting. The new Wolf Science Committee met twice during the period to review the status of wolf management in Wisconsin.

JOB 106.10 VOLUNTEER PROGRAMS

Thirty volunteers were trained at a Timber Wolf Alliance workshop on 9-11 August 2002. About 100 volunteer trackers were trained during 3 workshops in Wascott, Treehaven (Tomahawk), and Sandhill Wildlife Area (Babcock). During winter, over 98 volunteers conducted surveys in 46 survey blocks (average about 200 square miles each), and surveyed over 3785 miles. Volunteers also assisted with trapping, radio collaring, and howl surveys. Volunteers with TWA gave over 110 talks to 5285 people during the period.

JOB 106.11 WOLF RESEARCH

The Wisconsin DNR again cooperated on numerous research projects on wolves in the state.

Lisa Naughton and Rebecca Grossberg completed research on attitudes towards wolves by farmers, bear hunters and northern Wisconsin residents, and are preparing the report for publication.

Work was also completed on a model for predicting wolf depredations across Wisconsin and Michigan using landscape features. Researchers included Adrian Treves, Lisa Naughton, Rob Rose, David Mladenoff, Ted Sickley, Liz Harper and Adrian Wydeven. The manuscript of this work was submitted for publication.

Eric Anderson and graduate student Ellen Heilhecker of University of Wisconsin-Stevens Point completed the first season of research on pup survival and movements in central Wisconsin. Research was assisted by Wayne Hall and Dick Thiel.

Adrian Treves, Adrian Wydeven, Jane Wiedenhoeft and Brian Brost conducted analysis of wolf pack characteristics in relationship to depredation on domestic animals. The research should be published as part of a book planned by Defenders of Wildlife on carnivore conservation.

A re-examination of landscape characteristics selected by wolf packs is being conducted by David Mladenoff, David Mech, Adrian Wydeven and Jane Wiedenhoeft.

The wolf project continued to cooperate with the Clam Lake elk restoration project, examining factors affecting elk mortality, habitat use, and distribution. Radio telemetry and track survey data was shared with WDNR elk biologist Laine Stowell, and with University of Wisconsin -Stevens Point researcher Tim Ginnett and students.

The wolf program also cooperated in an international research project examining landscape ecology of elk in Yellowstone National Park Wyoming; Banff National Park, Alberta, eastern Ontario; and northern Wisconsin. The researchers include Peter Turchin, University of Connecticut; Monica Turner, University of Wisconsin; John Fryxell, Marck Boyce and Evelyn Merrill, University of Alberta. The researchers are examining spatial patterns of landscape used by elk using spatial modeling and GIS analysis. Elk spatial distributions are being examined in relationship to wolf territories.

Trophic interactions were examined in relationship of wolves to deer and plant communities. A presentation was prepared for the Ecological Society of America, August meeting and titled, "Tri-trophic interactions of wolves, deer and plant communities in Northern Wisconsin and Michigan" by Dean Anderson, Thomas Rooney, Monica Turner, Donald Waller, Adrian Wydeven, Jane Wiedenhoeft, Dean Beyer, William Alverson, and James Forester.

John Rafferty, Ph. D. candidate at University of Illinois-Urbana/Champaign is researching impact of wolves from shrinking suitable habitat due to human developments across portions of northern Wisconsin. John is examining an extinction threshold model that will examine how wolves may respond to shrinking suitable habitat.

Tom Gehring and graduate student Jason Hawley of Central Michigan University initiated research on testing of non-lethal methods of reducing wolf-human conflicts. Tom and Jason have started to trap wolves and fit them with radio collars and dog shock collars to test ability to deter wolves from certain areas.

The Wisconsin DNR wolf workers Adrian Wydeven, Randy Jurewicz and Jane Wiedenhoefte are continuing ongoing research on wolf pathology and mortality factors with the National Wildlife Health Center in Madison with Grace McLaughlin, Valerie Bochsler and Nancy Thomas. Most wolves dying in Wisconsin continue to be necropsied at the Center.

A new research project was started with Paula Holahan, Nancy Thomas and Adrian Wydeven on "Osteopathology of Museum Specimens on *Canis lupus*: correlation with necropsy and natural history data". Museum specimens from the University of Wisconsin Zoology collection will be examined in relationship to necropsy results and field data.

Dorothy Ginnett of University of Wisconsin-Stevens Point began conducting research with Jerold Thies on heartworm in wild canids, including wolves. Plans are to examine heartworm in wolves through serological testing and examination of carcasses when possible.

Data was contributed to a Norwegian study being headed by Scott Brainerd on impact of alpha wolf removals to wolf pack dynamics.

The wolf program produced several other reports during the study period. The "Wisconsin Gray Wolf Population in 2001-2002" was published in the Wisconsin Wildlife Surveys. Progress reports on wolf population monitoring were produced in fall, end of year/mid winter, and spring.

JOB 106.12 WOLF-DOG HYBRID AND CAPTIVE WOLVES

Eighteen cases of suspected wolf-dog hybrid incidents were reported during the study period (Table 8). Because wolf-dog hybrids are often considered just dogs, many problems of these animals are not broadly reported. Wolf-dog hybrid problems occurred in 15 counties across the state. Two cases of apparent wolf-dog hybrids joining wolf packs were detected; both these animals died, but there may be other cases like this occurring.

Captive wildlife regulations were passed by the Wisconsin Legislature on 8 March 2002. Initially it was thought the regulations would allow DNR to regulate wolf-dog hybrids, but after a while it was less clear whether WDNR could regulate wolf-dog hybrids by these regulations. Additional assessment of the regulations will be made, and additional attempts may be made to develop administrative rules on regulations for wolf-dog hybrids.

JOB 106.13 WOLF SPECIMEN MANAGEMENT

A meeting was again held at the National Wildlife Health Center in Madison on 19 February 2003, to discuss future necropsies and disposition of wolves. The National Wildlife Health Center will continue to attempt to necropsy radio tagged wolves and any dead wolves suspected as legal cases. Vehicle killed wolves and wolves euthanized at depredation sites would be made more available for education and cultural specimens. Most dead wolves handled were made into specimens for zoology collections and used by educators. Wolf specimens handled by WDNR regions included 40 in the Northern Region, 12 in the West Central Region, 6 in the Northeast region and 1 in the Southeast region.

JOB 106.14 ECOTOURISM

The Timber Wolf Alliance workshop in August 2002 brought 30 people to northern Wisconsin to visit wolf range. Programs on wolves were also presented at Treehaven near Tomahawk, Trees for Tomorrow in Eagle River, Sandhill Wildlife Area near Babcock, naturalist programs at the Northern Highland State Forest, as well as other state forests and state parks. The wolf exhibit at the Northern Great Lakes Visitor Center was part of the attraction for people visiting the Ashland area. These wolf programs and exhibits add to reasons people visit areas of wolf range in central and northern Wisconsin.

LITERATURE CITED

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Table 1. Wolves captured and radio-tagged in Wisconsin in 2002.

Wolf Number	Sex/Age^a	Weight (lbs)	Pack/Area	County Captured	Date
<u>Northern Forest</u>					
--- ^b	M/P	25	Deerbrook	Langlade	17 Jul 02
249	F/Y	52	Price Creek	Price	24 Oct 02
295 ^c	F/A	78	Totagatic River	Burnett	28 Jun 02
430 ^d	M/A	---	Rib River?	Taylor	18 May 02
431	F/A	67	Moquah	Bayfield	01 Jun 02
432 ^e	F/Y	64	Unknown	Burnett	25 Jul 02
433	M/A	70	Averill Creek	Lincoln	05 Jun 02
434	M/A	67	Moose Lake	Douglas	29 May 02
435 ^f	F/P	---	Deerbrook	Langlade	26 Jul 02
436 ^g	F/Y	54	Unknown	Burnett	13 Jul 02
437	F/A	69	North Willow	Oneida	11 May 02
438	M/A	85	Flag River	Bayfield	21 May 02
439	F/A	60	Flag River	Bayfield	22 May 02
440	F/Y	50	Shoberg Lake?	Douglas	08 Jun 02
441 ^c	F/Y	71	Unknown	Burnett	03 Jul 02
443 ^f	F/P	---	Deerbrook	Langlade	23 Jul 02
444	F/A	74	Hellhole Creek	Ashland	25 Jun 02
446	F/A	74	Casey Creek	Douglas	13 Jun 02
447	F/A	62	Bird Sanctuary	Douglas	21 Jun 02
448	F/Y	52	Pine Lake	Iron	20 May 02
449 ^f	M/P	---	Deerbrook	Langlade	18 Jul 02
450 ^f	F/P	---	Deerbrook	Langlade	20 Jul 02
452 ^f	F/P	30	Deerbrook	Langlade	22 Jul 02
453 ^f	M/A	81	Deerbrook	Langlade	17 Jul 02
454 ^f	F/A	80	Deerbrook	Langlade	18 Jul 02
455 ^g	F/A	65	Unknown	Burnett	18 Jul 02
456 ^g	F/Y	58	Unknown	Burnett	12 Jul 02
457 ^g	M/A	80	Unknown	Burnett	10 Sep 02
458 ^g	F/A	72	Unknown	Burnett	04 Sep 02
459	M/A	80	Hoffman Lake	Price	26 Oct 02
460 ^g	F/A	72	Unknown	Burnett	17 Oct 02
461	F/P	62	North Willow	Oneida	20 Nov 02
779 ^h	M/P	18	Blue Hills	Rusk	13 Jun 02
<u>Central Forest</u>					
338 ⁱ	M/Y	81	Bear Bluff	Jackson	28 Jul 02
349 ^j	F/P	15	Suk Cerney	Juneau	03 Jul 02
401 ^j	M/P	16	Suk Cerney	Juneau	05 Jul 02
402 ^j	M/P	19	Suk Cerney	Juneau	06 Jul 02
404 ^j	M/P	15	Suk Cerney	Juneau	06 Jul 02

Table 1. cont.

Wolf Number	Sex/Age^a	Weight (lbs)	Pack/Area	County Captured	Date
405 ^j	M/P	42	Bear Bluff	Jackson	20 Jul 02
406 ^j	F/P	42	Bear Bluff	Jackson	27 Jul 02
407 ^j	F/P	37	Bear Bluff	Jackson	28 Jul 02
408 ^j	M/P	43	Bear Bluff	Jackson	03 Aug 02
409 ^j	M/P	46	Wildcat Mound	Jackson	10 Aug 02
410 ^j	F/P	38	Wildcat Mound	Jackson	17 Aug 02
420	M/A	88	Wildcat Mound	Jackson	11 Aug 02
421	F/A	77	Wildcat Mound	Jackson	13 Aug 02
426	F/Y	50	Bear Bluff	Jackson	02 Jul 02
427	F/Y	57	Suk Cerney	Juneau	06 Jul 02
429	F/A	80	Wildcat Mound	Jackson	03 Jun 02
442	M/A	84	Suk Cerney	Juneau	06 Jul 02
465	F/A	67	Ft. McCoy	Monroe	13 Dec 02

33 captured in northern forest (31 collared), 18 captured in central forest (8 collared, 10 fitted with ear transmitters)

^a Age at time of capture assuming birth date 1 April (P = Pup, Y = Yearling, A = Adult)

^b Captured by Wildlife Services on farm, died in captivity.

^c Re-captured by Wildlife Services on farm, relocated to Bayfield County; originally captured in Washburn County in 1999.

^d Captured by Wildlife Services, released 3 mi. away, re-captured 19 May and relocated to Price County.

^e Captured by Wildlife Services on farm, translocated to Price County.

^f Captured by Wildlife Services on farm, translocated to Menominee County.

^g Captured by Wildlife Services on farm, translocated to Vilas County.

^h Not collared, too small.

ⁱ Re-capture, originally captured as a pup in 2001.

^j Fitted with ear transmitter for pup mortality research project.

Table 2. Radio telemetry data on wolves monitored from July 1, 2002 – June 30, 2003 in Wisconsin.

Wolf # & Sex	Age^a	Pack^b	Date Captured	Last Date	# of Locations^c	Winter Territory Size (mi²)	# of Wolves in Territory^d
G996M	A	North Willow	13 Jun 03	Ongoing	3	NE ^e	-
M036F	Y	West Firelane	4 May 00 ^f	Ongoing	93	36	2
241F	P	Porcupine Lake	20 Nov 97 ^g	Ongoing	272	70	3+
246M	A	Harrison Hills	11 Apr 98 ^h	Ongoing	47	18	2
248M	A	Torch River	28 Jun 00	Ongoing	152	55	5-6
249F	Y	Price Creek/Disperser	24 Oct 02	10 Dec 02 [*]	11	13	3
268M	Y	Truck Trail	11 Jun 97 ⁱ	13 Jan 03 [*]	363	31	3
285F	A	Ranger Island	24 Aug 98	17 Mar 03 [*]	234	22	4
291M	A	Chain Lakes	27 Jun 99	Ongoing	218	62	5
295F	Y	Totagatic River/Translocated ^j	25 May 99	2 Jul 02 ^{**}	178	NE	-
297M	A	South Empire	2 Jun 99	6 Jan 03 ^{**}	197	50	3
298M	Y	Tamarack River, MN	8 Jun 99	12 Aug 02 [*]	170	NE	-
300F	A	Harrison Hills	18 May 01	27 Nov 02 ^{**}	84	17	-
309F	P	Iron Run	15 Nov 99	Ongoing	193	17	4
332F	A	Pelican Lake	10 May 00	Ongoing	182	32	2
336M	Y	Bootjack Lake/Disperser	3 Jun 01	10 Mar 03 [*]	92	148	7-8
338M	P	Bear Bluff/Disperser	28 Jul 01	Ongoing	86	10	-
340F	A	Rattail	5 Aug 01	Ongoing	84	34	2
341F	Y	Seneca	31 May 01	Ongoing	95	38	2
343M	A	Seneca/Disperser	12 Jun 01	22 Apr 03 ^{**}	92	17	-
349F	P	Suk Cerney	3 Jul 02	5 Sep 02 ^{**}	9	NE	-
351M	A	Chippewa River	17 Jun 00	Ongoing	153	49	6
355M	A	Little Rice River	28 Jun 01	Ongoing	105	54	6
369F	A	Siskiwit Lake	25 Jun 01	19 Mar 03 ^{**}	90	38	1
370F	A	Black Lake	30 Jun 01	29 Apr 03 ^{**}	92	52	4-5
376F	Y	Stella Lake	12 Jun 01	Ongoing	113	16	3
388M	A	Crex Meadow	25 Jul 01	Ongoing	105	85	3
393F	P	Long Lake ^k	31 Jul 01	Ongoing	99	12	2
395M	A	Prairie River ^l	11 Sep 01	13 Jan 03 ^{**}	93	31	-
401M	P	Suk Cerney	5 Jul 02	1 Aug 02 ^{**}	3	NE	-
402M	P	Suk Cerney	6 Jul 02	15 Jul 02 [*]	3	NE	-
404M	P	Suk Cerney	6 Jul 02	15 Jul 02 ^{**}	3	NE	-
405M	P	Bear Bluff	20 Jul 02	6 Aug 02 [*]	3	NE	-

Table 2. (Cont.)

Wolf # & Sex	Age^a	Pack^b	Date Captured	Last Date	# of Locations^c	Winter Territory Size (mi²)	# of Wolves in Territory^d
406F	P	Bear Bluff	27 Jul 02	15 Jan 03 [*]	22	8	-
407F	P	Bear Bluff	28 Jul 02	15 Jan 03 [*]	17	8	-
408M	P	Bear Bluff	3 Aug 02	15 Jan 03 [*]	22	10	-
409M	P	Wildcat Mound	10 Aug 02	23 Jun 03 ^{*t}	22	7	4
410F	P	Wildcat Mound	17 Aug 02	15 Jan 03 [*]	20	11	-
420M	A	Wildcat Mound	11 Aug 02	7 Oct 02 [*]	6	NE	-
421F	A	Wildcat Mound	13 Aug 02	11 Oct 02 [*]	9	4	-
426F	Y	Bear Bluff	2 Jul 02 ^m	Ongoing	32	35	5-6
427F	Y	Suk Cerney/Disperser	6 Jul 02 ⁿ	16 Feb 03 ^{**}	25	4	2-3
429F	A	Wildcat Mound	3 Jun 02	Ongoing	38	50	4
430M	A	Rib River/Translocated ^o	18 May 02	3 Jul 02 ^{**}	8	NE	-
431F	A	Moquah	1 Jun 02	Ongoing	56	59	3
432F	Y	Translocated/Butler Rock ^o	25 Jul 02	Ongoing	65	24	2
433M	A	Averill Creek/Disperser	5 Jun 02	20 Feb 03 ^{**}	30	21	4-5
434M	A	Moose Lake/Disperser	29 May 02	Ongoing	55	11	6
435F	P	Translocated/Oconto R./Disp.	26 Jul 02 ^p	13 Feb 03 [*]	35	64	-
436F	Y	Translocated	13 Jul 02 ^q	30 Sep 02 ^r	17	NE	-
437F	A	North Willow	11 May 02	23 Nov 02 ^{**}	30	NE	7
438M	A	Flag River	21 May 02	Ongoing	57	50	4
439F	A	Flag River	22 May 02	Ongoing	57	52	-
440F	Y	Lake Nebagamon	8 Jun 02	13 Jan 03 [*]	31	32	5
441F	Y	Translocated/Mondeaux Flow	3 Jul 02 ^o	2 Dec 02 ^{**}	30	37	2
442M	A	Suk Cerney	6 Jul 02	27 May 03 ^{**}	31	23	2-3
443F	P	Translocated/Oconto River	23 Jul 02 ^p	7 Jan 03 ^{**}	30	10	-
444F	A	Hellhole Creek	25 Jun 02	Ongoing	51	51	5
446F	A	Casey C/Shoberg L/Disp.	13 Jun 02	Ongoing	55	6/3	5/3-4
447F	A	Bird Sanctuary	21 Jun 02	Ongoing	55	35	5
448F	Y	Pine Lake	20 May 02	Ongoing	58	65	3+
449M	P	Translocated/Oconto River	18 Jul 02 ^p	Ongoing	52	31	-
450F	P	Translocated/Oconto R./Disp.	20 Jul 02 ^p	17 Mar 03 [*]	40	49	-
452F	P	Translocated/Oconto River	22 Jul 02 ^p	Ongoing	51	30	-
453M	A	Translocated/Oconto River	17 Jul 02 ^p	17 Oct 02 ^{**}	16	11	-
454F	A	Translocated/Oconto River	19 Jul 02 ^p	Ongoing	44	14	3
455F	A	Translocated/Disperser	18 Jul 02 ^q	30 Sep 02 ^r	14	NE	-

Table 2. (Cont.)

Wolf # & Sex	Age^a	Pack^b	Date Captured	Last Date	# of Locations^c	Winter Territory Size (mi²)	# of Wolves in Territory^d
456F	Y	Translocated/Somo River	12 Jul 02 ^q	Ongoing	51	85	4
457M	A	Translocated/Round Lake	10 Sep 02	Ongoing	34	12	2
458F	Y?	Translocated/Giant Pine	4 Sep 02	Ongoing	42	87	3
459M	A	Hoffman Lake	26 Oct 02	Ongoing	25	51	5
460F	A?	Translocated	17 Oct 02	Ongoing	36	NE	-
461F	P	North Willow	20 Nov 02	Ongoing	32	32	-
462M	A	Black Lake	1 Jun 03	Ongoing	5	NE	-
464F	A	Moreland Lake	16 May 03	Ongoing	6	NE	-
465F	A	Ft. McCoy	13 Dec 02	Ongoing	7	15	5
473M	A	Moose Lake	29 Jun 03	Ongoing	1	NE	-
474M	A	Dunbar	19 May 03	Ongoing	6	NE	-
476M	A	Truck Trail	21 Jun 03	Ongoing	1	NE	-
482M	A	North Willow	10 Jun 03	Ongoing	3	NE	-
724F	A	Prairie River	11 Sep 01 ^s	21 Jan 03 ^{**}	422	20	-

^a Age at time of capture (P = Pup, Y = Yearling, A = Adult)

^b Pack during winter of the study period

^c Total locations from the time of capture

^d Number of wolves in pack during midwinter

^e No estimate

^f Captured in Gogebic County, Michigan

^g Recaptured wolf; first captured in Ashland County on 23 Jun 1997, 19 lb pup too small to collar

^h Recaptured by Wildlife Services, translocated to Forest County 27 May 1998; lost signal after release. Signal found 28 Oct 2002.

ⁱ Recaptured wolf; first captured as a pup in Douglas County on 28 Aug 1996

^j Recaptured by USDA-WS during depredation trapping, relocated to Bayfield County 28 Jun 2002

^k Captured by USDA-WS during depredation trapping, relocated to Oneida County

^l Captured by USDA-WS during depredation trapping, relocated to Forest County

^m Recaptured wolf; first captured as a pup in Jackson County on 28 Jul 2001

ⁿ Recaptured wolf; first captured as a pup in Juneau County on 15 Aug 2001

^o Captured by USDA-WS during depredation trapping, relocated to Price County

^p Captured by Wildlife Services on farm, translocated to Menominee County 29 Aug 2002

^q Captured by Wildlife Services on farm, translocated to Vilas County

^r Dispersed to Michigan

^s Initial capture in Douglas County 28 May 1997, recaptured by USDA-WS during depredation trapping, relocated to Forest County

* Lost signal

** Died

Table 3. Minimum estimation of Wisconsin's timber wolf population in winter 2002-2003.

Pack/Area/Wolf	Counties	Blocks	# of Wolves	Evidence^a
<u>NORTHERN FOREST</u>				
<i>Ada Lake</i>	Langlade/Oconto	92	2	O
<i>Alvin Creek*</i>	Forest	97, 84	2	T
<i>Augustine Lake*</i>	Iron/Ashland	57	5	T
<i>Averill Creek</i>	Lincoln	48, 70	4-5	T
<i>Bearsdale*</i>	Bayfield/Sawyer	25	4	T
<i>Beaverdam Lake*</i>	Bayfield/Ashland	34	2-3	T
<i>Bibbon Swamp*</i>	Bayfield	28	8	T/O
<i>Bird Sanctuary</i>	Douglas	3, 9	5	R/T/O
<i>Black Lake*</i>	Ashland/Sawyer	24, 37, 38	4-5	R/T
<i>Blue Hills</i>	Rusk/Sawyer	20	2	T
<i>Bootjack Lake*</i>	Price/Oneida	53, 51, 52	7-8	R/T
<i>Brush Creek*</i>	Ashland	36, 57	7	R/T
<i>Butler Rock*</i>	Oconto/Marinette	104	2	R/T
<i>Camp 6*</i>	Forest	102	2	T
<i>Casey Creek</i>	Douglas	6, 7	5	T/O
<i>Chain Lake*</i>	Douglas/Washburn	8, 23	5	R/T
<i>Chippewa River</i>	Ashland/Iron	56, 58	6	R/O
<i>Crex Meadow*</i>	Burnett/Pine	13	3	R/T
<i>Crotte Creek*</i>	Douglas	9, 3, 2, 11	2	T
<i>Dunbar*</i>	Florence/Marinette	108	4-5	T/O
<i>Eastside Firelane</i>	Ashland	56, 57	3	O
<i>Echo Valley*</i>	Bayfield	33	4	T
<i>Eddy Creek(R)</i>	Sawyer	20, 42	2	T
<i>Escanaba Lake</i>	Vilas	80	2	T/O
<i>Flag River</i>	Bayfield	31, 32	4	R/?
<i>Ghost Lake*</i>	Bayfield/Sawyer	24, 29	3-5	T/O
<i>Giant Pine*</i>	Forest	85	3	T
<i>Harrison Hills*</i>	Lincoln	71, 75	2	R/T/O
<i>Haystack Corner</i>	Sawyer/Rusk	43	5	T
<i>Hellhole Creek*</i>	Bayfield/Ashland	35, 36	5	R/T/O
<i>Hoffman Lake*</i>	Iron/Price/Ashland	55, 54	5	R/T/O
<i>Hungry Run*</i>	Ashland	38, 40	4-5	T
<i>Ino Swamp</i>	Bayfield	27	5	T
<i>Johnson Springs</i>	Forest	94	2	T
<i>Kidrick Swamp*</i>	Taylor/Price	46, 47	4	T
<i>Lake Nebagamon</i>	Douglas	6	5	R
<i>Lake Noquebay</i>	Marinette	113, 114	2	O
<i>Little Rice River*</i>	Oneida	51, 67, 65	6	R/T
<i>Log Creek*</i>	Sawyer	40, 37	4-5	T
<i>Long Lake*</i>	Rusk	126	2	R/T
<i>Mondeaux Flowage*</i>	Taylor	47	2	T
<i>Moose Lake</i>	Douglas	4	6	T/O
<i>Moquah</i>	Bayfield	30	3	R/T

Table 3. cont.

Pack/Area/Wolf	Counties	Blocks	# of Wolves	Evidence^a
Moreland Lake*	Bayfield	26	5	T
<i>Morgan Lake</i>	Florence/Forest	100	2+	T
Morrison Creek(R)	Ashland/Iron	39, 60	3	O
Murray's Landing	Iron	55	4-6	T/O
Nineweb Lake*	Vilas	80, 81	2	T
North Empire	Douglas	2, 3, 4	5	T/O
North Willow*	Oneida	65, 67, 78	7	R/T/O
O'Brien Lake*	Iron	57, 59	3	T
<i>Oconto River</i>	Oconto	131	3	R/O
Orienta Falls*	Bayfield/Douglas	7, 31	2	T
Pelican Lake	Oneida	76, 71	2	R/O
Pine Lake	Iron	58, 59, 61	3+	R/T/O
<i>Pokegama River*</i>	Douglas	1	2	T
<i>Poplar River</i>	Douglas	7	2	T/O
<i>Porcupine Lake*</i>	Bayfield	29,35,34	3+	R/T
Price Creek	Price/Sawyer	41, 44	3	T
Rainbow Lake*	Bayfield	27, 28	4	T
Ranger Island	Lincoln	69	4	R/T
Riverside	Burnett	10	2	T
<i>Round Lake</i>	Sawyer	24, 37, 42	2	R
Shanagolden*	Ashland	38	3	T
Shoberg Lake*	Douglas	6, 8	3-4	T/O
Skinner Creek*	Price	44	3-4	T
Smoky Hill*	Bayfield	25	3	T
Somo River	Lincoln	68	4	R/T
South Empire*	Douglas	3, 4	3	T
Spirit Lake*	Lincoln/Taylor/Price	49, 70	6	T
<i>Spring Creek</i>	Price	44	2	T/O
Stella Lake	Oneida	77	3	R/O
Sterling Barrens	Polk/Burnett	14	3	T
Thornapple River	Sawyer	41, 40	6	T
Torch River*	Ashland/Sawyer	38, 37, 36	5-6	R/T
Tranus Lake*	Washburn	22, 23	2	T
Truck Trail*	Douglas/Pine	2	3	R/T
Tupper Creek*	Sawyer	42, 43	2	T
West Firelane(R)	Ashland/Iron	39, 60	2	R/T
Total Northern Pack Members			280-294+	
79 Packs = 3.5-3.7 wolves/pack				
<u>Dispersers & Loners</u>				
<i>Bearskin</i>	Oneida	78	1	T
<i>Laona Forest</i>	Forest	93	1	T
<i>Martha Lake</i>	Iron	62	1	T
Miles Lake	Iron	54	1	T
Moose Road	Douglas/Pine	11	1	T

Table 3. cont.

Pack/Area/Wolf	Counties	Blocks	# of Wolves	Evidence^a
Siskiwit Lake*	Bayfield	32, 33, 30	1	R/T/O
<i>S. Island Lake</i>	Bayfield	26	1	T
<i>Spencer Lake</i>	Burnett/Barron/Polk	17	1	T
Stuntz Brook	Washburn	12	1	T
<i>W446F</i>	Douglas/Washburn		1	R
<i>W460F</i>	Washburn/Polk	19	1	R
Total Northern Loners			11	
Total Northern Wolves			291-305	
<u>CENTRAL FOREST</u>				
Bear Bluff*	Jackson/Wood/Juneau	121, 120, 119	5-6	R/T
Colburn*	Adams	127	2	T
Dead Creek	Jackson/Juneau	121	2-4	T
Eau Claire River	Clark/Eau Claire	117	2	T
Ft. McCoy*	Monroe	123	5	R/T/O
Iron Run*	Clark	117, 118	4	R/T/O
<i>Mead</i>	Marathon	133	2	O
Noch Hanai	Jackson/Clark	119	2	T
<i>Rattail</i>	Juneau	122, 125	2	R/T
Seneca	Wood	124, 125	2	R/T
<i>Silo</i>	Juneau	122	5	T
South Bluff*	Wood	121	2	T
Suk-Cerney*	Juneau	122	2-3	R/T
<i>Wedges Creek</i>	Clark	118	2	T
Wildcat Mound*	Jackson	120, 121	4	R/T
Total Central Pack Members			43-47	
15 Packs = 2.9-3.1 wolves/pack				
<u>Dispersers & Loners</u>				
<i>Buena Vista</i>	Wood/Adams		1	T
Total Central Loners			1	
Total Central Wolves			44-48	

Grand Total All Wolves **335-353**
Indian Reservation Wolves **7**
Wolves Outside Reservations **328-346**
Total Packs **94**

^a Evidence: O = observations

R = radio-telemetry surveys

T = track and sign surveys

*Pack with probable breeding activity

(R)Reservation pack or wolf

Table 4. Wolves dying in Wisconsin from 1 July 2002 to 30 June 2003.

Wolf # & Sex	Age^a	Date Captured	Date Died	County Died	Cause of Death
295F	4	28 Jun 02	2 Jul 02	Bavfield	Capture related
430M	A	19 May 02	3 Jul 02	Price	?
----F	P	-----	4 Jul 02	Lincoln	Vehicle Collision
404M	P	6 Jul 02	15 Jul 02	Juneau	Distemper
----M	P	-----	18 Jul 02	Langlade	Parvo-virus
----M	Y?	-----	25 Jul 02	Washburn	?
----F	P	-----	26 Jul 02	Ashland	Vehicle Collision
----M	P	-----	29 Jul 02	Iron	Mange?
----F	Y	-----	31 Jul 02	Douglas	Vehicle Collision
401M	P	5 Jul 02	1 Aug 02	Juneau	Malnutrition/Mange
----F	P	-----	1 Aug 02	Iron	Starvation
----M	P	-----	3 Aug 02	Bavfield	Vehicle Collision/mange
----F	A	-----	3 Aug 02	Washburn	Vehicle Collision
----F	P	-----	4 Aug 02	Bavfield	Vehicle Collision/mange
250M	2	9 Sep 00	5 Aug 02	Douglas	?
----M	P	-----	20 Aug 02	Bavfield	Vehicle Collision/mange
M6606M	A	23 Sep 01	27 Aug 02	Langlade	Shot
349F	P	3 Jul 02	5 Sep 02	Juneau	Malnutrition/Mange
----M?	A	-----	4 Oct 02	Marquette	Shot (bow)
453M	A	17 Jul 02	17 Oct 02	Oconto	Vehicle Collision
----?	P	-----	24 Oct 02	Clark	Mange?
----M	P?	-----	25 Oct 02	Bavfield	Other wolves?/Mange?
----F	P	-----	30 Oct 02	Burnett	Shot
----M	A	-----	5 Nov 02	Marquette	Vehicle Collision
----F	Y	-----	12 Nov 02	Ashland	Shot?
----?	P	-----	14 Nov 02	Clark	Mange?
----M	P	-----	24 Nov 02	Juneau	Shot
----?	?	-----	24? Nov 02	Sawver	Shot
437HF	A	11 May 02	27 Nov 02	Oneida	Drowned
300F	A	18 May 01	27 Nov 02	Lincoln	Shot
----M	A	-----	30 Nov 02	St. Croix	Shot
441F	Y	3 Jul 02	2 Dec 02	Taylor	Shot
----M	A	-----	10 Dec 02	Douglas	Vehicle Collision
----M	A	-----	14 Dec 02	Florence	Vehicle Collision
297M	A	2 Jun 99	6 Jan 03	Douglas	Mange
443F	P	23 Jul 02	7 Jan 03	Oconto	Shot
395M	A	11 Sep 01	13 Jan 03	Langlade	Mange/Other wolves
724F	A	16 Aug 01	21 Jan 03	Langlade	Mange
----?	?	-----	8 Feb 03	Lincoln	Vehicle Collision
----M	A	-----	9 Feb 03	Forest	Vehicle Collision
----F	P	-----	15 Feb 03	Iron	Vehicle Collision

Table 4. cont.

Wolf # & Sex	Age^a	Date Captured	Date Died	County Died	Cause of Death
427F	Y	6 Jul 02	16 Feb 03	Marathon	Mange/Disease?
433HM	A	5 Jun 02	20 Feb 03	Marquette	Shot
----F	Y	-----	4 Mar 03	Marinette	Shot
----M	?	-----	17 Mar 03	Lincoln	Vehicle Collision
369F	A	25 Jun 01	20 Mar 03	Bavfield	Vehicle Collision/Mange
----M	A	-----	15 Apr 03	Sawver	Mange?/Shot?
343M	A	12 Jun 01	22 Apr 03	Portage	Vehicle Collision
----?	?	-----	24 Apr 03	Waukesha	Vehicle Collision
370F	A	30 Jun 01	29 Apr 03	Ashland	Other wolves?
----F	A	-----	6 May 03	Burnett	Euthanized
----F	A	-----	19 May 03	Bavfield	Euthanized/Disease
----M	A	-----	20 May 03	Burnett	Euthanized
----M	A	-----	22 May 03	Burnett	Euthanized
275F	A	12 May 97	23 May 03	Jackson	?
442M	A	6 Jul 02	27 May 03	Juneau	?
----F	A	-----	28 May 03	Barron	Euthanized
----M	?	-----	28 May 03	Door	Shot
----M	Y	-----	23 Jun 03	Washburn	Vehicle Collision

^a Age at time of death

Table 5. Mortality summary of radio-collared wolves in Wisconsin and adjacent areas of Minnesota from October 1979 – June 2003.

	Cause of Death	Number	% Known Mortality
Human Causes	Capture Related	4	4%
	Shot Wound*	32	29%
	Trapped	3	3%
	Vehicle Collision	16	14%
	<u>Unknown Human Causes</u>	<u>5</u>	<u>4%</u>
	<i>Total Human Causes</i>	<i>60</i>	<i>54%</i>
Natural Causes	Accident	1	1%
	Birthing Complications	1	1%
	Disease	29	26%
	Killed by Other Wolves	16	14%
	Malnutrition/Starvation	2	2%
	<u>Unknown Natural Causes</u>	<u>3</u>	<u>3%</u>
	<i>Total Natural Causes</i>	<i>52</i>	<i>47%</i>
Totals	<i>Known Mortality</i>	<i>112</i>	<i>100%</i>
	<u>Unknown Mortality</u>	<u>12</u>	
	Total Mortality	124	

* 25 wolves shot by firearm; 2 wolves by bow and arrow

Table 6. Probable and possible wolf observations reported by natural resource agency personnel and private citizens in Wisconsin in July 2002 – June 2003.

County	Sightings	Wolves Seen	Track or Sign Observations	Total Observations
Adams	0	0	1	1
Ashland*	21	35	7	28
Barron	1	1	0	1
Bayfield*	28	65+	15	43
Brown	4	5	1	5
Burnett*	2	2	1	3
Chippewa	0	0	2	2
Clark*	1	3	3	4
Crawford	1	1	0	1
Dane	2	2	1	3
Door	2	3	0	2
Douglas*	30	63	11	41
Florence*	8	12	0	8
Forest*	7	9	12	19
Grant	1	1	0	1
Iron*	32	60	10	42
Jackson*	5	8-9	1	6
Juneau*	1	6	0	1
Langlade	12	13	1	13
Lincoln*	2	3	2	4
Manitowoc	1	1	0	1
Marathon	2	2	0	2
Marinette*	19	27	2	21
Marquette	0	0	1	1
Menominee	1	4	0	1
Oconto*	6	7	3	9
Oneida*	14	23	7	21
Pierce	1	1	0	1
Polk*	2	3	2	4
Portage	1	1	1	2
Price*	13	37	7	20
Rock	0	0	1	1
Rusk*	0	0	2	2
Sauk	1	1	0	1
Sawyer*	2	4	4	6
Shawano	7	13	2	9
St. Croix	1	1	0	1
Taylor*	0	0	1	1
Vernon	2	3	0	2
Vilas*	20	27	2	22
Washburn*	10	30	0	10
Washington	1	1	0	1
Waushara	2	2	0	2
Wood*	1	1	2	3
Totals	267	481-482+	105	372

* Counties with known breeding packs during winter of this study period. No observations were reported from Eau Claire and Monroe Counties where a breeding pack is known to exist.

Table 7. Wolf depredation cases on livestock and pets in Wisconsin, July 2002 through June 2003.

Date	Animal Lost	Pack Involved	County	Payments	Other Actions
7/3/02- 11/7/02*	22 calves	Totogatic	Burnett	pending	8 wolves** trapped & translocated
7/5/02	1 cow, 1 calf	Deerbrook	Langlade	\$4000.00	8 wolves trapped by W.S., 1 died, 7 translocated
7/26/02	1 mare, 1 colt	Pioneer Creek?	Vilas	\$10429.00	None
8/16/02	1 dog (Plott)	Bootjack Lake	Oneida	\$2500.00	None
9/8 - 10/22/02	7 sheep killed 20 sheep missing	Flag River	Bayfield	\$2453.50	Trapping attempted DOW donate 1 guard dog
9/10/02	4 dogs (Walker/ Bluetick/Plott)	Kidrick Swamp	Taylor	\$8000.00	None
9/12&14/02	2 dogs (Walker/Plott)	Shoberg Lake?	Douglas	\$3500.00	None
9/14/02	1 dog injured (Walker)	Shoberg Lake?	Douglas	\$100.00	None
9/27/02	1 dog (Bluetick)	Bootjack Lake	Price	\$2500.00	None
10/24/02	1 dog (Husky mix)	Moquah	Bayfield	\$558.00	None
11/15/02	1 dog (Bluetick)	Pelican Lake	Oneida	\$2500.00	None
11/22/02	1 foal (Shetland)	Bird Sanctuary	Douglas	\$2250.00	None
12/30/02	1 dog injured (Walker)	Murray's Landing	Iron	No claim	None
02/02/03	3 calves	Moquah	Bayfield	\$2250.00	Trapping attempted DOW donate 2 donkeys
02/05/03	1 dog (Bluetick)	Haystack Corner	Rusk	\$1500.00	None
02/15/03	1 deer (deer farm)	Moquah	Bayfield	\$1200.00	None
4/20/03 - 5/1/03	2 calves	Riverside?	Burnett	Pending	3 wolves trapped by WS & euthanized
4/22/03 & 5/14/03	4 calves	Blue Hills?	Barron	\$1400.00 & Pending	1 wolf trapped by WS & euthanized
4/29/03 & 5/12/03	4 sheep	Mondeaux Flowage	Taylor	\$300.00 & Pending	WS attempted trapping
5/12/03	1 calf	Riverside?	Burnett	\$400.00	None
5/22/03	1 dog injured (Lab)	O'Brien Lake	Iron	Pending	None
5/27/03	1 dog injured (Beagle)	Pokegama River	Douglas	\$1212.66	None
6/21/03	1 dog injured (Plott)	Murray Landing	Iron	\$332.21	None
6/30/03	1 calf	Ada Lake?	Forest	\$200.00	None

Table 7. cont.

	Animals Lost	Packs Involved	Counties	Payments	Other Actions
24 cases	61 animals killed	18 packs	12 counties	\$47,585.37	6 farms WS
	5 animals injured		10 farms		attempted trapping
	20 animals missing		1 deer farm		20 live-trapped
	34 calves killed				15 translocated
	1 cow killed				4 euthanized
	11 sheep killed				1 died in captivity
	20 sheep missing				1 farm DOW
	1 horse killed				donated
	2 foals killed				2 donkeys
	1 deer killed				1 farm DOW
	11 dogs killed				donated 1 guard
	5 dogs injured				dog

*4 calves and 1 cow kill <7/1/02

**1 wolf trapped <7/1/02

Table 8. Suspected wolf-dog hybrid incidents and problems in Wisconsin, 1 July 2002 – 30 June 2003.

Date	County	No. of wolf-dogs Age/Sex	Problem	Outcome
5/11/02- 11/23/02	Oneida	Wolf 437F, AF	Hybrid seemed to roam with wolf pack	Died natural cause
6/02/02- 12/09/02	Lincoln	Wolf 433M	Hybrid seemed to roam with wolf pack	Dispersed & shot 109 mi. to south
6/02/02	Columbia	1 A/?	Running lose	Unknown
7/10/02	Sheboygon	1 A/?	Escaped from owner	Captured & returned to owner.
8/02/02	Burnett	1 P/?	Traffic concerns on road near wolf pack	Killed by Vehicle?
9/16/02	Green	A/?	Running lose; stealing dog food	Unknown
11/06/02	Iron	? / ?	Escaped from owner	Unknown
11/14/02	Racine	?/ ?	Presented to Zoo as “wolf”	Held at Zoo?
11/18/02	Ozaukee	A/ ?	Running at Dog Park	Unknown
01/07/03	Pierce	A/M	Found dead, started investigation	Disposed
01/23/03	Marathon	?/?	Running in City	Captured by PD & returned to owner
01/24/03	Forest	A/?	Threatening people	Shot by PD
02/18/03	Forest	2 A + P's	Site of frequent escapes	Unknowns
03/27/03	Grant	A/?	Running lose	Unknown
05/01/03	Polk	A/ M	Killed by vehicle; started investigation	Disposed
05/07/03	Oconto	A/ M	Running lose, investigated death.	Died Unknown Cause
05/13/03	Sheboygan	2 A/?	Running Lose	Unknown
05/15/03	LaCrosse	A/?	Killed 4 calves	Shot

Table 9. Wolf pack territories 2002-2003. (mapped in Figure 2)

Pack Name	Map #	Year^a	Collared Wolves	# of Locations	Area (sq.mi.)
<i>Northern Forest</i>					
Ada Lake	71	Approx. ^b	None	None	NE ^c
Alvin Creek	73	Approx.	None	None	NE
Augustine Lake	56	1999	229	-	60
Averill Creek	64	2003	433	29	38
Bearsdale	21	Approx.	None	None	NE
Beaver Dam Lake	31	Approx.	None	None	NE
Bibbon Swamp	25	Approx.	None	None	NE
Bird Sanctuary	11	2003	447	42	28
Black Lake	34	2003	370	48	61
Blue Hills	16	Approx.	None	None	NE
Bootjack Lake	52	2003	336	46	155
Brush Creek	33	2002	310	-	55
Butler Rock	76	2003	432	19	51
Camp 6	75	Approx.	None	None	NE
Casey Creek	8	Approx.	None	None	NE
Chain Lake	18	2003	291	51	102
Chippewa River	57	2003	351	51	62
Crex Meadows	14	2003	388	54	105
Crotte Creek	12	2002	296	-	51
Dunbar	94	Approx.	None	None	NE
Eastside Firelane	55	Approx.	None	None	NE
Echo Valley	30	Approx.	None	None	NE
Eddy Creek	44	Approx.	None	None	NE
Escanaba Lake	68	Approx.	None	None	NE
Flag River	28	2003	438, 439	92	75
Giant Pine	70	2003	458	27	45
Ghost Lake	19	2002	241, 250	-	74
Harrison Hills	65	2003	246, 300	50	49
Haystack Corner	46	Approx.	None	None	NE
Hellhole Creek	32	2003	444	42	55
Hoffman Lake	54	2003	459	21	51
Hungry Run	38	Approx.	None	None	NE
Ino Swamp	24	Approx.	None	None	NE
Johnson Springs	72	Approx.	None	None	NE
Kidrick Swamp	49	Approx.	None	None	NE
Lake Nebagamon	7	2003	440	29	36
Lake Noquebay	78	Approx.	None	None	NE
Little Rice River	61	2003	355	52	61
Log Creek	39	2002	286	-	42
Long Lake	80	2003	393	41	15
Mondeaux Flowage	50	2003	441	15	37
Moose Lake	5	2003	434	34	13
Moquah	27	2003	431	45	70
Moreland Lake	22	Approx.	None	None	NE
Morgan Lake	74	Approx.	None	None	NE
Morrison Creek	41	Approx.	None	None	NE
Murray's Landing	53	Approx.	None	None	NE
Nineweb Lake	69	2000	318	-	136
North Empire	3	2000	298	-	20

Table 9. cont.

Pack Name	Map #	Year^a	Collared Wolves	# of Locations	Area (sq.mi.)
North Willow	60	2003	437, 461	50	63
O'Brien Lake	59	Approx.	None	None	NE
Oconto River	79	2003	435,443,449,450,452,453,454	228	98
Orienta Falls	9	Approx.	None	None	NE
Pelican Lake	66	2003	332	52	34
Pine Lake	58	2003	448	48	83
Pokegama River	1	Approx.	None	None	NE
Poplar River	10	Approx.	None	None	NE
Porcupine Lake	26	2003	241	46	132
Price Creek	43	2001	368	-	29
Rainbow Lake	23	1996	255	-	51
Ranger Island	63	2003	285	44	26
Riverside	13	Approx.	None	None	NE
Round Lake	35	2003	457	7	12
Shanagolden	37	Approx.	None	None	NE
Shoberg Lake	6	1999	290	-	55
Siskiwit Lake	29	2003	369	49	45
Skinner Creek	47	Approx.	None	None	NE
Smoky Hill	20	1998	259	-	63
Somo River	62	2003	456	23	85
South Empire	4	2003	297	40	57
Spirit Lake	51	Approx.	None	None	NE
Spring Creek	48	Approx.	None	None	NE
Stella Lake	67	2003	376	53	16
Sterling Barrens	15	Approx.	None	None	NE
Thornapple River	42	1997	239	-	42
Torch River	36	2003	248	50	61
Tranus Lake	17	2002	292	-	48
Truck Trail	2	2003	268	25	53
Tupper Creek	45	1998	276	-	53
West Firelane	40	2003	036	50	37
<u>Central Forest</u>					
Bear Bluff	86	2003	311,338,405,406,407,408,426	129	58
Colburn	94	Approx.	None	None	NE
Dead Creek	88	2001	348	-	25
Eau Claire River	81	Approx.	None	None	NE
Ft. McCoy	92	Approx.	None	None	NE
Iron Run	82	2003	309	41	43
Mead Wildlife Area	95	Approx.	None	None	NE
Noch Hanai	84	2001	269	-	38
Rattail	89	2003	340	42	50
Seneca	93	2003	341,343	82	77
Silo	91	Approx.	None	None	NE
South Bluff	87	Approx.	None	None	NE
Suk Cerney	90	2003	349, 427, 442	62	39
Wedges Creek	83	Approx.	None	None	NE
Wildcat Mound	85	2003	409,410,420,421,429	91	84

^aBased on available radio locations between 15 April of the previous year to 14 April of the year listed.

^bTerritory boundaries approximated based on snow track surveys, and public and agency reports.

^cNo estimate

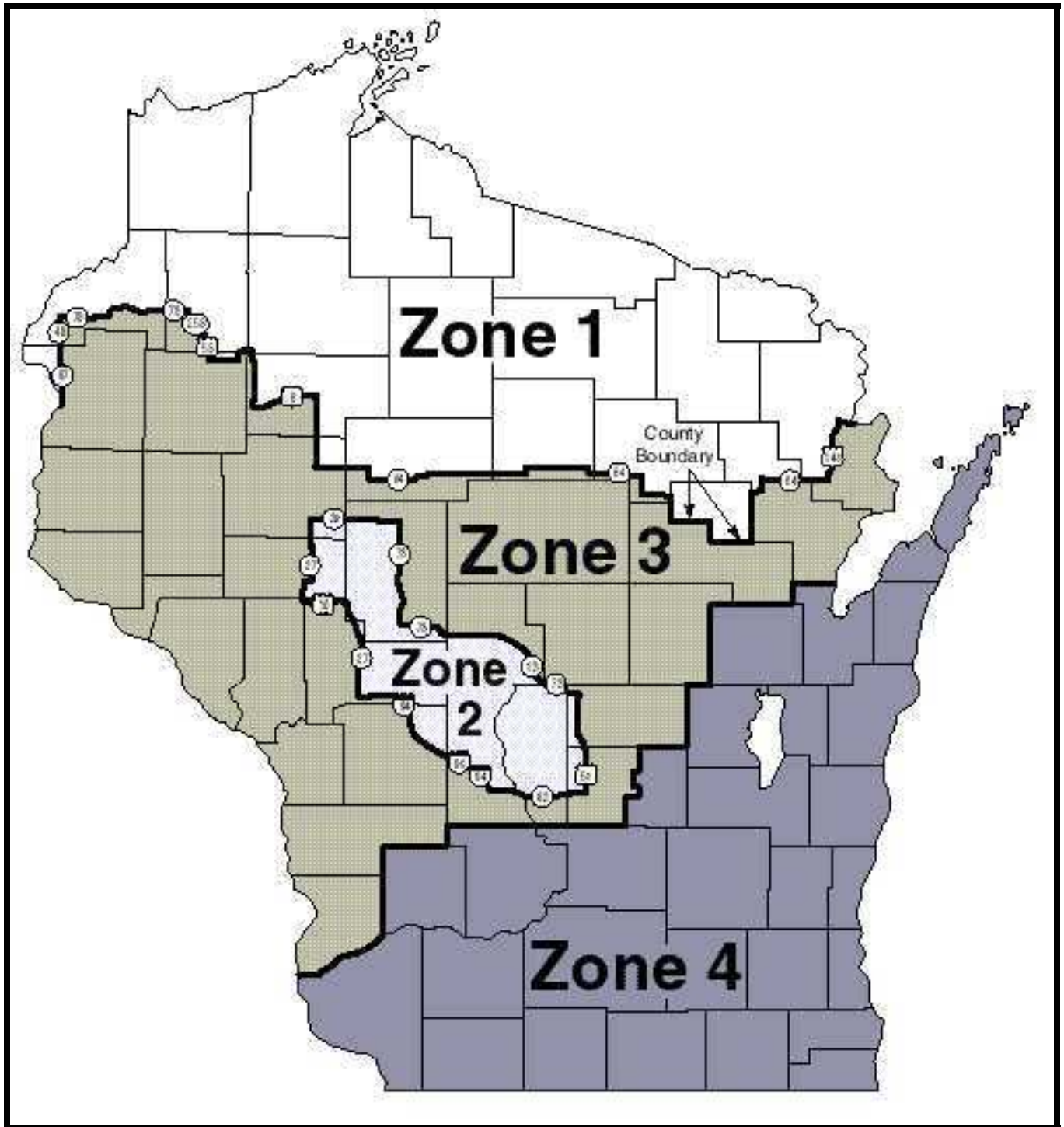


Figure 1. Wisconsin Wolf Management Zones as established by the 1999 State Wolf Management Plan.

Figure 2. Gray Wolf Distribution in Wisconsin: Winter 2002-2003

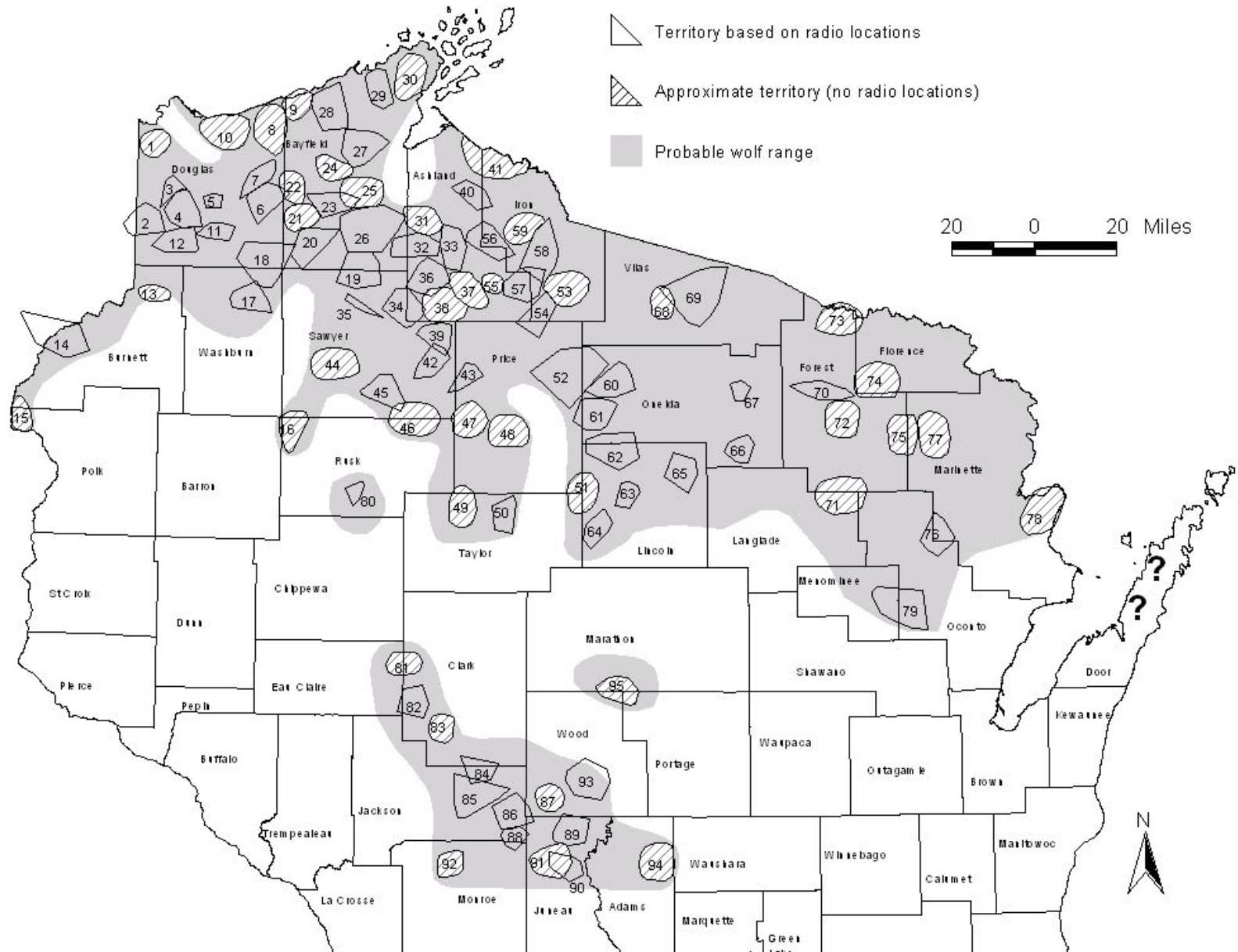


Figure 3. Changes in Wisconsin Gray Wolf Population: 1980-2003

