

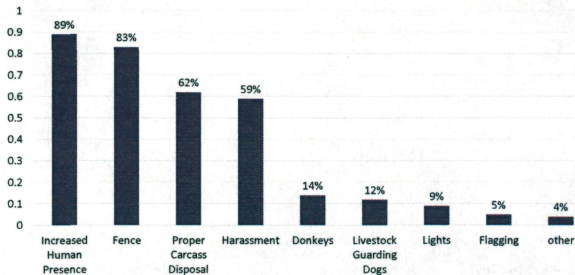


# Wolf Depredation Management in Minnesota



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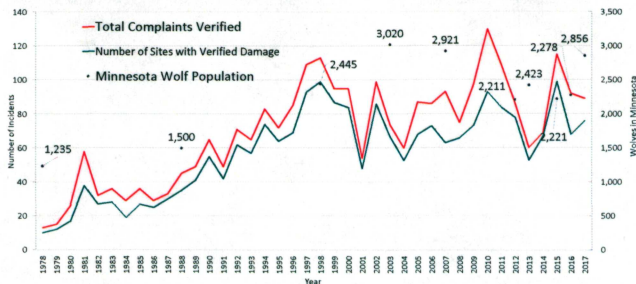
## PRODUCER-IMPLEMENTED NONLETHAL PRACTICES



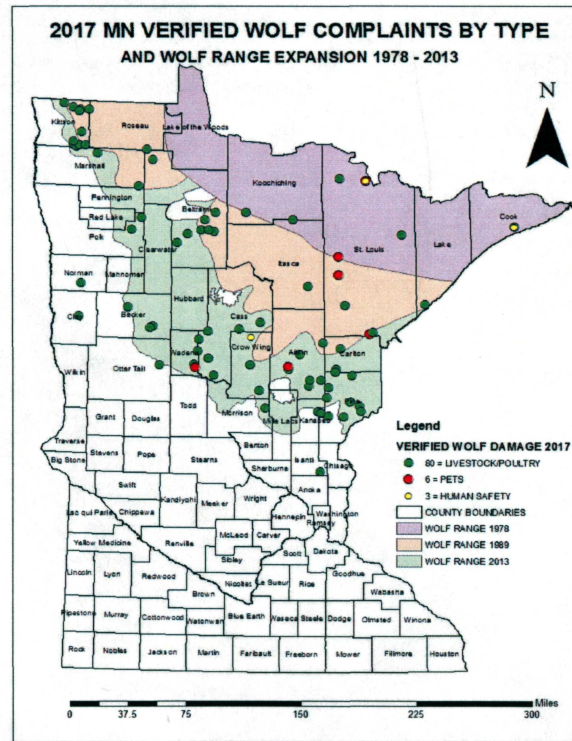
## WILDLIFE SERVICES NONLETHAL ASSISTANCE PROVIDED

- Workshops with producer groups
- Participation in non-lethal grant evaluation
- On site recommendations to reduce damage
  - Proper carcass disposal
  - Fencing
  - Other methods as appropriate
- Lights
- Flagging
  - Distributed to landowner or installed on site

## WOLF DAMAGE TRENDS (1978-2017)



## VERIFIED WOLF COMPLAINTS (2017)



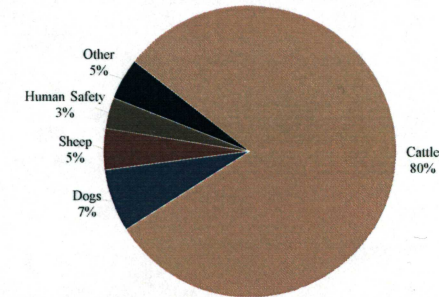
## MN DEPT OF AG LIVESTOCK WOLF DAMAGE PREVENTION GRANTS

- New in 2017
- 2 year trial
- \$120,000/year available to producers:
  - Fencing
  - Shelters
  - Livestock guarding animals
  - Lights, scare devices, etc.

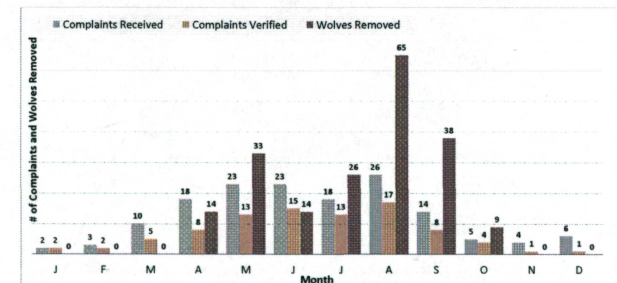
## ANNUAL WS PROGRAM STATISTICS (2010-2017)

Year	2010	2011	2012 <sup>1</sup>	2013 <sup>2</sup>	2014 <sup>3</sup>	2015	2016	2017
Total complaints received	272	211	126	130	115	220	157	152
Total complaints verified <sup>4</sup>	130	109	86	60	69	115	92	89
Verified livestock and poultry complaints	106	96	81	53	62	92	80	80
Verified complaints involving dogs	23	9	9	6	5	18	8	6
Percentage of total complaints verified	47.8	51.7	68.2	46.1	60	52	58	59
Number of farms/Altes with verified losses	93	84	78	53	67	99	76	76
Number of wolves taken	192	215	215	95	172	220	191	199
Number of wolves killed	189	202	215	95	172	213	183	190
Verified Wolf Killed Domestic Animals								
Calves	80	75	63	58	44	67	63	68
Cows	7	16	9	6	8	17	13	8
Sheep	15	9	5	0	21	12	3	3
Dogs	15	6	6	5	2	16	5	6
Horses	1	1	2	1	0	0	1	0
Turkeys	24	2	0	0	0	0	1	0
Other	12	20	14	30	2	7	2	7
Verified wolf-wounded domestic animals <sup>5</sup>								
Calves	9	13	6	2	5	5	5	4
Cows	3	0	0	0	8	0	0	0
Dogs	8	4	2	0	5	4	4	2
Other	0	4	1	3	0	0	1	3

## TYPES OF VERIFIED DAMAGE (2017)



## COMPLAINTS RECEIVED, VERIFIED AND WOLVES REMOVED (2017)



# USDA-WILDLIFE SERVICES WOLF DAMAGE MANAGEMENT IN MINNESOTA 2017

## Background

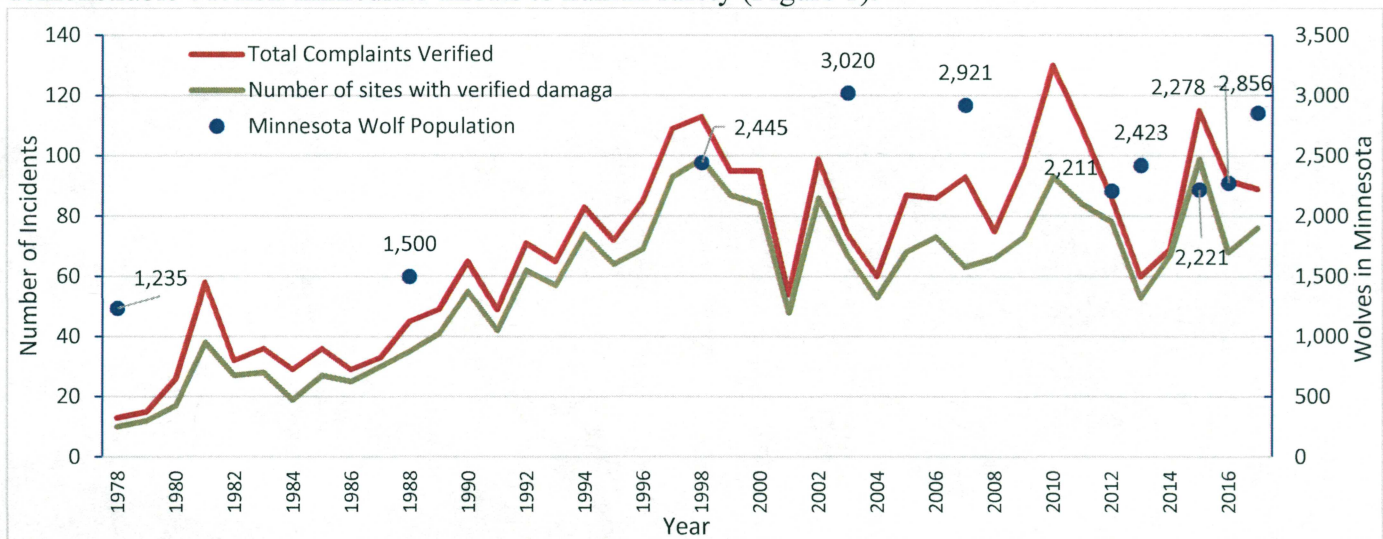
The USDA-Wildlife Services (WS) Minnesota gray wolf (*Canis lupus*) depredation management program uses a variety of methods to manage wolf damage. Wolves in Minnesota regularly kill and/or injure livestock (cattle, sheep, poultry and occasionally horses) and pets (primarily dogs). While the overall damage to livestock producers and pet owners is relatively small, the financial losses and personal impact to livestock producers and pet owners can be significant.

The Minnesota Department of Natural Resources (MNDNR) estimated that there were 2,856 wolves in approximately 500 packs in Minnesota over the winter of 2016-2017. Considering a 90% confidence interval, the actual population size could range from 2,371 to 3,386 wolves (Erb et al. 2017).

WS investigates reports of livestock and pet losses to wolves and wolf threats to human safety in cooperation with the MNDNR Law Enforcement Division. State statute also authorizes peace officers from the county sheriff's office, University of Minnesota Extension agents or licensed veterinarians that have been trained in wolf damage identification to verify wolf damage for the purposes of compensation through the MN Department of Agriculture. If wolf damage is verified and there is potential for further losses, WS may initiate wolf removal efforts near the depredation site to reduce the likelihood of additional damage. WS also provides technical assistance to cooperators to reduce wolf damage and recommends the use of non-lethal methods whenever possible to reduce conflicts with wolves. The WS program also assists state and federal agencies in documenting the extent of wolf depredations in Minnesota and provides wolf related information to livestock producers, resource managers, Tribes, private citizens, and other interested parties. The ability to mitigate losses associated with wolves promotes public acceptance of this species and has ultimately contributed to the recovery of wolves in Minnesota.

## 2017 Summary

Verified wolf conflicts in Minnesota during 2017 were slightly lower than in 2016, with 89 complaints verified at 76 sites and 199 wolves taken in response to verified damage to domestic animals or demonstrable but non-immediate threats to human safety (Figure 1).



**Figure 1.** Number of verified wolf complaints, depredation sites, and wolf population estimates for Minnesota from 1978 through 2017 (WS Unpublished Data).

During 2017, WS provided technical assistance via personal consultations, telephone, site visits, and instructional sessions to individuals and livestock producers groups resulting in approximately 500 people instructed in ways to reduce or deter wolf damage. During 2017, WS personnel also distributed flagging and/or flashing lights to 12 individuals to deter wolf presence from their property.

The 89 total complaints verified in 2017 included 80 depredations on livestock/poultry, 6 involving depredations on domestic dogs and 3 complaints involving human safety (Table 1).

Year	2010	2011	2012 <sup>3</sup>	2013 <sup>3</sup>	2014 <sup>3</sup>	2015	2016	2017
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Sheep	15	9	5	0	21	12	3	3
Dogs	15	6	6	5	2	16	5	6
Horses	1	1	2	1	0	0	1	0
Turkeys	24	2	0	0	0	0	1	0
Other**	12	20	14	30	2	7	2	7
<b>Verified wolf-wounded domestic animals<sup>4</sup></b>								
Calves	9	13	6	2	5	5	5	4
Cows	3	0	0	0	8	0	0	0
Dogs	8	4	2	0	5	4	4	2
Other <sup>2</sup>	0	4	1	3	0	0	1	3

**Table 1.** Wolf depredation on domestic animals in Minnesota, 2010-2017.

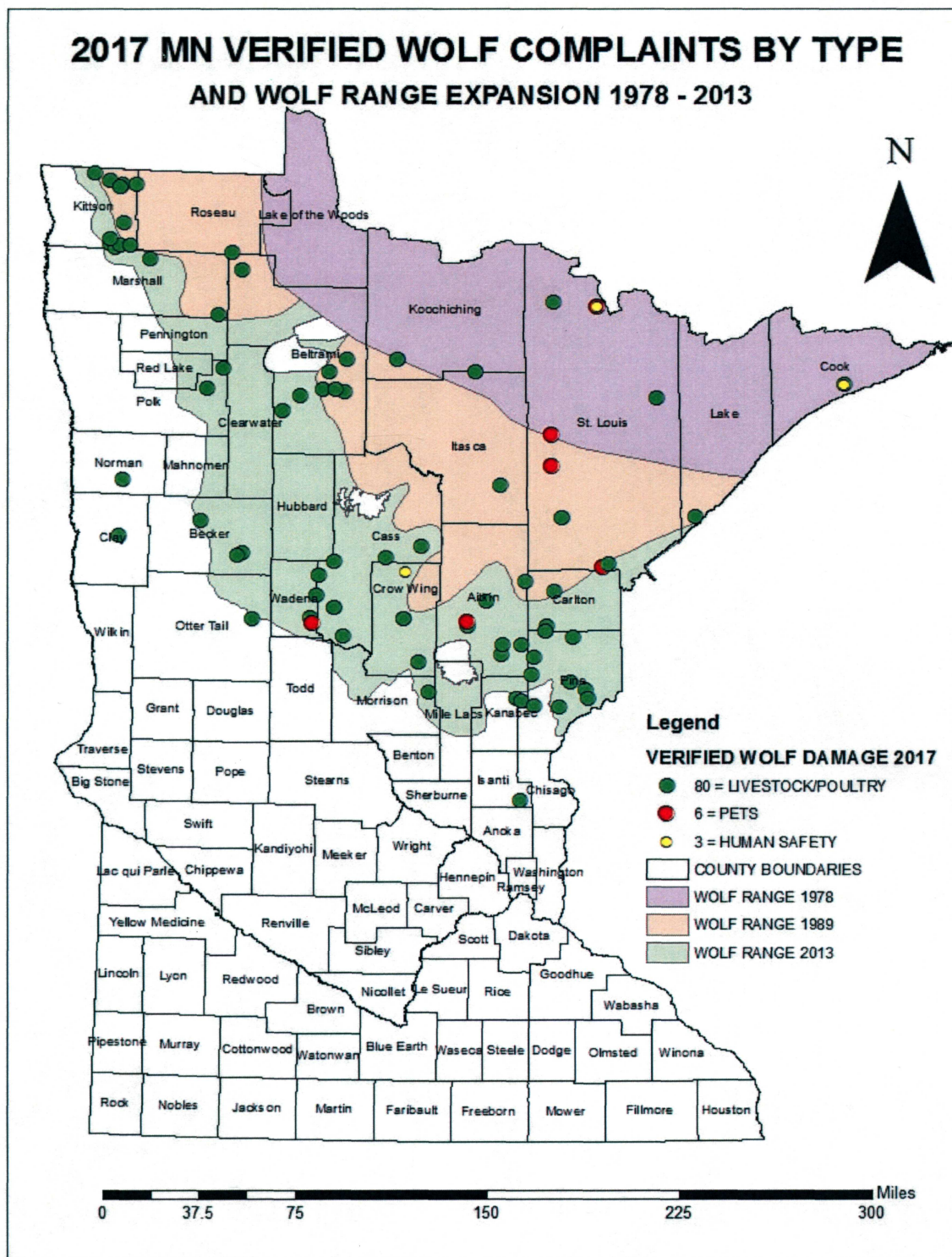
<sup>1</sup>A verified complaint is one in which WS determines that wolves have killed or injured one or more domestic animals as evidenced by: (1) Observing wounded animals or remains of animals killed and (2) Finding evidence of wolf involvement e.g. tracks, scat, other indicators.

<sup>2</sup>Others includes a variety of domestic animals including chickens, donkeys, llamas, bison, rabbits, goats, and captive deer.

<sup>3</sup>From 2012 to 2014, primary authority for wolf management in the Western Great Lakes DPS was transferred to the state and tribes. The state transferred to a system that used “certified wolf controllers” to respond to wolf complaints in addition to WS and MNDNR staff. The MNDNR only requested WS assistance with WDM from April to October during these years.

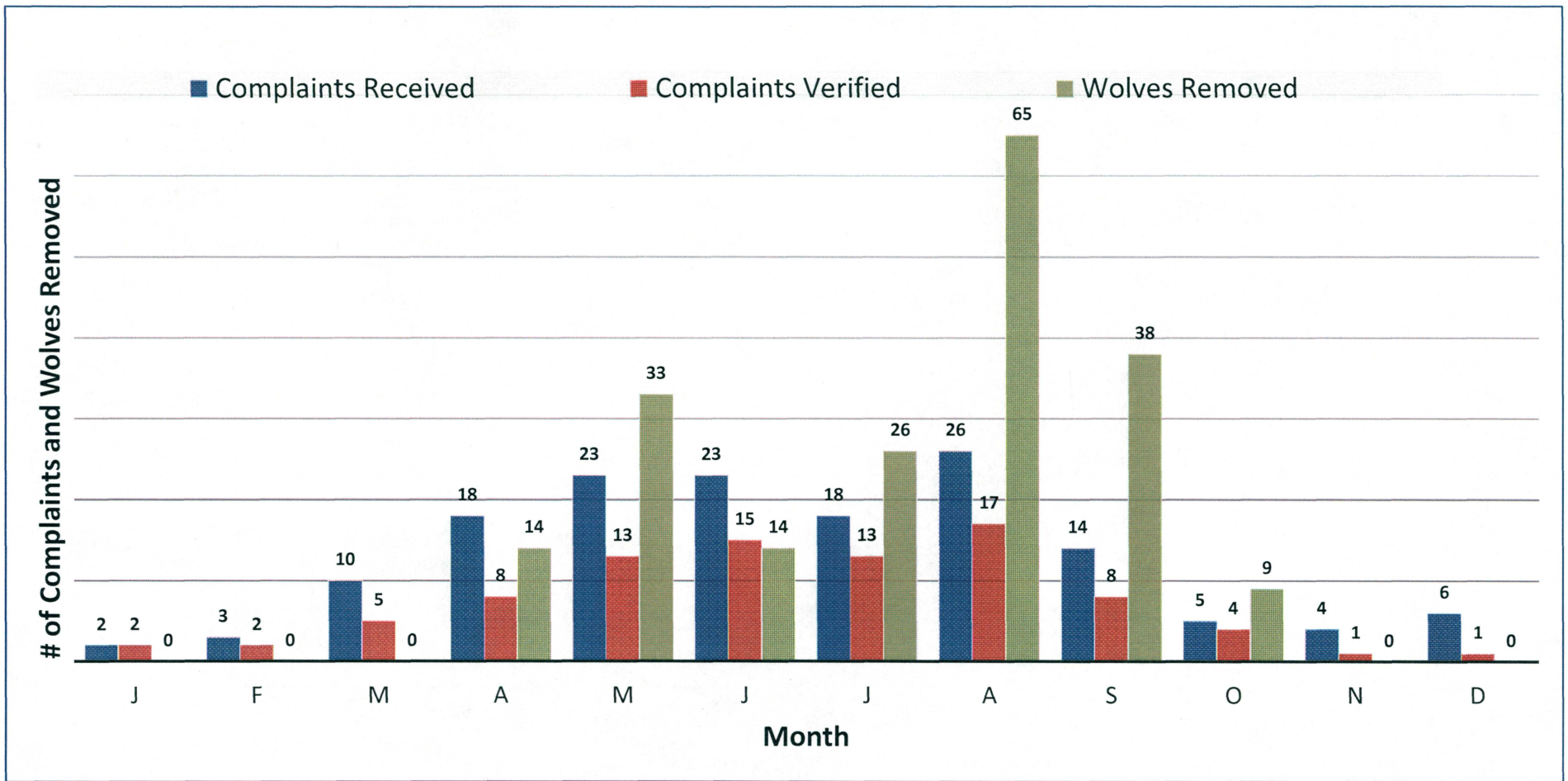
<sup>4</sup> Records of animals wounded but not killed by wolves were not available until 2010

The distribution of verified wolf damage complaints during 2017 is shown in Figure 2, along with the approximate range expansion of Minnesota's wolf population from 1978 through 2013.



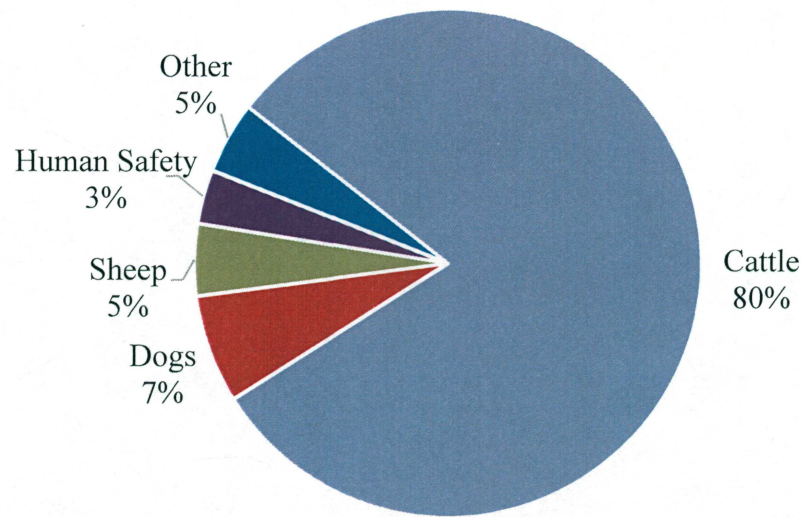
**Figure 2.** Location of verified wolf complaints in Minnesota in 2017.

The seasonal distribution of wolf depredation complaints by month during 2017 (Figure 3) was typical of previous years complaint distribution with peak depredations occurring in the summer months



**Figure 3.** Seasonal Distribution of Wolf Depredations in 2017. As in previous years, wolf complaints are received throughout the year with complaints typically peaking during the summer months.

The majority of verified wolf complaints in 2017 (Figure 4), as in previous years, were related to cattle, followed by dogs, sheep, other domestic animals, and human safety making up the remainder of all other verified wolf complaints.



**Figure 4.** 2017 verified wolf complaints by type.

Verified wolf complaints occurred in 23 of Minnesota’s 87 Counties in 2017 with the greatest numbers occurring in Kittson, Pine, and Beltrami counties (Table 2). A total of 199 wolves were taken by WS in response to verified complaints in those 23 counties (Figure 5).

County	Verified wolf complaints in 2017	Wolves removed	County	Verified wolf complaints in 2017	Wolves removed
Aitkin	7	21	Koochiching	2	1
Becker	3	13	Lake	1	2
Beltrami	9	23	Marshall	3	8
Carlton	3	4	Morrison	1	0
Cass	7	12	Norman	1	0
Clay	1	2	Ottertail	1	2
Cook	2	0	Pine	11	27
Crow Wing	4	19	Polk	2	0
Isanti	1	2	Roseau	1	3
Itasca	3	6	St. Louis	8	25
Kanabec	3	4	Wadena	3	0
Kittson	12	25			
			TOTAL	89	199

**Table 2.** Verified wolf complaints and wolves taken by county in Minnesota during 2017.

# WOLVES TAKEN BY USDA WS PER COUNTY 2017

199 Wolves Taken Across 23 Counties in Minnesota

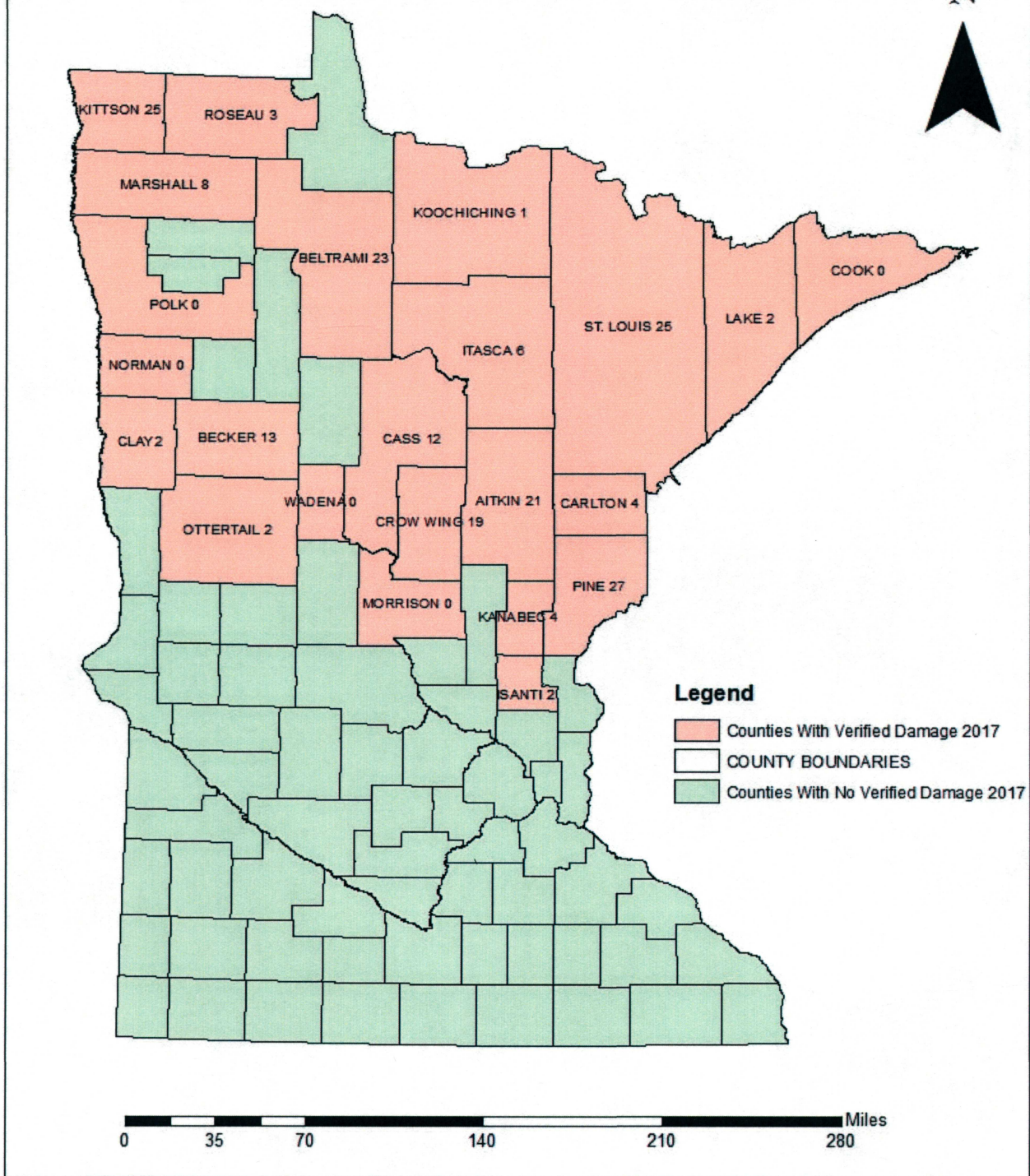


Figure 5. Wolves taken in Minnesota by county in 2017.

## Legal Changes

Effective Dec. 19, 2014, Minnesotans could no longer legally kill a wolf except in the defense of human life. This was one of the results of a federal judge's decision to reinstate Endangered Species Act protections for gray wolves in Minnesota, Wisconsin and Michigan. Wolves reverted to the federal protection status they had prior to being removed from the endangered species list in the Great Lakes region in January 2012. As a result, wolves are now federally classified as Threatened in Minnesota and Endangered elsewhere in the Great Lakes region.

From January 2012 – December 18, 2014 wolves were under state and tribal management in Minnesota. The Minnesota DNR had a public harvest of wolves (hunting and trapping) in 2012, 2013 and 2014. Under state/tribal management, wolves posing a threat to domestic animals could be taken under guidelines of the Minnesota Wolf Management Plan. Additionally, certified gray wolf controllers were authorized to conduct wolf damage control activities during 2012-2014 when wolves were under state/tribal management

Under federal management, all wolf control activities must be conducted within ½ mile of a verified depredation site and wolf pups caught on or before August 1<sup>st</sup> must be released at the point of capture. Additionally, lethal wolf control is not allowed in federal wolf management Zone 1 (Figure 6) in northeastern Minnesota unless a demonstrated, but non-immediate threat to human safety by a wolf is documented. Federal wolf management Zone 1 comprises a generally remote area with minimal livestock production from approximately Voyageurs National Park in the west to Taconite Harbor on Lake Superior in the east. However, federal wolf management Zone 1 does include several towns and communities where there is potential for negative wolf-human interactions, especially related to pet dogs.

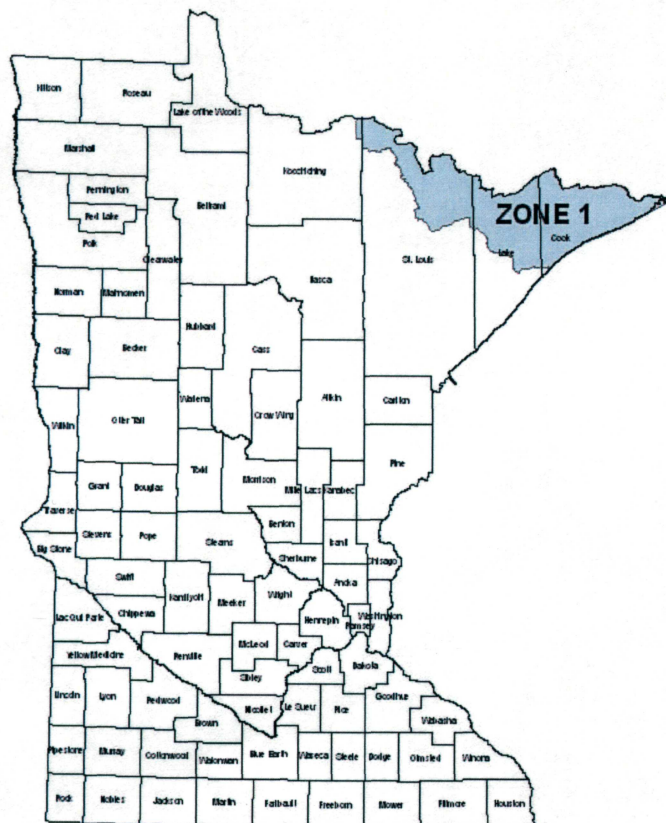


Figure 6. Minnesota Wolf Management Zone 1.



## Compensation

Livestock verified as killed by wolves are eligible for compensation from the Minnesota Department of Agriculture (MDA). Compensation paid by MDA for wolf related damage in MN is indicated in Table 3. No compensation is currently paid for pets that are killed or wounded in Minnesota or for livestock that are wounded, unless injuries to livestock are so severe the animal needs to be euthanized.

State Fiscal year (July 1-June 30)	Total wolf claims	Number of wolf claims
1993	\$30,996	NA
1994	\$34,328	NA
1995	\$29,697	NA
1996	\$31,777	NA
1997	\$39,309	NA
1998	\$57,480	111
1999	\$66,052	103
2000	\$91,585	121
2001	\$80,174	70
2002	\$69,515	67
2003	\$82,646	97
2004	\$42,077	47
2005	\$45,100	37
2006	\$72,895	71
2007	\$81,683	82
2008	\$95,526	82
2009	\$88,366	87
2010	\$106,615	104
2011	\$102,230	128
2012	\$119,659	81
2013	\$113,714	94
2014	\$109,475	98
2015	\$106,102	65
2016	\$253,313	137
2017 (thru 12-7-17)	\$153,396	93

**Table 3.** Compensation paid by Minnesota Department of Agriculture for livestock destroyed by wolves. Source: Minnesota Department of Agriculture.

## Acknowledgements

WS wolf damage control personnel during 2017 included: Duane Sahr, Jeff Grabarkewitz, Kevin Fuller, Frank House, Jim Natvik, Byron Cole, Dave Hughley, Mike Swanson, LaRae Roseen, District Supervisor John Hart, and WS Contractor Bill Paul. WS received valuable administrative support for the wolf depredation control program from Constance Timm and Nicole Wolf.

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### **Literature Cited**

Erb, J., C. Humpal and B. Sampson. 2017. Minnesota Wolf Population Update, Minnesota Department of Natural Resources, St. Paul.

Minnesota Wolf Management Plan. 2001. Minnesota Department of Natural Resources, St. Paul, Minnesota, 36pp.