

# USDA-WILDLIFE SERVICES WOLF DAMAGE MANAGEMENT IN MINNESOTA 2018

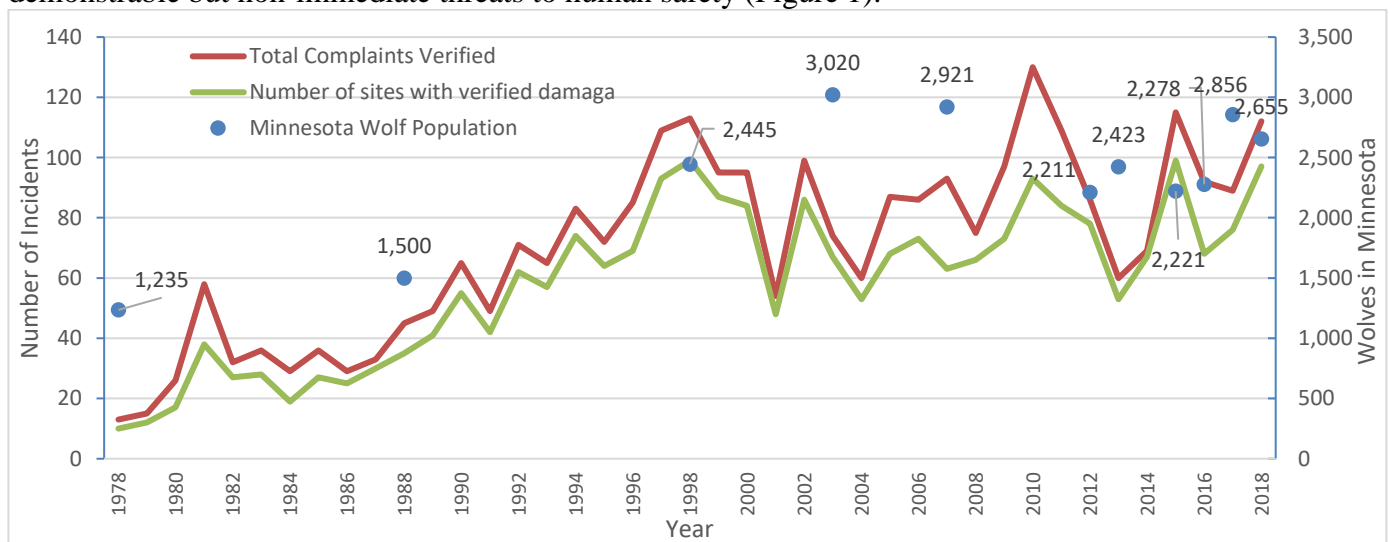
## Background

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 2,655 wolves in approximately 465 packs in Minnesota over the winter of 2017-2018. Considering a 90% confidence interval, the actual population size could range from 1,972 to 3,387 wolves (Erb et al. 2018). 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 contributes to the sustainability of wolves in Minnesota.

## 2018 Summary

Verified wolf conflicts in Minnesota during 2018 were slightly higher than in 2017, with 113 complaints verified at 97 sites and 189 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 2018 (WS Unpublished Data).

The 113 total verified wolf complaints in 2018 included 101 depredations on livestock/poultry, 7 involving depredations on domestic dogs and 5 complaints involving human safety (Table 1).

<b>Year</b>	<b>2011</b>	<b>2012<sup>3</sup></b>	<b>2013<sup>3</sup></b>	<b>2014<sup>3</sup></b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Total complaints received	211	126	130	115	220	157	152	180
Total complaints verified <sup>1</sup>	109	86	60	69	115	92	89	113
Verified livestock and poultry complaints	96	81	53	62	92	80	80	101
Verified complaints involving dogs	9	9	6	5	18	8	6	7
Percentage of total complaints verified	51.7	68.2	46.1	60	52	58	59	62.7
Number of farms/sites with verified losses	84	78	53	67	99	76	76	97
Number of wolves taken	215	215	95	172	220	191	199	189
Number of wolves killed	202	215	95	172	213	183	190	189
<b>Verified Wolf Killed Domestic Animals</b>								
Calves	75	63	58	44	67	63	68	82
Cows	16	9	6	8	17	13	8	9
Sheep	9	5	0	21	12	3	3	7
Dogs	6	6	5	2	16	5	6	4
Horses	1	2	1	0	0	1	0	2
Turkeys	2	0	0	0	0	1	0	0
Other**	20	14	30	2	7	2	7	11
<b>Verified wolf-wounded domestic animals</b>								
Calves	13	6	2	5	5	5	4	12
Cows	0	0	0	8	0	0	0	2
Dogs	4	2	0	5	4	4	2	5
Other <sup>2</sup>	4	1	3	0	0	1	3	0

**Table 1.** Wolf depredation on domestic animals in Minnesota, 2011-2018.

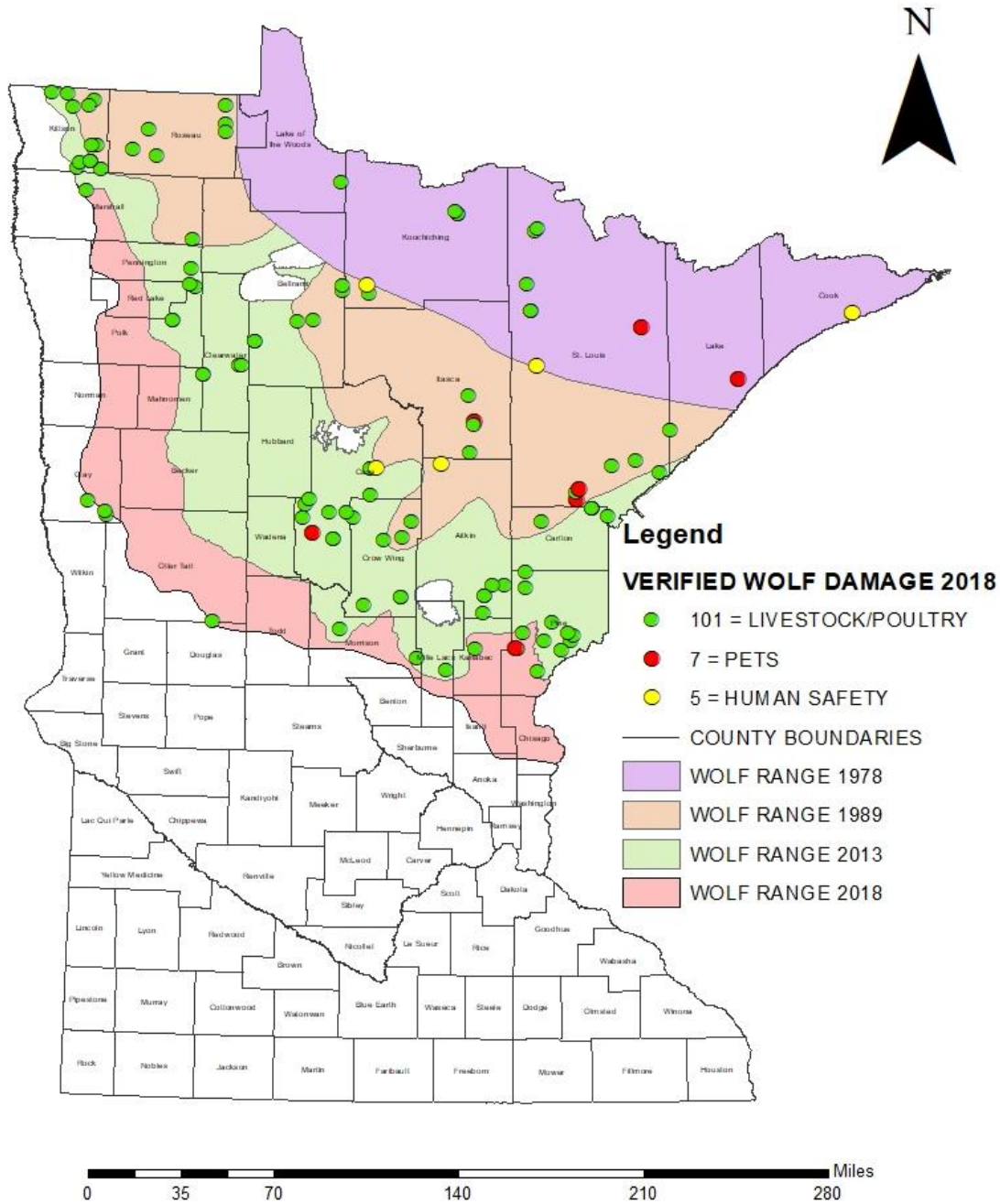
<sup>1</sup>A verified complaint is one in which WS determines that wolves have killed or injured one or more domestic animals as evidenced by: (1) Observing wounded animals or remains of animals killed and (2) Finding evidence of wolf involvement e.g. tracks, scat, other indicators.

<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 allowed “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. Numbers in this table do not include wolves that were removed by “certified wolf controllers” while wolves were under state management.

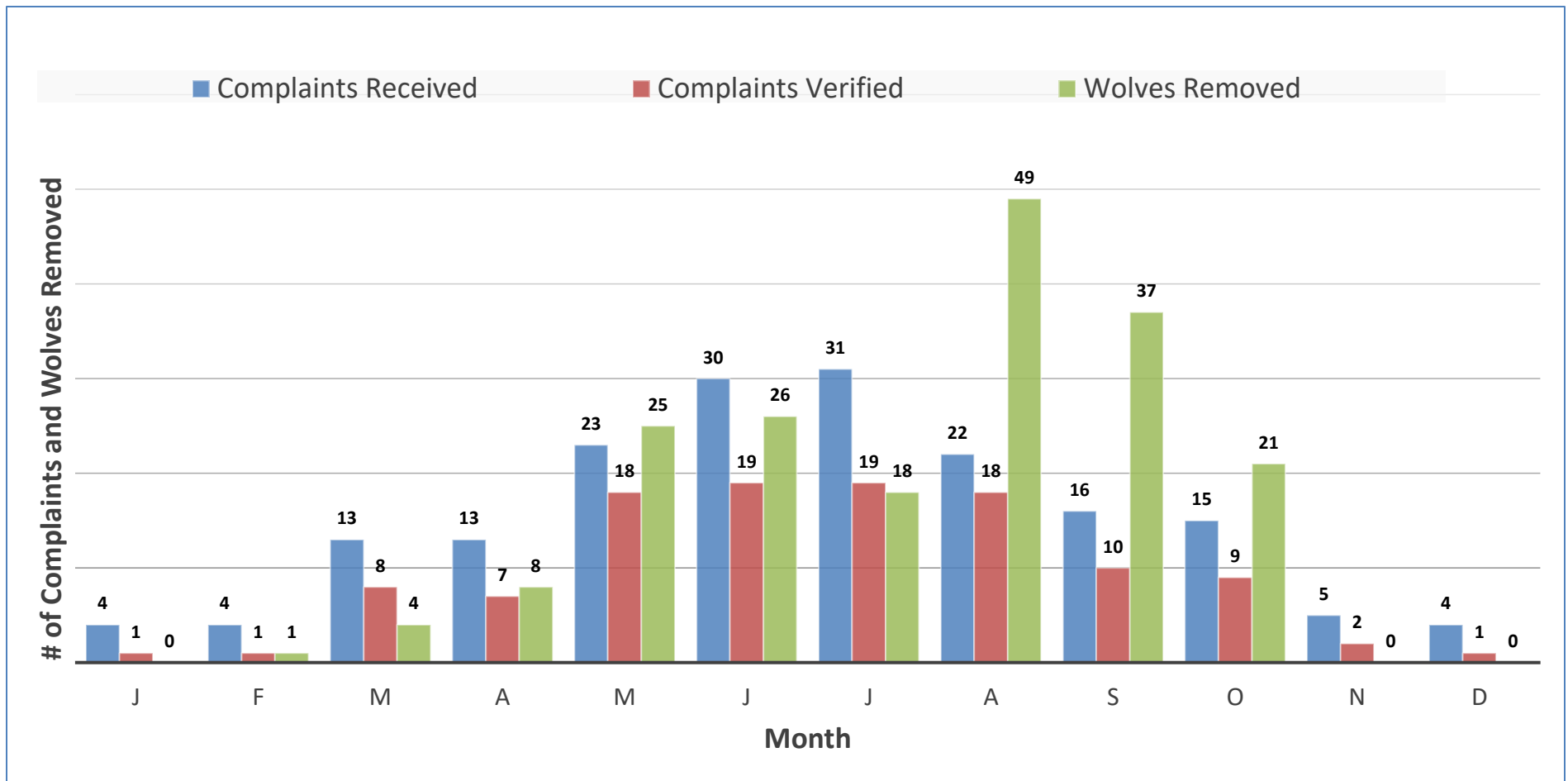
The distribution of verified wolf damage complaints during 2018 is shown in Figure 2, along with the approximate range expansion of Minnesota’s wolf population from 1978 through 2013.

## 2018 MN VERIFIED WOLF COMPLAINTS BY TYPE AND WOLF RANGE EXPANSION 1978 - 2018



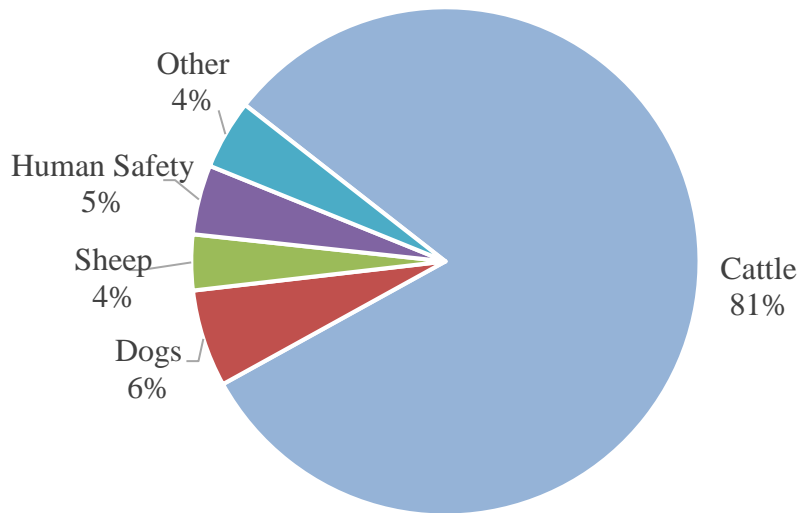
**Figure 2.** Location of verified wolf complaints in Minnesota in 2018.

The seasonal distribution of wolf depredation complaints by month during 2018 (Figure 3) was typical of previous years complaint distribution with peak depredations occurring in the summer months.



**Figure 3.** Seasonal Distribution of Wolf Deprecations in 2018. 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 2018 (Figure 4), as in previous years, were related to cattle, followed by dogs and human safety, with sheep and other domestic animals making up the remainder of all other verified wolf complaints.



**Figure 4.** 2018 verified wolf complaints by type.

Verified wolf complaints occurred in 23 of Minnesota’s 87 Counties in 2018 with the greatest numbers occurring in St. Louis, Kittson, Pine, and Cass counties (Table 2). A total of 189 wolves were taken by WS in response to verified complaints in those 23 counties (Figure 5).

County	Verified wolf complaints in 2018	Wolves removed	County	Verified wolf complaints in 2018	Wolves removed
Aitkin	6	3	Lake	2	0
Beltrami	6	8	Lake of the Woods	1	3
Carlton	5	15	Marshall	2	7
Cass	12	15	Mille Lacs	1	5
Clay	3	0	Morrison	2	8
Clearwater	4	5	Ottertail	1	0
Cook	2	12	Pennington	3	3
Crow Wing	6	9	Pine	12	29
Itasca	4	2	Polk	2	1
Kanabec	1	7	Roseau	6	12
Kittson	13	9	St. Louis	14	29
Koochiching	5	7			
			<b>TOTAL</b>	<b>113</b>	<b>189</b>

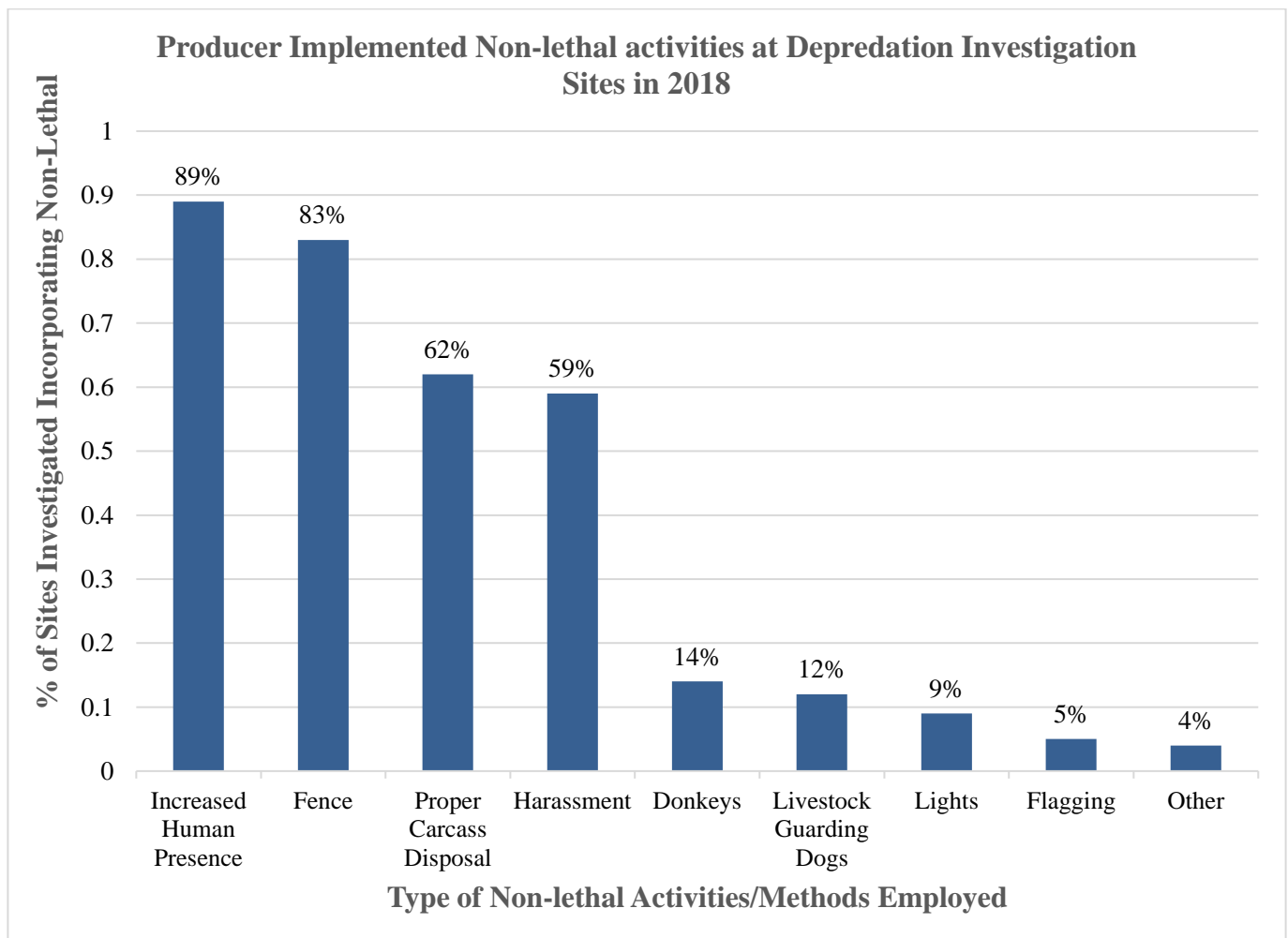
**Table 2.** Verified wolf complaints and wolves taken by county in Minnesota during 2018.

## Non-lethal Methods

During 2018, WS provided technical assistance via personal consultations, telephone conversations, on-site recommendations, and instructional sessions to individuals and livestock producer groups resulting in approximately 300 people instructed in methods to manage wolf damage. During 2018, WS personnel also distributed flagging and/or flashing lights to 15 individuals as a non-lethal means to deter wolf presence from their property.

Wildlife Services personnel also participate in non-lethal grant evaluations in cooperation with the Minnesota Department of Agriculture (MDA). These MDA-funded grants provide financial assistance for non-lethal activities such as predator-proof fencing, livestock guarding animals, livestock shelters, and other methods implemented to help reduce or prevent livestock depredations by wolves.

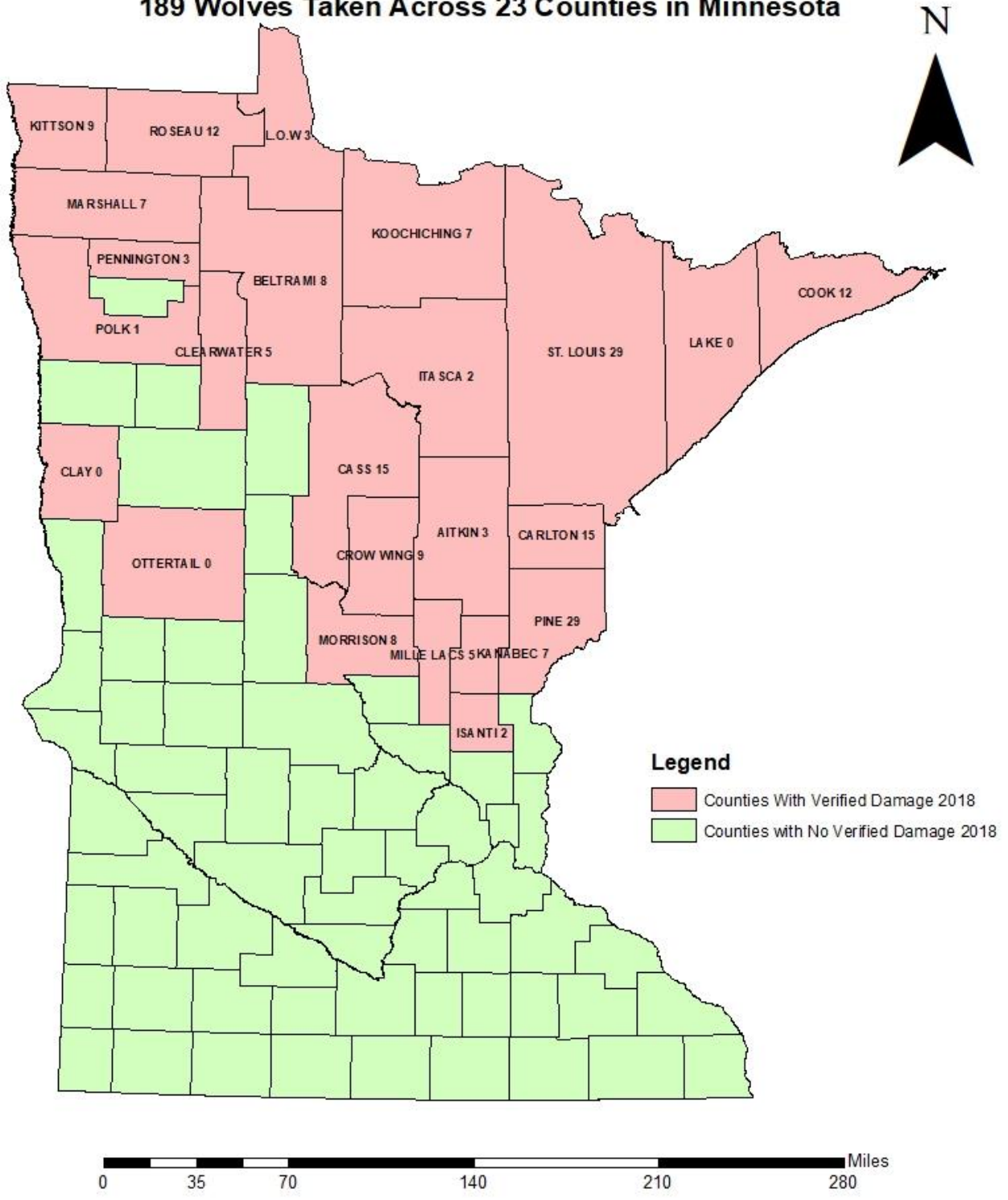
In 2018, WS personnel began documenting producer-implemented non-lethal practices they observed during wolf depredation investigations. Producer implemented non-lethal practices include such things as increased human presence, fencing, livestock carcass disposal or composting, harassment, livestock guarding animals, lights, flagging, and other practices that help prevent or deter wolf depredations.



**Figure 5.** Producer-implemented non-lethal practices documented by WS personnel in 2018 at sites with verified wolf damage.

# WOLVES TAKEN BY USDA WS PER COUNTY 2018

189 Wolves Taken Across 23 Counties in Minnesota



**Figure 5.** Wolves taken in Minnesota by county in 2018.







## 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 by wolves in Minnesota or for livestock that are wounded, unless injuries to livestock are so severe the animal needs to be euthanized.

State <b>Fiscal</b> 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	\$156,000	94
2018	\$161,212	113

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

## Acknowledgements

WS wolf damage control personnel during 2018 included: Duane Sahr, Jeff Grabarkewitz, Kevin Fuller, Frank House, Jim Natvik, Dave Hughley, Mike Swanson, LaRae Roseen, Nick Welinski, 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.

*For more information contact:*

USDA-APHIS-Wildlife Services

34912 U.S. Hwy. 2 Grand Rapids, MN 55744

(218) 327-3350

e-mail: [john.p.hart@usda.gov](mailto:john.p.hart@usda.gov)

[duane.p.sahr@usda.gov](mailto:duane.p.sahr@usda.gov)

### **Literature Cited**

Erb, J., C. Humpal and B. Sampson. 2018. 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.