

Gray Wolf Population 2010-2011

By Adrian P. Wydeven and Jane E. Wiedenhoef

Abstract

The Wisconsin gray wolf (*Canis lupus*) population in late winter 2011 was 782 to 824 wolves, including 762 to 805 wolves in 202 or 203 packs and 19 or 20 loners. A total of 751 + wolves occurred outside of Indian reservations, thus the population exceeded its management goal of 350 wolves outside of Indian reservations by 401+ wolves. The wolf population increased 11% above the 2010 count of 704+ wolves. Wolf packs occurred in 34 Wisconsin counties and wolves were reported for 55 counties in the state. The wolf population is currently again listed as federally endangered after being delisted for 19 months in 2007-2008, and 2 months in 2009. A new federal delisting process started on May 5, 2011, and wolves should again be delisted late in 2011. Gray wolves have been state delisted since 2004.

Introduction

Gray wolves recolonized Wisconsin in the mid-1970's and WDNR has monitored populations annually since 1979. In 1975 the Wisconsin DNR listed the gray wolf as a state endangered species and downlisted them to threatened status in 1999. On August 1 2004, wolves were removed from the list of threatened species and classified as protected wild animals.

The U.S. Fish and Wildlife Service (USFWS) listed gray wolves in the eastern U.S. as endangered in 1967 and again in 1974. The USFWS downlisted wolves to a federally threatened species on April 1, 2003, as part of the Eastern Gray Wolf Distinct Population Segment. But because of a federal district court decision, on January 31, 2005 wolves were relisted as endangered in Wisconsin and other locations. Special Section 10 permits were granted by the USFWS in both 2005 and 2006 to allow limited take of depredating wolves, but permits were lost both years due to lawsuits. Wolves were designated as delisted in the Western Great Lakes Distinct Population Segment on March 12, 2007, but were relisted again on September 29, 2008, delisted again on May 3, 2009, and again relisted on July 1, 2009. This report represents wolf population information for a population that continues to be listed as federally endangered. The USFWS again published a proposed rule to delist wolves in the Western Great Lakes region on May 5, 2011, and expects to have wolves again delisted by the end of 2011.

When federal delisting is completed, intense population surveys will be required for the first five years after federal delisting. The enclosed report includes the type of information that will be provided for the eventual post-delisting monitoring. These surveys are also important for determining future management by the state. This report summarizes wolf survey activity for 2010 and portions of 2011.

Method

Wolf numbers were determined by live-trapping/ radio tracking (Mech 1974, Fuller and Snow 1988), howl surveys (Harrington and Mech 1982), and winter track surveys (Thiel and Welch 1981, Wydeven et al. 1996, Wydeven et al. 2009). Track surveys were conducted in blocks of suitable habitat (Mladenoff et al. 1995, 2009), or areas where wolves had been reported. Additional information on wolf abundance was determined from wolves reported by agency personnel or the general public through "Rare Mammal Observation Cards" (Wydeven 1992) and the "Rare Mammal

Observation" web reporting form, http://www.dnr.state.wi.us/org/land/er/forms/rare_mammal.asp. See Wydeven et al. (2009) for more details on the methods.

Results and Discussion

A minimum count of 782-824 wolves was obtained in Wisconsin in late winter 2010-2011 (Table 1). Average size of 158 northern packs (zone 1) was 3.6 to 3.8 wolves, 27 Central Forest packs (zone 2) was 4.4 to 4.6 wolves, and 17 or 18 west and central Wisconsin packs (zone 3) was 4.5 wolves per pack (Table 1). A total of 19 or 20 wolves were identified as lone wolves, but the total number of lone wolves across the state was probably underestimated.

The wolf population estimation for 2009-2010 was 690-733 wolves (Wydeven and Wiedenhoft 2010), but surveys in summer indicated that at least 7 pairs were missed. Thus we revised the 2010 count to 704 to 747 wolves, and thus the 2011 wolf population may have increased by 11 %. Between 1990 and 2000, the Wisconsin wolf population increased at an average annual increase of 22%, but between 2000 and 2007 had slowed to an annual growth rate of 12% (Wydeven et al. 2009). Average growth rate between 2000 and 2010 was 11%. While population growth rates have decreased some, suspected carrying capacity may be considerably higher than recent estimates (Van Deelen 2009), but more active management with delisting will likely also affect long-term potential for carrying capacity.

At least 202 or 203 packs were located in 34 Wisconsin counties (Figure 1, Tables 1 & 2). Average year-round territory area per collared wolf was 55.6 square miles in zone 1 (n=47), 41.0 square miles in zone 2 (n=8), and 62.0 square miles in zone 3 (n=1) (Table 2). We used 55.6 square miles for zone 1 territorial wolves and 41.0 square miles for zone 2 and 3 territorial wolves to assess amount of occupied wolf range. Although the single sample we have for zone 3 was higher, we feel zone 3 wolves probably occupy smaller territories similar to zone 2. The year-round area occupied by territorial wolves would be estimated at about 10,940 square miles in northern and central Wisconsin in 2010-2011, and if we included an interstitial area of 37% (see Fuller 1989), wolf range would cover 14,940 square miles. Among 769 wolves that appeared to occupy regular territory areas, average density would be about 1 wolf per 14 square miles. Wolf territories were focused on heavily forested areas of public and industrial forest land in those regions of the state, but more wolves were beginning to move into more mixed forest/agricultural areas in northwest and central Wisconsin.

Figure 2 illustrates the changes in the Wisconsin wolf population over the last 32 years. Although population growth rate averaged 22% annually during the 1990s, it declined to an average of 11% between 2000 and 2010. With federal downlisting in 2003, and by special permits in 2005 and 2006, some limited lethal controls were applied to depredating wolves. Between 2003 and 2006, when a mean of 5.5 % of the winter wolf population was removed by lethal control activities of depredating wolves, the population grew at an annual rate of 13% (2003 to 2007). In 2007, 37 wolves and 1 wolf-dog hybrid were lethally removed by USDA-Wildlife Services (WS), plus landowners legally shot 3 wolves on their land or 7.3% of the wolf population in winter 2007 was lethally removed (546+ wolves). In 2008, 39 wolves and 2 wolf dog hybrids were lethally removed, as well as 4 wolves legally shot by landowners, or 7.8% of the wolf population in winter 2008 (549+ wolves). In 2009 only 10 wolves were removed by government trapper or landowners due to the short period of delisting, resulting in only 1.6% of the winter population being removed. In 2010, only 16 wolves and 1 wolf-dog hybrid involved in human safety situations were removed, or 2.3 % of the winter 2010 population. Lack of lethal controls is one of the factors that allows this population to continue to increase. Even when in effect, there is little risk that any major decline would occur in the wolf population from these controls. If delisting had been in effect in 2010, only about 17% of state wolf packs would have been exposed to controls.

A total of 72 wolves and 4 wolf-dog hybrids were found dead in Wisconsin in 2010, as well as 4 wolves originally from Wisconsin died in adjacent states (Table 3). A total of 91 radio-tagged wolves were monitored by radio-telemetry in Wisconsin in 2010, and 18 (20%), including 2 wolves that died in adjacent states, were known to have died. This represents a relatively low mortality rate for adult wolves, but some of the collars lost may also represent possible mortalities that were not detected. Among 16 Wisconsin radio-collared wolves actively being monitored that died in the state, mortality included: 7 (44 %) illegal shooting, 1 (6 %) mange and other disease, 1 (6 %) other wolves, 2 (12 %) vehicle collisions, 2 (12%) euthanized for human safety, and 3 (19 %) unknown. The overall rate of illegal kill (44%) was less than 62 % detected in 2009, but a higher percentage of mortalities were unknown in 2010. The recent illegal kill was higher than the 1990s and when wolves were delisted in 2007 and 2008, when it normally was about 20% of mortality among collared wolves dying.

Mortality in the overall sample of 72 dead wolves (58 were ≥ 1 year old) included: 15 (21 %) illegal kills, 25 (35 %) vehicle collisions, 1 (1 %) train collision, 16 (22 %) depredation and human safety controls, 1 euthanized depredator (initially suspected as hybrid), 1 (1 %) euthanized sick/injured wolves, 2 (3 %) mange and other diseases, 1 (1 %) attacked by other wolves, 1 (1%) other natural mortality and 9 (12 %) unknowns. Natural mortalities such as disease and intraspecific strife tend to be higher for the collared wolves, and are infrequently detected in non-collared animals. Vehicle collisions tend to be higher for the non-collared sample, in part due to these being readily observed and reported, but also may be because the non-collared sample includes wolves dispersing through the state in marginal habitat with high density of roads. The 15 illegally killed wolves declined somewhat from the record 21 illegal kills detected in 2009. Dead wolves were detected in 22 Wisconsin counties including 10 counties in zone 1, 4 counties in zone 2, 9 counties in zone 3, and 1 county in zone 4 (some counties occurred in more than 1 zone). Dead wolves were detected in 32 Wisconsin Counties in 2009 (Wydeven and Wiedenhoeft 2010).

Wolf observations classified as "possible" or "probable" occurred in 55 Wisconsin counties in 2010, although 12 counties only had single wolf reports (Table 4). The 365 wolf observations reported in 2010 was similar to reports in 2009 (373 reports) and was higher than previous years (2008, 351 reports; 2007, 329 reports; 2006, 312 reports; 2005, 319 reports; 2004, 252 reports; 2003, 330 reports; and 2002, 355 reports). The number of reports in 2010 and 2009 was only slightly more than 2002 when the wolf population was half as small, indicating poor power in this index as a measure of wolf abundance. Highest rates of reported observations were for Price (23), Marinette (22), and Ashland (20) Counties. Highest observations were from counties with breeding packs, but reports were also received from 13 counties mainly in zone 3 (central and western Wisconsin) and 18 counties in zone 4 (southeast and southern Wisconsin). Some reports of wolves outside the northern and central forests may have been of dogs, coyotes or wolf-dog hybrids, but the mortality of a wolf in Dane County (Table 3), indicates wolves were traveling to zone 4 in southern Wisconsin. Although it appears that numbers of reported wolf observations does not closely track the wolf population, these reports continue to be useful for directing other surveys and supplementing these surveys, as well as providing broad information on wolf distribution and dispersal across the state.

The wolf count in 2010-2011 included 751-793 wolves outside Indian reservations in Wisconsin. The state long-term population goal was to maintain 350 wolves in the state outside Indian reservations (Wisconsin DNR 1999), thus the current count represents 401+ wolves above the population goal. During the recent delisting, more flexible controls were used on depredating and problem wolves to reduce depredations, but the relisting has reduced the WDNR and WS ability to apply these controls. With federal delisting a new wolf plan will be developed and the existing management goal will be reexamined.

The federal delisting goal for Wisconsin and Michigan was a population of 100 or more wolves for a period of 5 or more years (U. S. Fish and Wildlife Service 1992). The wolf population currently is about 1500 wolves for both states, and has been at 100 or more since 1994. The delisting process for the Western Great Lakes Distinct Population Segment completed on March 12, 2007, gave the states of Wisconsin, Michigan and Minnesota more flexible management programs for dealing with wolves in the region. Because of a lawsuit, wolves were again relisted on September 29, 2008. The USFWS again delisted wolves in the region on May 3, 2009, after addressing shortcomings of the initial delisting, but the USFWS failed to provide a public comment period on the updating of the delisting rule and resulted in wolves again being listed as endangered on July 1, 2009 (relisted as threatened in Minnesota). On May 4, 2011 the U.S Fish and Wildlife Service published a new proposed delisting rule for the Western Great Lakes region, and provided a public comment period on the new rule between May 5 and July 5, 2011.

<http://www.fws.gov/midwest/wolf/delisting/FRProposedDelistMay2011.htm>

A final rule delisting wolves in the region is expected to be completed by the end of 2011 or early 2012.

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Table 1. Pack and lone wolf summaries for Wisconsin in winter 2010-2011 (Map numbers refer to Figure 1). Evidence included Rvadio telemetry (R), Track surveys (T), Observations by agency or general public (O), and Depredation reports (D).

Map No.	Pack or Area	Survey Block	Counties	Win. Est.	Collared Wolves	Breeding Detected	Evidence
Zone 1							
1	Pokegama River	1	Douglas	3-5		Y	T
2	Belden Swamp	2	Douglas	6	W760F Y	Y	R & T
3	<i>Breitzman Lake</i>	2	Douglas	5		Y	T
4	<i>Jackson Box</i>	3,4	Douglas	4		Y	T
5	North Empire	3,4	Douglas	3-5		Y	T
6	South Empire	3,4	Douglas	3		Y	T
7	Moose Lake	4,5	Douglas	4		Y	T & O
8	Pikes Peak	4,5	Douglas	2	W616F A	?	R & T
9	Amnicon River	5,6	Douglas	3	W669F A	Y	T & R
10	South Range	5,7	Douglas	4-5		Y?	T
11	<i>Brule River</i>	6	Douglas	1	W637M A died	N	T & R
12	Lake Nebagamon	6	Douglas	9		Y	T
13	Muck Lake	6,26	Douglas, Bayfield	3		?	T
14	Casey Creek	7	Douglas	3		Y	O & T
15	Poplar River	7	Douglas	3-4		Y	T & O
16	Chain Lake	8,23	Douglas, Washburn	6	W791M A	Y	R & T
17	Shoberg Lake	8,26	Douglas, Bayfield	6	W664F A	Y	R & T
18	<i>Ox Creek</i>	8	Douglas	2		Y	T
	W753F disperser	8		1	W753F Y	N	R
19	Bird Sanctuary	9,8,4,6	Douglas	3	W672F A	Y	T & R
20	Crotte Creek	9	Douglas	3-5	W602F A	Y	R & T
21	<i>Leder Lake</i>	9,10	Douglas, Washburn	4		Y	T
22	Namakagon Barrens	10	Burnett, Doug., Wash.	6		Y	T & O
23	Riverside	10,12	Burnett	4	W776F A	Y	R & T
24	Chase Brook	11	Burnett, Douglas	3		Y	T
25	Moose Road	11,2	Douglas	12	W564F A	Y	R & T
26	Lipsett Lake	12	Burnett	2	W774F Y	?	T, R & O
27	Stuntz Brook	12,10	Washburn	4		Y	T
28	Webb Creek	12	Washburn	2	W761M A	?	O, R & T
29	Amsterdam Slough	13	Burnett	2		Y	T
30	Crex Meadow	13	Burnett	5		Y	T & O
31	Falun Meadows	13	Burnett	4		Y	T & O
32	Sterling Barrens	14	Burnett	4		Y	T & O
33	Wolf Creek	14	Polk	2		Y	T
34	Wolf Lake	19	Washburn, Sawyer	3		Y	T
35	Weirgor Lake	20A,19	Sawyer	2		Y	T
36	<i>Nail Creek</i>	20A	Rusk, Sawyer	6-7		Y	T
37	Blue Hills North	20A	Rusk, Sawyer	5		Y	T
38	<i>Dugan Lake</i>	21	Washburn	2-3		N	T & O
39	Bean Brook	21	Washburn, Sawyer	1		N	O & T
40	Spring Brook	22	Washburn	2		Y	T

Table 1. Continued.

Map No.	Pack or Area	Survey Block	Counties	Win. Est.	Collared Wolves	Breeding Detected	Evidence
41	Tranus Lake	22	Washburn	4		Y	T
42	<i>Chittamo</i>	23,10,22	Washburn	2	W784M A died	Y	R & T
43	Frog Creek	23	Washburn,Sawyer	4		Y	T & O
44	Smoky Hill	23,8	Douglas,Bayfield	4		Y	T & O
45	Ghost Lake	24,37	Sawyer,Bayfield	6-7		Y	T & O
46	Seeley Hills	24,29	Sawyer,Bayfield	6		Y	T & O
47	Bearsdale	25	Bayfield	3	W663F A died	Y	T & R
48	Sabin Lake	25,24	Sawyer,Bayfield	2		Y	O & T
49	Moreland Lake	26,6	Bayfield,Douglas	6	W670F A W757M A	Y	R, T & O
50	Rainbow Lake	26,27,25	Bayfield	4	W626F A	Y	T & R
51	Delta	27,28	Bayfield	2		Y	T
52	Ino Swamp	27,30	Bayfield	7		Y	T
53	Pigeon Lake	27,25	Bayfield	4	W615F A	Y	T & R
54	Bibon Swamp	28	Bayfield	3-5		Y	T
55	Mason	28,34	Bayfield	3		Y	T
56	Porcupine Lake	29,35	Bayfield	4		Y	T
57	Moquah	30	Bayfield	3		Y	T & O
58	Flag River	31,30,32	Bayfield	4	W673M A died	Y	T & R
59	Orienta Falls	31	Bayfield,Douglas	2		Y	T & O
60	Siskiwit Lake	32,33	Bayfield	3		Y	T
61	Echo Valley	33	Bayfield	4		?	T
62	Twin Lakes	33,30,32	Bayfield	2	W773M Y	?	R
63	Beaver Dam Lake	34,35,36	Ashland,Bayfield	3-4	W671F A	?	R, T & O
64	White River	34	Bayfield,Ashland	2		?	O
65	Hellhole Creek	35	Bayfield,Ashland	3		?	T
66	Brush Creek	36,57	Ashland	6-7	W651M A	Y	R, T & O
67	Black Lake	37,38,40	Sawyer,Ashland	3	W573F A dispersed	Y	T, O & R
68	<i>Mukwonago Trails</i>	37	Sawyer	5		Y	O & T
69	Round Lake	37,42	Sawyer	2		?	T
70	Venison Creek	37,42	Sawyer	2		?	T
71	Shanagolden	38,36	Ashland	3		Y	T
72	Torch River	38,37,36	Ashland	2	W764M A dispersed	Y	R & T
73	Kakagon Sloughs	39,34	Ashland	5	W667M A	Y?	R & O
74	West Firelane	39,60	Ashland,Iron	2	W779M P W780F Y	?	R & T
	W774F loner	39	Ashland	1	W774F Y	N	R
	W764M disperser	40	Ashland	1	W764M A	N	R
75	Hungry Run	40	Ashland,Sawyer	4-5		Y	T
76	Log Creek	40	Price,Sawyer	5		Y	T
77	Pine Creek	40,38,55,56	Price,Ashland	3		Y	T

Table 1. Continued.

Map No.	Pack or Area	Survey Block	Counties	Win. Est.	Collared Wolves	Breeding Detected	Evidence
78	Davis Lake	41,52	Price	3		Y	T & O
79	Price Creek	41,44,43	Price,Sawyer	4	W691M A	Y	R
80	Thornapple River	41	Sawyer	2		Y	
81	<i>Tuscobia Trail</i>	41,37	Sawyer	2	W630F A	N?	R & T
	W573F disperser	42	Sawyer	1	W573F A	N	R
82	Eddy Creek	42	Sawyer	3		Y	T
83	Winter	42,43,41	Sawyer	4		Y	T & O
84	Haystack Corner	43	Sawyer,Rusk	2	W650F A	Y	R & T
85	Lea Lake	43	Rusk	4	W759M Y	?	R & T
86	Main Creek	43,45	Rusk	2		?	T
87	Tupper Creek	43,20A	Sawyer	4		Y	T
88	Carpenter Creek	44	Price	3	W752F Y	?	R & T
89	Skinner Creek	44	Price,Sawyer,Rusk	5	W555M A	Y	T & R
90	Spring Creek	44,46	Price	4		Y	T & O
91	Catawba	46	Price	2		?	T
92	Green Creek	46	Price,Rusk,Taylor	3		?	T
93	Chequamegon Waters	47, 153	Taylor	2-4		Y	T
94	Kidrick Swamp	47	Taylor	2-3		Y	T
95	Mondeaux Flowage	47,46	Taylor	2		Y	T
96	Averill Creek South	48,70,135	Lincoln	3		?	T & O
97	Little Black River	48	Taylor	4		Y	T
98	Alcohol Creek	49,50	Price	2		Y	T
99	Spirit Lake	49,48	Taylor,Price	2		?	T
100	Marheimie Creek	50,49	Price,Lincoln	3	W686M A	?	R & T
	W754F disperser	50	Price	1	W754F Y	N	R
101	Clifford	51	Price,Oneida	4		Y?	T
102	Dover Loop	51	Price	6		Y	T
103	Musser Creek	51,53,52	Price	10		Y	T
104	Thunder Creek	51,53,65	Price,Oneida	6	W687M A dispersed	Y	T, R & O
105	Wintergreen	52,54,55	Price	3	W793F A	Y	T, R & D
106	Wilson Flowage	52,53	Price	3		Y	T
107	Bootjack Lake	53,54,65	Oneida,Price,Vilas	5	W623F A	Y?	T, O & R
108	Miles Lake	54	Iron,Vilas	2		?	T
109	Hoffman Lake	55,54	Price,Iron,Ashland	4-6		Y	T & O
110	Murray's Landing	55,64,62	Iron	2		Y	T
111	Chippewa River	56,58,57	Iron,Ashland	4		Y?	T
112	Magee Creek	56,57	Ashland	2		?	T & D
113	Augustine Lake	57	Iron,Ashland	4		Y	T
114	O'Brien Lake	57,59	Iron	4		Y?	T & O
	W694F disperser	58	Iron	1	W694F A	N	R
115	Pine Lake	58,55,61	Iron	2	W508F A	?	R
116	<i>Merril Lake</i>	61,62,MI	Iron	2		?	T
117	Cedar Lake	62,63	Vilas,Iron	2-3		Y	T & O
118	Whitney Lake	63	Vilas	4		Y?	O & T

Table 1. Continued.

Map No.	Pack or Area	Survey Block	Counties	Win. Est.	Collared Wolves	Breeding Detected	Evidence
119	Little Rock Lake	64,80	Vilas	5	W692F A	Y?	R, T & O
	Pokegama Trail	64	Vilas	1		N	T
120	North Willow	65,67	Oneida	9	W754F Y dispersed W792F P	Y	R & T
121	Scotchman Lake	65,54	Oneida	2	W690F A	?	R
122	Bradley	67,68	Lincoln,Oneida	6		Y	T & O
123	Little Rice River	67,51	Oneida	5	W687M A W755F A dispersed	Y	R & T
124	Swamp Creek	67	Oneida	3		Y	T
125	Somo River	68	Lincoln	3		?	T
126	Ranger Island	69	Lincoln	4		Y	T
127	Averill Creek North	70,69	Lincoln	6		Y	T
128	Harrison Hills	71,75	Lincoln	3		?	T & O
129	Clearwater Creek	72,74	Langlade	3		Y	T
130	Prairie River	74	Langlade	2		?	T
131	Crescent Flats	75	Oneida,Lincoln	2-3		?	O & T
132	Pelican Lake	76,74	Oneida	6-7		Y?	T & O
133	Stella Lake	77	Oneida	3		Y	T
134	Casian	78,79,77	Oneida	3-5	W688F A	?	R, T & O
135	Escanaba Lake	80,81	Vilas	3	W500B F A	Y	R & T
136	Pincherry Lake	80	Vilas	2		Y	T & O
137	Nineweb Lake	81,80,82	Vilas	3		Y	T
138	Muskrat Creek	82	Vilas	3		Y	T
	Kentuck Lake loner	83	Vilas	1		N	T & O
139	Giant Pine	84,85,96,97	Forest	10	M2749F A	Y	R, T & O
140	Atkins Lake	86,77	Oneida,Forest	3		Y	O & T
141	Jack Lake	88	Langlade	3-5		?	T
142	Evergreen	90,66,91	Menom,Lang,Oconto	2	M2761F A	N?	R & T
143	South Branch	90, 131	Menominee,Oconto	2		?	T
144	West Branch	90, 130	Menominee,Shawano	2		?	T
145	Zoar	90,66,130	Menominee,Langlade	3	M2778F Y	?	T
	W768M disperser	90	Menominee	1	W768M A	N	R
146	Ada Lake	92	Oconto,Langlade	3		Y	T
147	Bob's Lake	94,95,101	Forest	3	M734M A	Y	R, O & T
148	McArthur Pine	95,85,100	Forest	4		Y	O & T
149	<i>Lost Lake</i>	98	Florence	2		Y	T
150	Mud Lake	99,98	Florence & MI	2		Y	T & O
151	Morgan Lake	100,98	Florence,Forest	5		Y	T
152	Camp 6	101	Forest,Marinette	2-3		?	T
153	Knowles Creek	102	Forest	4		Y	T
154	Peshtigo Brook	104	Oconto,Marinette	2		N?	O & T
155	Eagle Creek	106, 102	Marinette	3-4		Y	T & O
156	Pike River	107	Marinette	3-4		?	T
157	<i>Spread Eagle Barrens</i>	108, 109	Florence	4		Y	T

Table 1. Continued.

Map No.	Pack or Area	Survey Block	Counties	Win. Est.	Collared Wolves	Breeding Detected	Evidence
158	Dunbar	108	Florence,Marinette	4		Y?	T
159	Pemene	110	Marinette,Florence	6	W782F A	Y	O, T & R
160	Island Lake	112, 106	Marinette	3		?	T
Zone 1 Total			568-600 in 158 packs + 11 loners = 579-611 (3.6-3.8 wolves / pack)				
Zone 2							
161	Augusta	117	Eau Claire	5		Y	T
162	Dickison Creek	117	Clark	4		Y	T
163	Eau Claire River	117	Eau Claire,Clark	5	W657M A	Y	T & R
164	Iron Run	117, 118	Clark,Eau Claire	5-6		Y	T
165	Meadows Creek	118, 117	Clark	4		Y	T
166	Wedges Creek	118	Clark	6		Y	T
167	Ballard Road	119	Clark,Jackson	6		Y	T
168	Brushy Ridge	119	Clark,Jackson	4		Y	T
169	Davidson Creek	119	Jackson	5		Y	T
170	Noch Hanai	119	Jackson	4	W772M A	Y	T & R
171	Pray	120,119,121	Jackson	2	W652F A	Y	T & R
172	Starlight	120	Jackson	3-4	W654F A	?	T & R
173	Wildcat Mound	120	Jackson	5-7		Y	T
174	Bear Bluff	121	Jackson	4		?	O & T
175	Mather West	121, 122	Monroe,Jackson	5		Y?	T
176	McKenna	121	Jackson	8		Y	T
177	South Bluff	121, 122	Wood,Juneau	7		Y	T & O
178	Turner Creek	121, 124	Wood	3		?	O
179	Mather East	122, 121	Juneau	4	W635F A	Y	T, R & O
180	Silo	122, 129	Juneau	7		Y	T & O
181	Seneca	124, 140	Wood	6-7		Y	T
182	2-Korner	124	Wood,Jackson	4	W684F A	N?	R & T
183	Rattail	125	Juneau	1		N	T
184	Creamery	125	Wood	3		Y	T
185	Colburn	127, 128	Adams,Waushara	3		Y	T & O
186	<i>Leola Marsh</i>	127	Adams,Portage	2	W763F Y	Y	R
187	Petenwell	127	Adams	2	W763F Y dispersed	Y	T & R
188	Caves Creek	128	Marquette	1		N	O & T
189	Quincy Bluff	128	Adams	1		N	T
	Meredith	129	Juneau	1		N	T & O
190	<i>Mill Bluff</i>	129	Juneau,Monroe	2-3		Y	T
Zone 2 Total			118-124 in 27 packs + 4 loners = 122-128 (4.4-4.6 wolves/ pack)				
Zone 3							
191	Clam River	17	Burnett,Polk	3		Y	T
192	Sand Creek	17,18	Burn,Polk,Barr,Wash.	3		?	T
193	Blue Hills South	20B,20A,126	Barron,Rusk	3		N?	T
194	<i>Ackley Wildlife Area</i>	72,73	Lincoln,Lang,Marath.	3		?	O & T

Table 1. Continued.

Map No.	Pack or Area	Survey Block	Counties	Win. Est.	Collared Wolves	Breeding Detected	Evidence
195	<i>Lake Mary</i>	113	Marinette & MI	4		N?	T & O
196	Lake Noquebay	113	Marinette	5		Y	T
197	<i>Clear Creek</i>	120, 123	Jackson, Monroe	4		Y	O & T
198	Ft. McCoy	123	Monroe	12		Y	T & O
199	South Post	123	Monroe	8	W751F A	Y	T, O & R
200	Spence Lake	126	Chippewa, Rusk	4		Y	T
201	Long Lake	126, 45	Rusk	1-2		N?	O & T
202	Miller Creek	130, 90	Shawano, Menominee	6	W658F A	Y?	R & T
203	<i>Tilleda</i>	130, 138	Shawano	3-5		Y	T & O
204	Mead	133	Marath, Wood, Portage	8		Y	T
205	<i>Dewey Marsh</i>	137	Portage, Marathon	3-4		Y	T
206	Split Rock	138	Shawano, Waupaca	3		Y	T & O
207	<i>Navarino</i>	139	Shawano, Waupaca	2		N?	O
208	Fogarty Marsh	140	Portage, Wood	1		N	T
209	Lamb's Creek	148, 149	Dunn	2		Y	T
	Loner	151	Chippewa	1		N	T
	W778F disperser	0	Jackson	1	W778F Y	N	R
Zone 3 Total			76-81 in 17-18 packs + 4-5 loners = 81-85 (4.5 wolves / pack)				
STATEWIDE TOTAL			762-805 in 202-203 packs + 19-20 loners = 782-824 (3.8-4.0 wolves / pack) 751-793 off reservations				
MI Packs detected in WI, but counted in MI							
210	Little Girl's Point	60, 39	Iron & MI	6		Y	O & T
211	<i>Menominee River</i>	111	Marinette & MI	2-3		?	T

Table 2. *Wolf pack territories 2010-2011 (mapped in Figure 1).*

Pack Name	Map #	Year^a	Collared Wolf	# of radio locations	# of other locations^b	Area (Mi²)
Zone 1						
Ada Lake	146	Approx.	none	0	3	NE
Alcohol Creek	98	Approx.	none	0	1	NE
Amnicon River	9	2011	W669 ^c	47(43)	8	46.3
Amsterdam Slough	29	Approx.	none	0	0	NE
Atkins Lake	140	Approx.	none	0	4	NE
Augustine Lake	113	Approx.	none	0	8	NE
Averill Creek North	127	2010	W647 ^c	0	14	NE
Averill Creek South	96	Approx.	none	0	6	NE
Bean Brook	39	Approx.	none	0	1	NE
Bearsdale	47	2011	W663 ^c	48(47)	5	26.4
Beaver Dam Lake	63	2011	W671 ^c	51	8	90.1
Belden Swamp	2	2011	W760 ^c	48	4	25.6
Bibon Swamp	54	Approx.	none	0	1	NE
Bird Sanctuary	19	2011	W672 ^c	50(48)	2	48.3
Black Lake	67	2011	W573 ^c	43(42)	130	69.1
Blue Hills North	37	Approx.	none	0	3	NE
Bob's Lake	147	2011	M734	56	2	56.4
Bootjack Lake	107	2011	W623 ^c	56(55)	4	83.3
Bradley	122	2009	W617 ^c	0	5	NE
Breizman Lake	3	Approx.	none	0	5	NE
Brule River	11	Approx.	W637 ^c	19	4	NE
Brush Creek	66	2011	W651	54(52)	3	42.0
Camp 6	152	Approx.	none	0	4	NE
Carpenter Creek	88	2011	W752	22	1	10.7
Casey Creek	14	2011	W757	33(29)	8	32.7
Casian	134	2011	W688 ^c	50(47)	3	129.5
Catawba	91	Approx.	none	0	1	NE
Cedar Lake	117	2010	W674 ^c	0	3	NE
Chain Lake	16	Approx.	W791 ^c	16(10)	4	NE
Chase Brook	24	Approx.	none	0	8	NE
Chequamegon Waters	93	Approx.	none	0	2	NE
Chippewa River	111	Approx.	none	0	1	NE
Chittamo	42	2011	W784 ^c	33(32)	5	50.4
Clearwater Creek	129	Approx.	none	0	3	NE
Clifford	101	Approx.	none	0	4	NE
Crescent Flats	131	2007	W568 ^c	0	8	NE
Crex Meadow	30	2010	W698 ^c	0	5	NE
Crotte Creek	20	2011	W602	50	2	28.0
Davis Lake	78	Approx.	none	0	7	NE
Delta	51	2010	W627 ^c	0	2	NE
Dover Loop	102	Approx.	none	0	5	NE
Dugan Lake	38	Approx.	none	0	3	NE
Dunbar	158	2009	W646 ^c	0	6	NE
Eagle Creek	155	Approx.	none	0	12	NE

Table 2. Continued.

Pack Name	Map #	Year^a	Collared Wolf	# of radio locations	# of other locations^b	Area (Mi²)
Echo Valley	61	Approx.	none	0	3	NE
Eddy Creek	82	Approx.	none	0	1	NE
Escanaba Lake	135	2011	W500B	56	3	98.6
Evergreen	142	2011	M2761 ^c	56(52)	4	236.4
Falun Meadows	31	Approx.	none	0	8	NE
Flag River	58	Approx.	W673 ^c	14	7	NE
Frog Creek	43	Approx.	none	0	6	NE
Ghost Lake	45	2011	W694 ^c	32(28)	34	40.4
Giant Pine	139	2011	M2749 ^c	55	18	192.6
Green Creek	92	Approx.	none	0	3	NE
Harrison Hills	128	2010	W617 ^c	0	7	NE
Haystack Corner	84	2011	W650	53(52)	1	85.0
Hellhole Creek	65	Approx.	none	0	4	NE
Hoffman Lake	109	2009	W632 ^c	0	14	NE
Hungry Run	75	Approx.	none	0	18	NE
Ino Swamp	52	2009	W561 ^c	0	5	NE
Island Lake	160	Approx.	none	0	5	NE
Jack Lake	141	Approx.	none	0	4	NE
Jackson Box	4	Approx.	none	0	3	NE
Kakagon Sloughs	73	2011	W667 ^c	51(47)	0	58.4
Kidrick Swamp	94	Approx.	none	0	2	NE
Knowles Creek	153	Approx.	none	0	3	NE
Lake Nebagamon	12	2010	W679 ^c	15	12	NE
Lea Lake	85	2011	W759	52	1	22.6
Leder Lake	21	Approx.	none	0	2	NE
Lipsett Lake	26	2011	W774 ^c	35	2	24.4
Little Black River	97	Approx.	none	0	2	NE
Little Rice River	123	2011	W687,W755	66(63)	3	46.0
Little Rock Lake	119	2011	W692 ^c	56	4	49.5
Log Creek	76	Approx.	none	0	3	NE
Lost Lake	149	Approx.	none	0	1	NE
Magee Creek	112	2010	M726,W696 ^c	0	2	NE
Main Creek	86	Approx.	none	0	1	NE
Marheimie Creek	100	2011	W686	56(55)	3	43.3
Mason	55	Approx.	W627 ^c	17(14)	3	NE
McArthur Pine	148	Approx.	none	0	4	NE
Merril Lake	116	Approx.	none	0	1	NE
Miles Lake	108	2010	W503 ^c	0	1	NE
Mondeaux Flowage	95	Approx.	none	0	3	NE
Moose Lake	7	Approx.	none	0	4	NE
Moose Road	25	2011	W564 ^c	50	6	45.2
Moquah	57	2010	W662 ^c	0	6	NE
Moreland Lake	49	2011	W670,W757 ^c	66(64)	5	23.2
Morgan Lake	151	2010	M719 ^c	0	5	NE
Muck Lake	13	Approx.	none	0	3	NE
Mud Lake	150	Approx.	W783 ^c	4	4	NE

Table 2. Continued.

Pack Name	Map #	Year^a	Collared Wolf	# of radio locations	# of other locations^b	Area (Mi²)
Mukwonago Trails	68	Approx.	none	0	10	NE
Murray's Landing	110	2009	W680 ^c	0	3	NE
Muskrat Creek	138	Approx.	none	0	4	NE
Musser Creek	103	Approx.	none	0	11	NE
Nail Creek	36	Approx.	none	0	3	NE
Namakagon Barrens	22	Approx.	none	0	10	NE
Nineweb Lake	137	Approx.	W645 ^c	0	4	NE
North Empire	5	Approx.	none	0	8	NE
North Willow	120	2011	W754,W792,W793	81	3	80.8
O'Brien Lake	114	Approx.	none	0	2	NE
Oriente Falls	59	Approx.	none	0	8	NE
Ox Creek	18	2011	W637 ^c	24(23)	2	27.1
Pelican Lake	132	Approx.	none	0	6	NE
Pemene	159	2011	W782 ^c	43(42)	12	56.4
Peshtigo Brook	154	Approx.	none	0	8	NE
Pigeon Lake	53	2011	W615	50	6	42.3
Pike River	156	Approx.	none	0	7	NE
Pikes Peak	8	2011	W616	49	0	37.4
Pincherry Lake	136	Approx.	none	0	1	NE
Pine Creek	77	Approx.	none	0	8	NE
Pine Lake	115	2011	W508	56	0	43.1
Pokegama River	1	Approx.	none	0	2	NE
Poplar River	15	Approx.	none	0	5	NE
Porcupine Lake	56	2004	W241 ^c	0	5	NE
Prairie River	130	Approx.	none	0	3	NE
Price Creek	79	2011	W691,W752 ^c	43	3	70.9
Rainbow Lake	50	2011	W570,W626,W697	72	3	64.5
Ranger Island	126	2004	G99,W479 ^c	0	20	NE
Riverside	23	2011	W776 ^c	39	7	31.6
Round Lake	69	Approx.	none	0	2	NE
Sabin Lake	48	2010	M2737, W511 ^c	8	6	NE
Scotchman Lake	121	2011	W690	26(24)	0	14.7
Seeley Hills	46	Approx.	none	0	5	NE
Shanagolden	71	2011	W475 ^c	28	11	43.8
Shoberg Lake	17	2011	W664 ^c	50(48)	4	38.9
Siskiwit Lake	60	2003	W369 ^c	0	6	NE
Skinner Creek	89	2011	W555 ^c	53	5	43.6
Smoky Hill	44	2008	W638 ^c	0	12	NE
Somo River	125	2006	W514 ^c	0	2	NE
South Branch	143	Approx.	none	0	2	NE
South Empire	6	Approx.	none	0	3	NE
South Range	10	Approx.	none	0	9	NE
Spirit Lake	99	Approx.	W456 ^c	0	1	NE
Spread Eagle Barrens	157	Approx.	none	0	2	NE
Spring Brook	40	Approx.	none	0	6	NE
Spring Creek	90	Approx.	none	0	2	NE

Table 2. Continued.

Pack Name	Map #	Year^a	Collared Wolf	# of radio locations	# of other locations^b	Area (Mi²)
Stella Lake	133	Approx.	none	0	4	NE
Sterling Barrens	32	Approx.	none	0	12	NE
Stuntz Brook	27	Approx.	none	0	1	NE
Swamp Creek	124	2009	W611 ^c	0	7	NE
Thornapple River	80	Approx.	none	0	2	NE
Thunder Creek	104	2011	W687 ^c	38	4	40.7
Torch River	72	2011	W764 ^c	35(34)	3	35.4
Tranus Lake	41	Approx.	none	0	5	NE
Tupper Creek	87	Approx.	none	0	4	NE
Tuscobia Trail	81	2011	W630	34(32)	0	33.4
Twin Lakes	62	2011	W773	46	0	40.3
Venison Creek	70	Approx..	none	0	3	NE
Webb Creek	28	2011	W761 ^c	24	1	28.7
Weirgor Lake	35	2008	W606 ^c	0	3	NE
West Branch	144	Approx.	none	0	1	NE
West Firelane	74	2011	W779,W780 ^c	20(19)	3	64.8
White River	64	Approx.	none	0	0	NE
Whitney Lake	118	2008	W649 ^c	0	3	NE
Wilson Flowage	106	Approx.	none	0	6	NE
Winter	83	Approx.	none	0	19	NE
Wintergreen	105	2011	W770,W682,W793 ^c	63(56)	813	70.9
Wolf Creek	33	Approx.	none	0	0	NE
Wolf Lake	34	Approx.	none	0	8	NE
Zoar	145	Approx.	M2778 ^c	5	2	NE

Zone 1 Avg. territory size = 55.6 mi² (n=47)

Zone 2						
Augusta	161	Approx.	none	0	7	0.0
Ballard Road	167	Approx.	none	0	11	0.0
Bear Bluff	174	2011	W778,W790 ^c	130	5	20.6
Brushy Ridge	168	Approx.	none	0	9	0.0
Caves Creek	188	Approx.	none	0	3	0.0
Colburn	185	2011	W762,W763 ^c	25(24)	19	93.9
Creamery	184	Approx.	none	0	4	0.0
Davidson Creek	169	Approx.	W487 ^c	19	6	0.0
Dickison Creek	162	Approx.	none	0	7	0.0
Eau Claire River	163	Approx.	W657	20(19)	8	0.0
Iron Run	164	2010	W676 ^c	0	7	0.0
Leola Marsh	186	Approx.	W763	18(16)	0	0.0
Mather East	179	2011	W635 ^c	67	21	62.3
Mather West	175	2010	W641 ^c	0	0	0.0
McKenna	176	Approx.	none	0	8	0.0
Meadows Creek	165	2011	W657 ^c	28(25)	2	34.3
Mill Bluff	190	Approx.	none	0	5	0.0
Noch Hanai	170	2011	W683,W772 ^c	31(29)	48	25.0
Petenwell	187	Approx.	W763 ^c	9(8)	3	0.0
Pray	171	2011	W652,W771 ^c	59(49)	6	44.2

Table 2. Continued.

Pack Name	Map #	Year ^a	Collared Wolf	# of radio locations	# of other locations ^b	Area (Mi ²)
Quincy Bluff	189	Approx.	none	0	3	0.0
Rattail	183	Approx.	none	0	2	0.0
Seneca	181	2004	W341,W414 ^c	0	9	0.0
Silo	180	Approx.	none	0	17	0.0
South Bluff	177	2008	W559 ^c	0	20	0.0
Starlight	172	2011	W654 ^c	49	3	29.8
Turner Creek	178	Approx.	none	0	1	0.0
2-Korner	182	2011	W684 ^c	49	3	18.2
Wedges Creek	166	2010	W677 ^c	0	4	0.0
Wildcat Mound	173	Approx.	none	0	7	0.0

Zone 2 Avg. territory size = 41.0 mi² (n=8)

Zone 3						
Ackley Wildlife Area	194	Approx.	none	0	2	0.0
Blue Hills South	193	Approx.	none	0	4	0.0
Clam River	191	2007	M2715 ^c	0	3	0.0
Clear Creek	197	Approx.	none	0	3	0.0
Dewey Marsh	205	Approx.	none	0	9	0.0
Fogarty Marsh	208	Approx.	none	0	1	0.0
Ft. McCoy	198	Approx.	none	0	20	0.0
Lake Mary	195	Approx.	none	0	4	0.0
Lake Noquebay	196	Approx.	none	0	11	0.0
Lamb's Creek	209	Approx.	none	0	7	0.0
Long Lake	201	Approx.	none	0	2	0.0
Mead	204	Approx.	none	0	2	0.0
Miller Creek	202	2011	W658	61	4	62.0
Navarino	207	Approx.	none	0	4	0.0
Sand Creek	192	Approx.	none	0	2	0.0
South Post	199	Approx.	W751 ^c	15	18	0.0
Spence Lake	200	Approx.	none	0	6	0.0
Split Rock	206	Approx.	none	10	9	0.0
Tilleda	203	Approx.	W659 ^c	16(13)	4	0.0

Zone 3 Avg. territory size = 62.0 Mi² (n=1)

NE = No estimate

^a Pack territory boundaries based on available radio locations between 15 April of the previous year to 14 April of the year listed. Approx = Territory boundaries were approximated based on track surveys, mortalities, depredations, public and agency reports, and historical location of pack.

^b Other locations from track surveys, mortalities, depredations, & public and agency reports in 2010-2011.

^c Territory boundaries based on radiolocations have been significantly modified based on additional location information for this pack and/or surrounding packs.

Table 3. Wolf mortality in Wisconsin in 2010.

Date	Wolf Number	Age/ Sex	County	Cause	Pack
Zone 1					
01/02/10		A/F	Vilas	Illegally killed	Miles Lake
01/05/10	W693*	A/F	Bayfield	Disease – mange	Rainbow Lake
01/12/10		P/F	Douglas	Vehicle collision	Spruce River
01/12/10	W498*	A/F	Douglas	Vehicle collision?/ trauma	Shoberg Lake
02/04/10	M2752**	A/F	Vilas	Trauma (Possible trap injury)	MI Pack
02/11/10		A/M	Rusk	Vehicle collision	Lea Lake
02/16/10		A/M	Ashland	Vehicle collision	Black Lake
02/20/10		A/M	Ashland	Vehicle collision	Beaver Dam Lake
03/15/10	W503*	A/F	Price	Illegally killed – shot	Miles Lake
03/31/10		A/F	Ashland	Disease-mange	West Firelane
04/03/10		A/M	Lincoln	Vehicle collision	Disperser
04/29/10		Y/F	Douglas	Vehicle collision	Bird Sanctuary
04/30/10		A/?	Douglas	Unknown	Shoberg Lake
05/03/10	W634*	A/F	Douglas	Unknown	Belden Swamp
05/15/10	(H)? ^a	A/F	Price	Euthanized – Depredation	Skinner Creek
05/24/10	W697*	A/M	Bayfield	Vehicle collision	Rainbow Lake
07/18/10	W511*	A/F	Sawyer	Illegally killed - Shot	Sabin Lake
07/27/10		Y?/M	Iron	Vehicle collision	Murray's Landing
08/03/10	W682*	A/M	Price	Unknown	Wintergreen North
08/06/10		A/F	Douglas	Vehicle collision	Casey Creek
08/11/10		A/M	Price	Euthanized – Health & Safety	Wintergreen South
08/17/10		Y/F	Price	Euthanized – Health & Safety	Wintergreen South
08/17/10	W627*	A/F	Bayfield	Unknown	Mason
08/25/10		Y/F	Vilas	Vehicle Collision	Pin Cherry Lake
08/25/10		P/M	Price	Euthanized – Health & Safety	Wintergreen South
08/26/10	Hybrid ^b	A/F	Price	Euthanized – Health & Safety	Wintergreen South
08/26/10		A/M	Price	Euthanized – Health & Safety	Wintergreen South
08/26/10		P/F	Price	Euthanized – Health & Safety	Wintergreen South
09/01/10		P/?	Douglas	Vehicle Collision	Ox Creek
09/05/10		A/F	Price	Euthanized – Health & Safety	Wintergreen South
09/06/10		P/F	Douglas	Vehicle collision	Poplar River?
09/08/10	Hybrid?	A/M	Bayfield	Unknown	Unknown
09/15/10		Y/M	Ashland	Vehicle collision	Disperser?
09/29/10		Y/M	Price	Euthanized – Health & Safety	Wintergreen South
10/03/10		A/F	Price	Euthanized – Health & Safety	Wintergreen South
10/12/10		P?/F	Douglas	Illegally killed	Lake Nebagamon
10/14/10	W475*	A/F	Ashland	Illegally killed - shot	Shanagolden
10/15/10		Y?/F	Douglas	Vehicle collision	Poplar River
10/24/10	W770*	A/M	Price	Euthanized – Health & Safety	Disperser?
10/25/10		A/F	Price	Euthanized – Health & Safety	Wintergreen South
10/28/10	W777*	Y/F	Sawyer	Illegally killed – shot	Disperser
11/06/10		A/F	Burnett	Euthanized – poor condition	Crex Meadow
11/10/10		P?/?	Burnett	Unknown	Namakagon Barrs.
11/11/10		A/M	Ashland	Vehicle collision	Little Girls Point

Table 3. Continued.

Date	Wolf Number	Age/ Sex	County	Cause	Pack
11/27/10		Y/M	Rusk	Illegally killed – shot	Blue Hills North
12/28/10		A??	Burnett	Unknown	Namakagon Barrs.
12/31/10		?/ F	Oneida	Vehicle Collision	Disperser
<u>Zone 2</u>					
01/16/10		A/M	Eau Claire	Illegally killed - Shot, poisoned	Eau Claire River?
01/29/10		A/?	Jackson	Illegally killed – shot	Wildcat Mound
02/26/10	W655*	A/M	Clark	Other wolves?	Brushy Ridge
03/30/10	Hybrid ^b	?/M	Monroe	Vehicle collision?	Unknown
05/08/10		P/F	Jackson	Unknown	Unknown
10/01/10		A/M	Jackson	Euthanized – Health & Safety	Bear Bluff
10/07/10		P/M	Jackson	Euthanized – Health & Safety	Bear Bluff
10/07/10		Y/F	Jackson	Euthanized – Health & Safety	Bear Bluff
10/08/10		P/F	Jackson	Euthanized – Health & Safety	Bear Bluff
10/10/10	W790*	A/F	Jackson	Euthanized – Health & Safety	Bear Bluff
10/13/10		P/M	Jackson	Vehicle collision	Noch Hanai
10/14/10		P/F	Jackson	Euthanized – Health & Safety	Bear Bluff
10/18/10	M2782	A/M	Clark	Vehicle collision (train)	Disperser
11/18/10	W683*	A/M	Jackson	Illegally killed - shot	Noch Hanai
11/23/10	W771*	A/F	Jackson	Illegally killed - shot	Noch Hanai
<u>Zone 3</u>					
02/05/10		A/F	Portage	Vehicle collision	Disperser
02/07/10		A/F	Portage	Illegally killed-gunshot	Fogarty Marsh
02/25/10		A/M	Monroe	Vehicle collision/ euthanized	Ft McCoy?
03/09/10		?/F	Portage	Vehicle collision?	Disperser
03/29/10		A/M	Buffalo	Unknown	Disperser
04/03/10		A?/ F	Wood	Illegally killed - shot	Disperser?
04/26/10		A/M	Marathon	Vehicle collision?	Disperser
04/29/10		A/M	Monroe	Illegally killed-gunshot	Disperser?
06/28/10		P/?	Wood	Vehicle collision	?
10/25/10	W659*	A/F	Shawano	Illegally killed - shot (w/arrow)	Loner
11/12/10		A/F	Wood	Vehicle collision	Seneca
11/22/10		A/F	Jackson	Unknown	Disperser?
12/04/10		A?/M	Polk	Vehicle collision	Disperser
<u>Zone 4</u>					
01/06/10		Y/F	Dane	Vehicle collision	Disperser
<u>WI Collared Wolves found dead outside of WI</u>					
01/04/10	W648*	A/F	Iron, MI	Mange?	Disperser?
09/20/10	W639*	A/F	Pine, MN	Illegally killed – shot	MN pack
10/03/10	W455	A/F	Gogebic, MI	Unknown	MI pack
10/15/10	W406**	A/F	Schoolcraft, MI	Disease – congestion, edema	MI pack

Zone 1 = 47 mortalities, (12 collared), 3 or 4 wolf-dog hybrids **Zone 2** = 15 mortalities, (5 collared, 1 of which was not being actively monitored), 1 wolf-dog hybrid **Zone 3** = 13 mortalities, (1 collared)

Zone 4 = 1 mortality **Outside of WI** = 4 mortalities; 2 WI monitored wolf mortalities

*Actively monitored at time of death by WI DNR. **Actively monitored at time of death by MI DNR.

^a Genetically tested as wolf, but physically appeared to be a wolf-dog hybrid.

^b Genetically tested as hybrid.

Table 4. Probable and possible wolf observations reported by natural resource agency personnel and private citizens in Wisconsin, 2010.

County	Number of Sightings	Wolves Seen	Track or Sign Observations	Total Wolf Observations
Adams*	4	4	1	5
Ashland*	20	45	0	20
Barron*	1	1	3	4
Bayfield*	10	21	7	17
Burnett*	11	21	0	11
Chippewa*	4	9	2	6
Clark*	1	2	0	1
Columbia	3	4	2	5
Dane	6	6	0	6
Door	3	4	1	4
Douglas*	12	32	6	18
Dunn	1	7	1	2
Eau Claire*	1	9	0	1
Florence*	13	16	0	13
Fond du Lac	1	2	0	1
Forest*	3	7	1	4
Green Lake	1	1	0	1
Iowa	1	1	0	1
Iron*	8	16	4	12
Jackson*	5	16	0	5
Juneau*	3	7	3	6
Kenosha	3	3	0	3
Kewaunee	2	3	1	3
Langlade*	1	1	0	1
Lincoln*	5	7	0	5
Manitowoc	10	12	0	10
Marathon*	9	13	1	10
Marinette*	20	31	2	22
Marquette	4	6	0	4
Menominee*	3	4	0	3
Monroe*	4	15	0	4
Oconto*	10	18	2	12
Oneida*	14	33	2	16
Outagamie	3	4	0	3
Ozaukee	1	1	0	1
Pepin	1	1	0	1
Polk*	4	12	1	5
Portage*	5	8	1	6
Price*	19	40	4	23
Richland	2	2	0	2
Rock	1	1	0	1
Rusk*	3	4	1	4
Sauk	5	6	0	5
Sawyer*	14	21	1	15
Shawano*	14	30	0	14
Trempealeau	1	1	0	1
Vernon	1	1	0	1

Table 4. *Continued.*

County	Number of Sightings	Wolves Seen	Track or Sign Observations	Total Wolf Observations
Vilas*	14	19	2	16
Walworth	1	1	0	1
Washburn*	5	7	2	7
Washington	2	2	0	2
Waupaca	7	9	1	8
Waushara	3	4	1	4
Winnebago	4	4	0	4
Wood*	5	10	0	5
Total	312	565	53	365

*Counties believed to have packs with breeding activity in 2010. No observations were reported from Taylor county where breeding packs are known to exist.

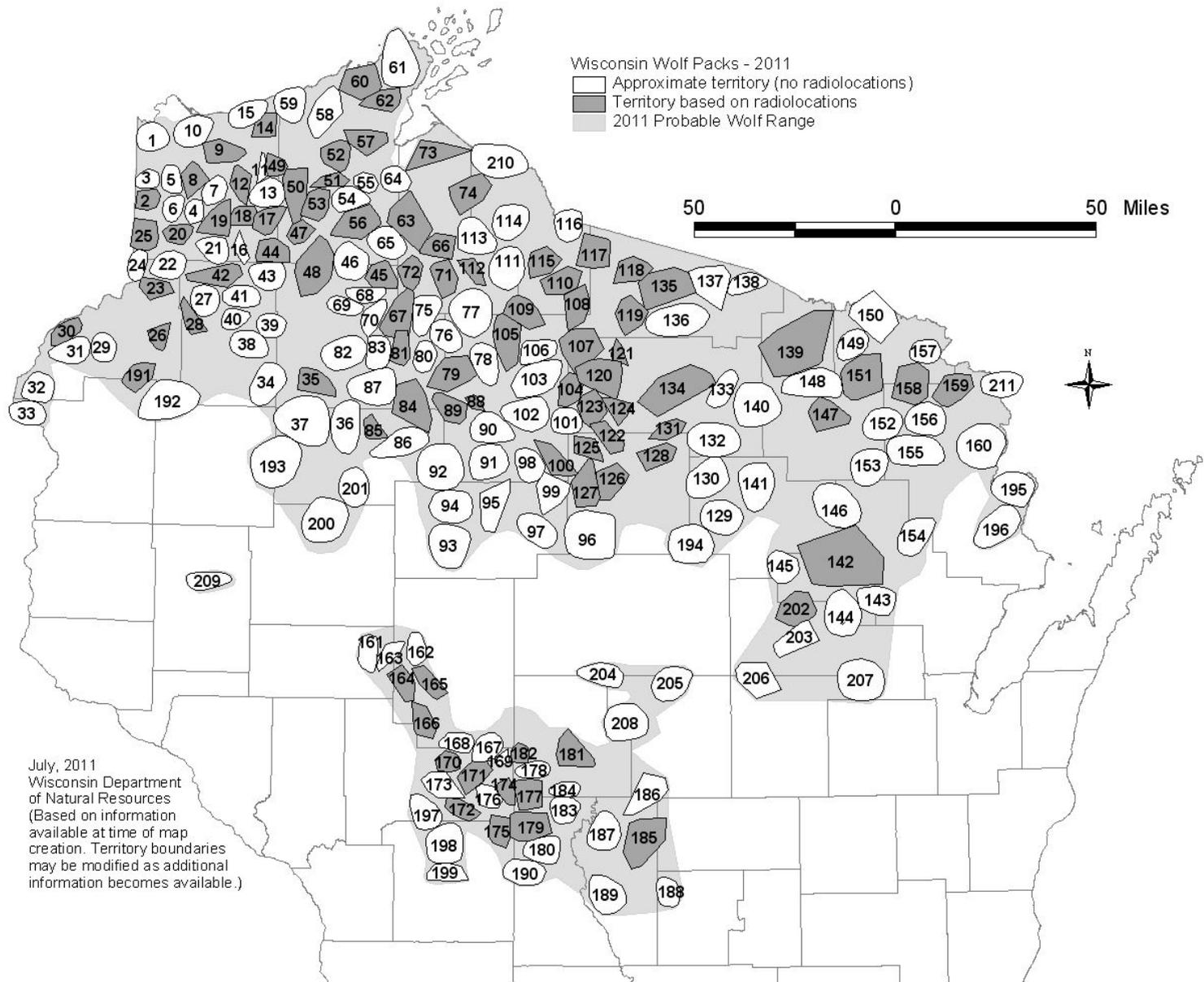


Figure 1. *Gray Wolf Distribution in Wisconsin: Winter 2010-2011 (numbers refer to Tables 1 and 2).*

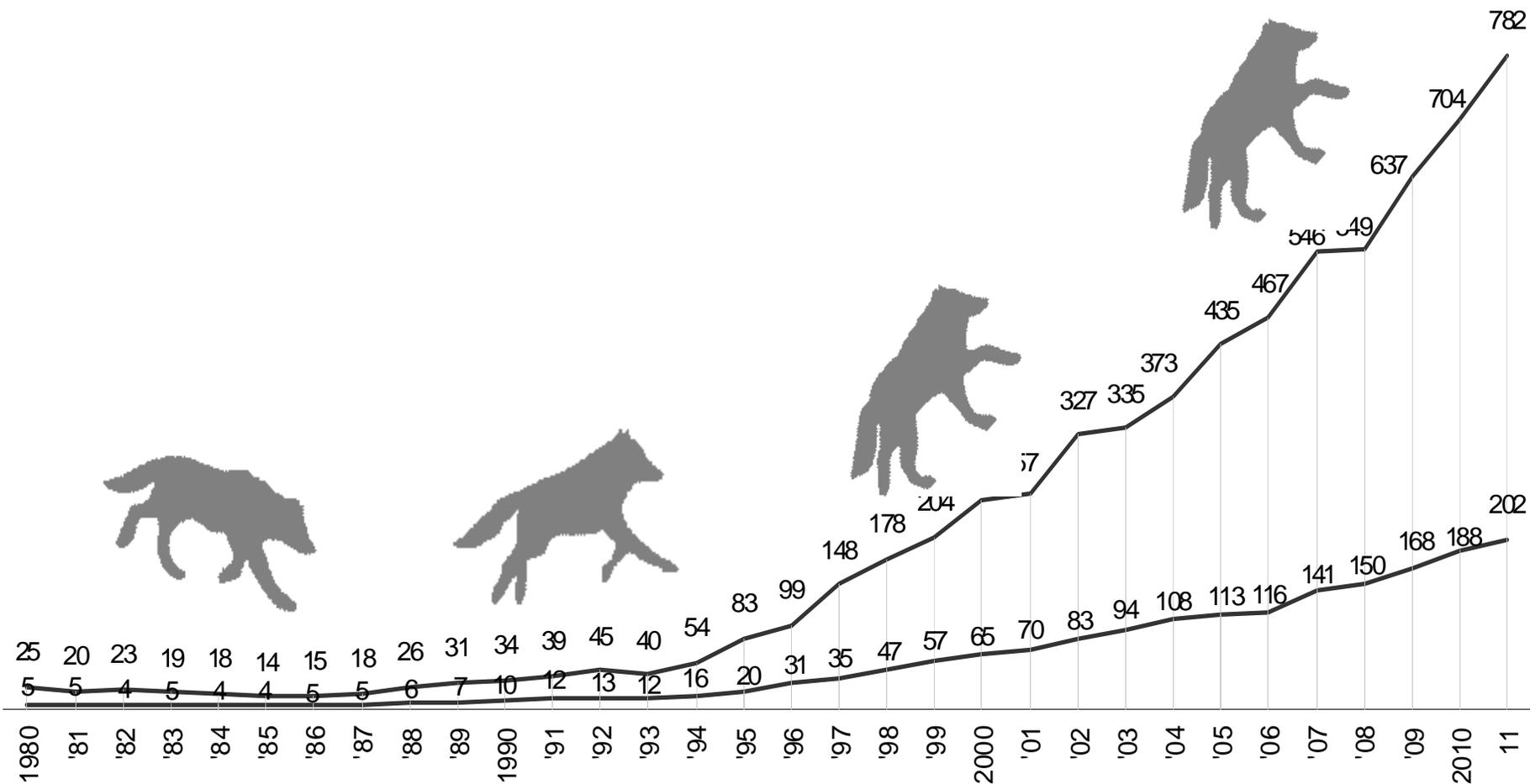


Figure 2. Changes in Wisconsin Gray Wolf Population: 1980-2011.