



Wolf-Livestock Conflict Prevention Grants

Outcomes and Impacts on Livestock Compensation Claims FY 2017 – Present

(SPACE FOR PICTURE/GRAPHIC)

Whitney Place
625 Robert Street North, Saint Paul, MN 55155
www.mda.state.mn.us

January 15, 2020

Table of Contents

Background.....Page 3

FY18 Wolf-Livestock Conflict Prevention Grants.....Page 3

 Figure 1. Project budget amounts for wolf-livestock grant applications for FY18 grant cycle...Page 4

 Figure 2. Amounts requested in applications to FY18 wolf-livestock grant cycle by activity.....Page 4

 Figure 3. Numbers of applications to FY18 wolf-livestock grants and amounts of depredation claims paid in past 18 months by county.....Page 5

 Figure 4. Amounts awarded for FY18 wolf-livestock grants by activity.....Page 5

 Figure 5. Number of grants and total amounts awarded for FY18 grant cycle by county.....Page 6

 Table 1. Summary of grant projects funded during FY18 grant cycle.....Page 7

 Table 2. Information provided in final reports by grant recipients for FY18 grant cycle.....Page 8

FY19 Wolf-Livestock Conflict Prevention Grants.....Page 17

 Table 3. Comparison of FY18 and FY19 grant applications.....Page 17

 Figure 6. Numbers and total amounts requested by county for FY19 grant applications.....Page 18

 Figure 7. Amounts requested in FY19 wolf-livestock grant applications by activity.....Page 19

 Figure 8. Amounts awarded for FY19 wolf-livestock grants by activity.....Page 19

 Figure 9. Number of grants and total amounts awarded for FY19 grants by county.....Page 20

 Table 4. Summary of FY19 grant projects.....Page 21

 Table 5. Information provided by grantee’s in FY19 grant reports.....Page 22

Impact of Wolf-Livestock Conflict Prevention Grants on Wolf Depredation Claims.....Page 27

 Table 6. Wolf losses before and after completed grant projects for relevant farms.....Page 28

 Figure 10. Wolf depredation claims by number and total amount paid as well as dollars granted by fiscal year.....Page 29

Pursuant to Minn. Stat. § 3.197, the cost of preparing this report was approximately \$850.

In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651-201-6000. TTY users can call the Minnesota Relay Service at 711. The MDA is an equal opportunity employer and provider.

The Minnesota Department of Agriculture (MDA) receives an appropriation of \$350,000 each biennium to reimburse wolf depredation claims made by livestock producers. Over the last 10 years, the MDA has paid between 80-140 claims worth approximately \$100,000 - \$250,000 per year. In order to be reimbursed for livestock lost to wolves, a producer must have evidence of the loss verified by an official such as a Minnesota Department of Natural Resources (MN DNR) Conservation Officer, United States Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) Wildlife Specialist, or other authorized entity. If evidence is not available or is not conclusive, a claim payment will not be made. Many producers participating in the grant program report that suspected losses to wolves are much greater than what can be verified.

The MDA was appropriated \$120,000 in FY 2018 and 2019 to award grants to livestock producers to prevent wolf-livestock conflicts. Specific grant-eligible activities were highlighted in the legislation including purchase of guard animals, veterinary costs for guard animals, installation of wolf barriers such as pens, fladry and fencing, installation of wolf-detering lights and alarms, calving and lambing shelters. The legislation did not limit grants to these activities only. To be eligible for a grant, a livestock producer needed to raise livestock within Minnesota's wolf range.

FY18 Wolf-Livestock Conflict Prevention Grants

The FY18 request for proposal was announced on October 16, 2017, with an application deadline of November 24, 2017. Due to low response, the deadline was extended to December 15, 2017.

A total of 53 eligible applications were received requesting a total of \$611,336, although nearly half of the applications were for amounts less than \$5,000 (Figure 1). Most of the funds requested were for fencing and shelters (Figure 2). Applications were received from 21 counties, lining up well with counties having depredation claims during the 18 months prior to the initiation of the grant program (Figure 3).

Grant applications were reviewed and ranked by a panel of representatives from Minnesota Cattlemen, Minnesota Lamb and Wool Producers, Minnesota Farm Bureau, Minnesota Farmer's Union, University of Minnesota, MN DNR, USDA APHIS Wildlife Services, and the MDA. Criteria used to evaluate proposals included:

- Documented losses from wolves (up to 10 points)
- Completeness of application (up to 5 points)
- Demonstrated knowledge (up to 5 points)
- Effectiveness of tactics (up to 5 points)
- Cost efficiency (up to 5 points)

The final applications to receive grant funds were selected by the Commissioner of Agriculture. Of the 53 applications made for the FY18 grant cycle, 26 projects were initially selected for funding and the earliest projects began in February 2018. Prior to the end of FY18, two of the grant recipients decided to withdraw from the grant program and an additional five projects were initiated with the savings from those projects and from others which had been completed under budget. One more grant recipient withdrew from the program after the end of FY18 when the funds could no longer be granted to another applicant.

A total of 28 projects were completed by June 30, 2019, and nearly all expenses have been submitted and paid, which totals \$109,068 to date. A summary of the completed projects can be found in Table 1. At the end of their project, each grantee was asked to complete a final report and answer three questions:

1. Please describe past issues with wolf depredation and how this project should reduce future depredation.
2. Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?
3. Do you feel this project will reduce future wolf-livestock conflict? If no, why not?

Participants in this grant cycle generally did not have significant challenges with the grant program and were optimistic that their project would reduce future wolf depredation. The information from the FY18 reports can be found in Table 2.

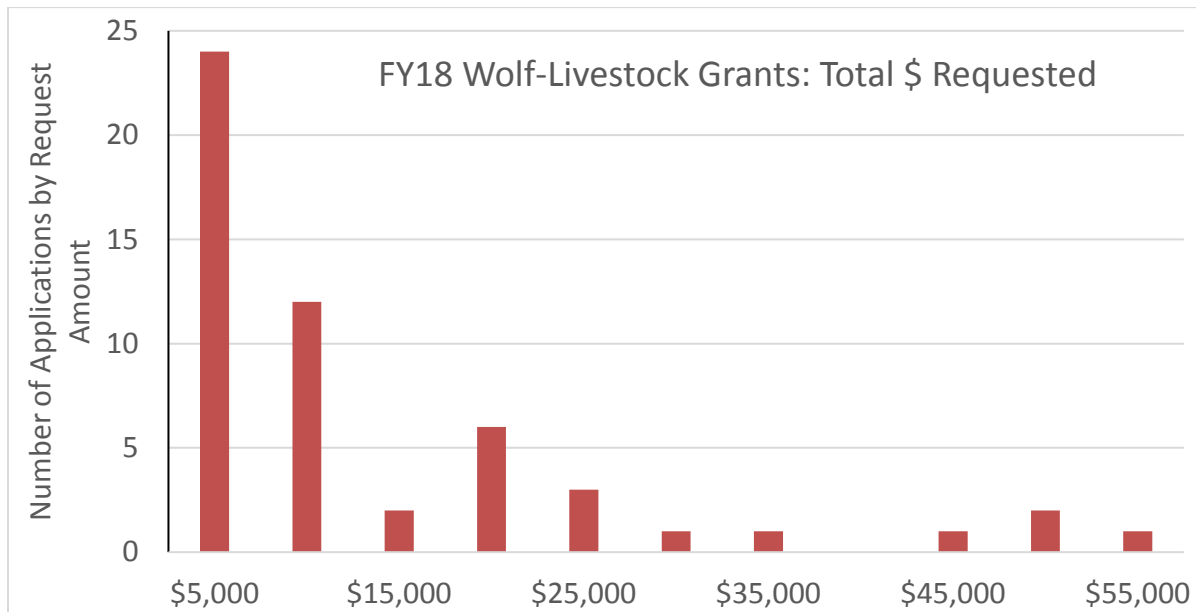


Figure 1. Project budget amounts for wolf-livestock grant applications for FY18 grant cycle.

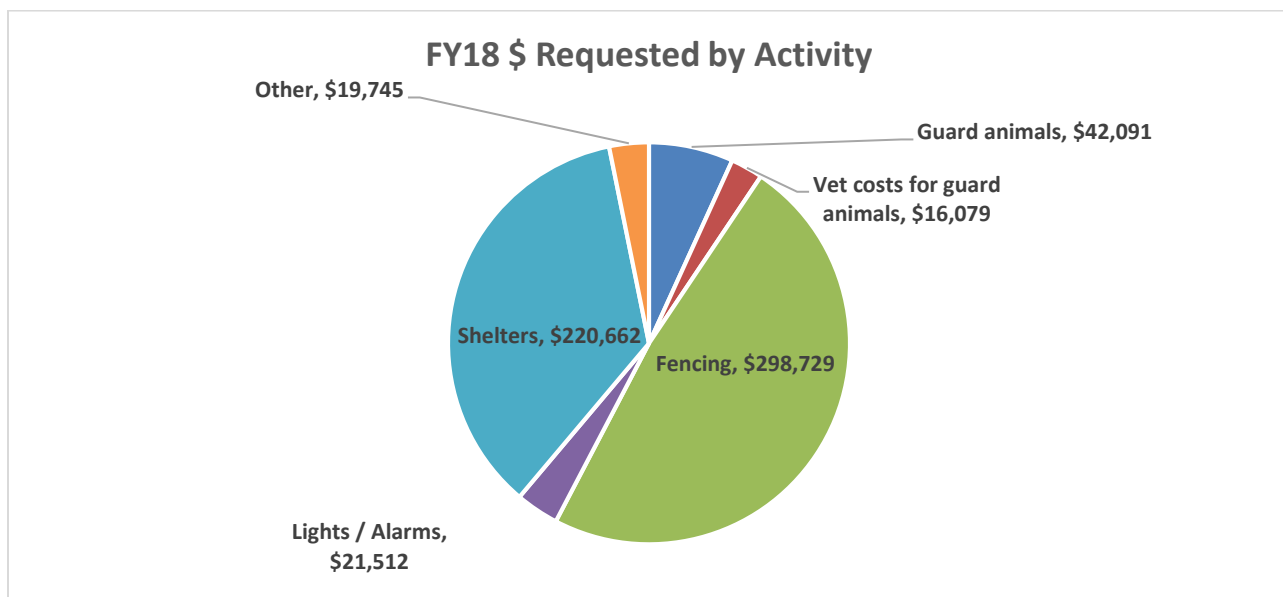


Figure 2. Amounts requested in applications to FY18 wolf-livestock grant cycle by activity.

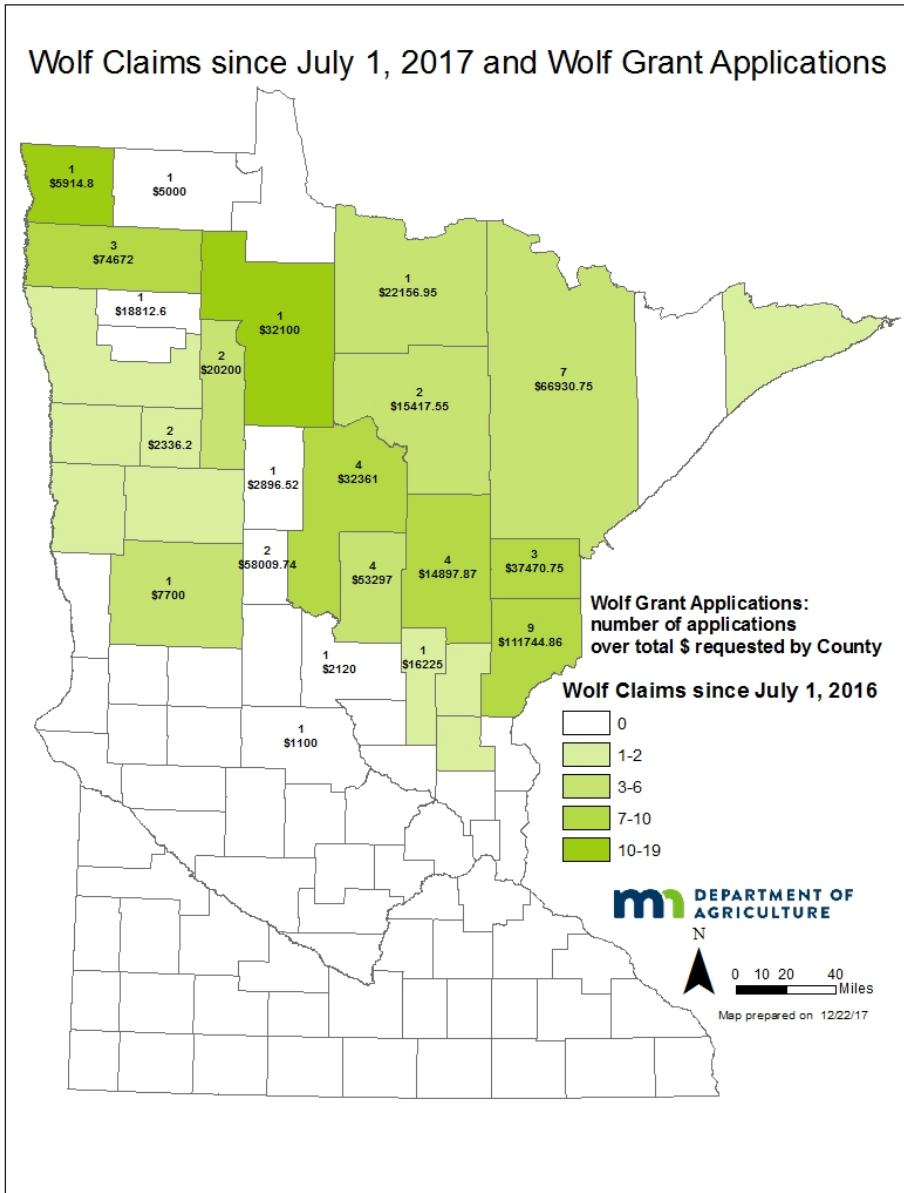


Figure 3. Numbers and total amounts of applications to FY18 wolf-livestock grants and numbers of depredation claims paid in past 18 months by county.

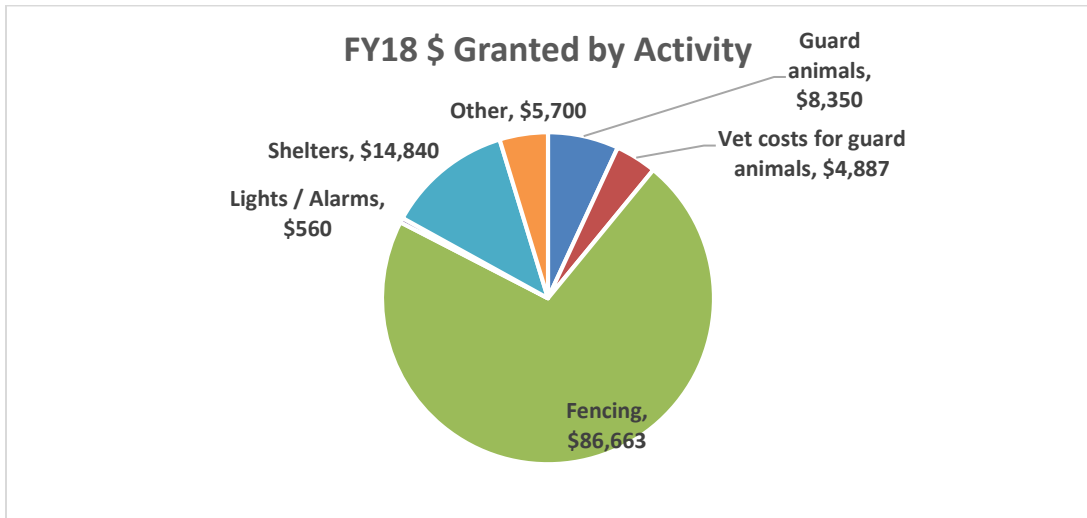
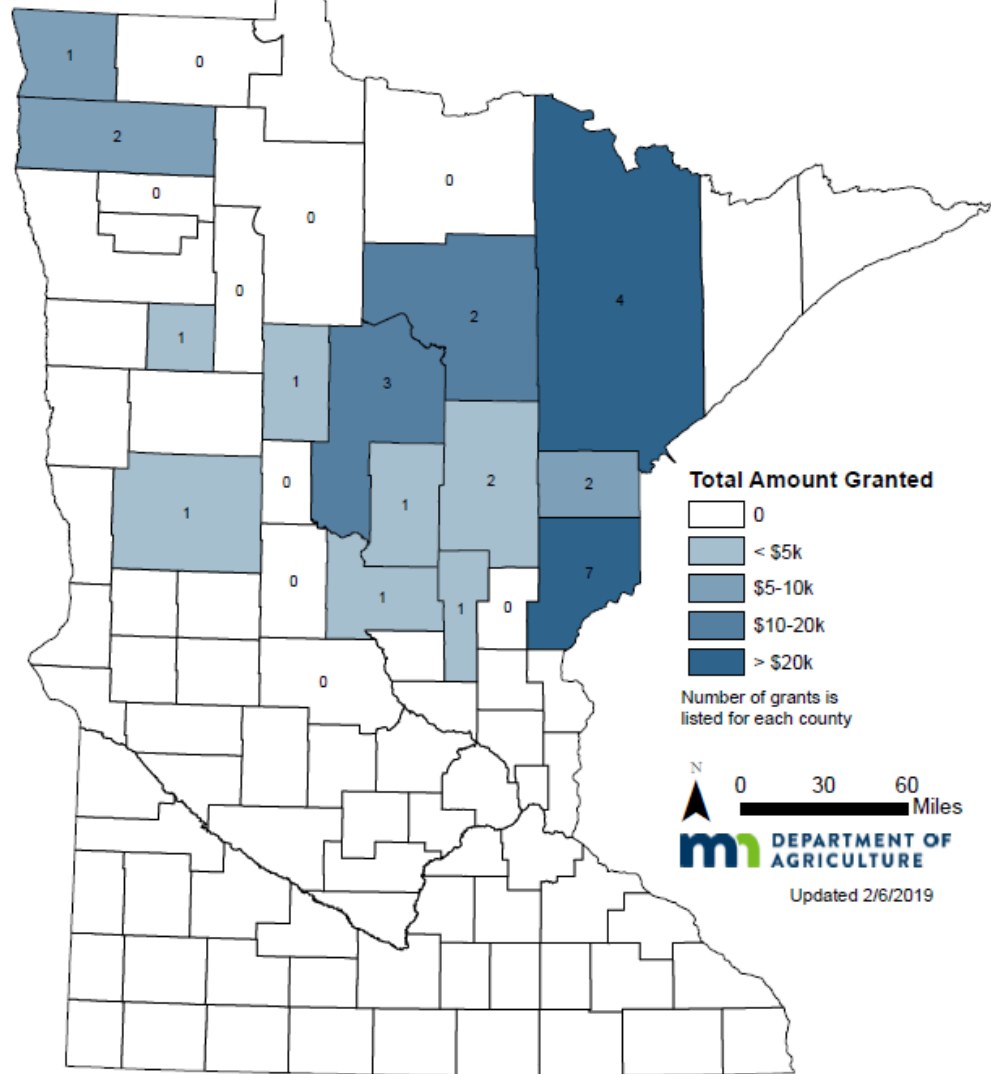


Figure 4. Amounts awarded for FY18 wolf-livestock grants by activity.

Wolf-Livestock Conflict Prevention Grants 2017-2018



In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651/201-6000. TTY users can call the Minnesota Relay Service at 711 or 1-800-627-3529. The MDA is an equal opportunity employer and provider.

Figure 5. Number of grants and total amounts awarded for FY18 grant cycle by county.

Table 1. Summary of grant projects funded during the FY18 grant cycle.

ID	County	Livestock Type	Past Losses Score*	Amount Granted	Project	Completion Date	Spent
1	Otter Tail	Unknown	2	\$5,000	Fencing	8/6/2018	\$5,000
6	Pine	Sheep, cattle, pigs, poultry	2	\$1,983	Vet care for existing animals	6/28/2018	\$1,983
8	Pine	Cattle, sheep	8	\$5,884	Fencing plus lambing shelter	8/22/2018	\$5,884
12	Cass	Cattle	2	\$1,750	Barriers and lights	Withdrawn	
14	Pine	Cattle	8	\$3,200	Donkeys and vet care	6/8/2018	\$2,297
18	Morrison	Cattle	4	\$2,120	Calving shelter	5/29/2018	\$2,120
19	Pine	Sheep	4	\$3,837	Guard dog	4/16/2018	\$3,837
20	Mahnomen	Cattle	8	\$2,000	Donkeys	6/21/2018	\$1,925
24	Cass	Cattle	4	\$9,000	Calving shelters	8/29/2018	\$9,000
25	Mille Lacs	Unknown	2	\$1,750	Fencing and lights	9/5/2018	\$1,750
26	Cass	Cattle	4	\$400	Lights	5/22/2018	\$400
29	Pine	Sheep	2	\$2,237	Vet care for existing animals, fencing	8/20/2018	\$2,237
32	Carlton	Cattle	4	\$7,272	Donkey and vet care, fencing	11/4/2019	\$4,963
35	Itasca	Cattle	8	\$10,000	Fencing	11/13/2018	\$10,000
36	Itasca	Cattle, sheep, goats	4	\$5,418	Vet care for existing animals and fencing	8/29/2018	\$5,418
37	Aitkin	Cattle, sheep	2	\$1,500	Donkeys and guard dog	7/1/2019	\$1,385
41	Aitkin	Cattle	2	\$1,500	Fencing	7/25/2018	\$1,500
43	Marshall	Unknown	4	\$2,050	Donkeys, guard dogs and vet care	11/14/2018	\$1,845
45	Hubbard	Sheep	2	\$2,897	Fencing	7/10/2018	\$2,897
46	Pine	Cattle	8	\$10,000	Fencing	8/27/2018	\$10,000
48	Kittson	Unknown	6	\$5,762	Barriers, fencing	5/25/2018	\$5,762
49	Pine	Sheep	2	\$1,500	Fencing	11/28/2018	\$1,500
50	Saint Louis	Cattle	4	\$7,500	Barriers	8/6/2018	\$7,500
51	Saint Louis	Cattle	4	\$7,500	Barriers	7/12/2018	\$7,500
52	Saint Louis	Sheep	2	\$1,224	Fencing, shelter	8/29/2018	\$1,224
54	Crow Wing	Cattle	2	\$3,340	Calving shelters	9/10/2018	\$3,340
22 ^a	Saint Louis	Cattle	6	\$7,500	Barriers	7/5/2018	\$7,500
27 ^a	Carlton	Cattle	4	\$700	Donkeys	9/4/2019	\$301
39 ^a	Marshall	Cattle, poultry	8	\$5,160	Fencing and lights	Continued in FY19 project	

*2 = No past documented losses

4 = Past documented losses but not in last 2 years

6 = Losses during past 2 years < \$2,000

8 = Losses during past 2 years \$2,000-\$5,000

10 = Losses during past 2 years > \$5,000

^asame producer also received grant in FY19 cycle

Table 2. Information provided in final reports by grant recipients for FY18 grant cycle.

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
1	8/6/2018	Have had issues with lambs disappearing. Wolves getting into our pasture and causing havoc. Two wolves shot that were on our property.	Documentation. Buying railroad ties to be used for corner posts. Hoping I get reimbursed for them. Probably should have called them fence posts on the receipt. The other issue is coming up with an estimate as to cost. Prices have gone up. Almost impossible to hire anyone to help.	Yes, definitely will. However, my other pasture needs to be made more secure as well as our winter feedlot. Should be a lot more peace of mind.
6	6/28/2018	<p>We just bought our farm and began raising livestock -- sheep, cattle, pigs, and chickens -- in the summer of 2016. Thankfully we have not had any wolf-livestock conflicts in the past two years; however, we have utilized livestock guardian dogs with our sheep flock since we began because we heard reports from neighbors of sightings on our land as well as removals on nearby farms. We have also spoken with the USDA's Wildlife Services which stated that Pine County is a confirmed high wolf complaint and removal area.</p> <p>Veterinary care of the dogs is a huge cost against the profitability of our farm enterprise, but essential in order to deter wolf predation. This project will reduce future depredation by keeping our livestock guardian dogs healthy and in good working condition, protecting them from and treating them for parasites and practically unavoidable (as working dogs that live outside 24/7) mosquito and tick-borne diseases.</p>	<p>The grant application and agreement process was very straight-forward, clear, and easy to complete. My questions were answered quickly. In terms of completing the project, veterinary care of livestock guardian dogs has been difficult to obtain in the past because many small animal vets are unwilling to make calls to the farm when they know farmers will refuse their more expensive recommended services. It is not worth their time when they reluctant practitioners willing to give us estimates and entertain coming to the farm for the first time. already have busy clinic practices. Mentioning the grant award made previously uninterested or</p>	<p>This project will absolutely reduce future wolf-livestock conflict. Livestock guardian dogs have been proven as one of the most effective deterrents against wolves and other predators.</p>
8	8/22/2018	<p>The past 10 years we have seen signs of wolves and they have killed calves. This year (2018) our neighbors had wolves kil some of their calves and we also saw a wolf close to cattle pens and sheds at our own farm. This project should therefore reduce the ease with which wolves can enter pens and kill livestock.</p>	<p>I had no problem with completing this particular project</p>	<p>Yes I feel that this project will reduce livestock-loss due to wolf conflict.</p>
12	Withdraw			

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
14	6/8/2018	Loss of calves and cows due to wolf activity	No, it was good	Yes, it helps. The donkeys have been very helpful and the fencing has/will continue to serve its purpose.
18	5/29/2018	Wolves came to where cows were alone with their young calves and got the new babies. Now we can lock up the cows until the calves are big enough to go with the herd.	Everything was pretty easy to follow. If you didn't have a computer it would be more difficult	Yes, for the reasons above
19	4/16/2018	Past issues with wolves have been at night on pasture. Using this herding dog to bring sheep home every night should alleviate that issues unless wolves move into yard.	The contract person (mark) was exceptionally good to work with, answering questions immediately. The application and grant agreement process went smoothly. Finding a trained farm dog wasn't easy. Was very fortunate to find Mick. Thank you to everyone for this wonderful and positive opportunity.	Getting the sheep into the yard close to the house should be a big deterrent. Should the wolves move into the yard, we would have a problem. I think this will definitely help reduce future wolf-sheep conflict.
20	6/21/2018	As you are aware, the timber wolf is a very illusive animal and changes its territory at times. This year as of yet I have had a pair of wolves that were here in early May or end of April but have not killed or bothered the cattle at this time. I have the Jack and the Jenny in separate pastures, they may be doing their job and I am not aware because you rarely see the wolves to begin with. I haven't had any calves killed or attacked. If I have the opportunity to witness either pasture where they would be chasing either a coyote or wolf I will let you know. Thank you for the help.		
24	8/29/2018	We have lost many calves and cows to wolves, some of which have been able to be verified by USFW officials or MN DNR Officers. We have tried many options to try and reduce wolf-livestock conflicts by using blinking lights, moving cattle, 24-hour surveillance, changing calving dates, among other things, and we still have calves lost. The shelters will allow the calves to go into an enclosed area keeping the calves protected, making the cows congregate in front of the shelter creating a barrier for the wolves to get at the calves.	The application was straight forward and easy to complete and the communication from the grant team was great! We checked with a couple of local welders to make the shelters but between their schedules and cost we were unable to source them locally; then due to adverse weather this spring the company we chose was backordered on our shelters, and then to get a reduced rate on shipping we had them hauled at the shipper's convenience. Overall the process was done and will be in place for next calving season to help reduce the potential for wolf attacks.	I believe these shelters will reduce our chances of wolves attacking calves during calving season. By giving them a place that is protected on 3 sides, it will give them a place to hide away from the wolves while they sleep which is when most of our wolf attacks occur during the night.

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
25	9/5/2018	We have not had any wolf depredation issues, but this is primarily due to the lengths we have gone to secure animals at night. We have seen wolves on multiple occasions on our property and our farm is located directly across the road from a 39,000 acre wildlife management area known to have numerous wolves present. By installing secure, wolf-resistant gates to our newly installed fencing, we can now begin to leave animals out on pasture at night which will greatly improve our farm productivity, profitability and land stewardship (rotational grazing.)	No. Overall, the MDA seems to have done a good job of making the application process user-friendly. Additionally, the process to request reimbursement is also easy to navigate.	Yes. This grant allowed me to install high quality wolf-resistant gates on our property that compliment a 10-wire high tensile electrified perimeter fence. It also allowed me to install additional wires on fencelines closer to the ground to reduce the likelihood of wolf entry.
26	5/22/2018	Lost 8, 400 pound calves in one night and 13 the next year. Wolves only ate the guts and killed another calf. Wolves killed within a short distance of our house at 4pm. Wolves chased cattle to death and DNR didn't help. The game warden liked wolves. John Hart helped and took 9 wolves before killing slowed down. Wolves are still here, real problem.	With our late spring the time frame to get it done is too short	Depending on the amount of wolves and their fear of the lights over a period of time. Wolves get to know it is just lights. Once they start to kill the only way to stop them is to kill the wolf. Neighbors don't like the lights.
29	8/20/2018	We have had a number of wolf depredation events, but the worst was in 1999 when a very large pack took 75 lambs and a dozen ewes in a very short time. At the time I had no secure place to put the sheep. Fortunately parvo reduced that pack later that year, but the lesson remained that we need a secure place to retreat to in the event of another large pack. Since then there has been packs of 8 and 10 wolves in the area. Our dogs were able to dissuade them and they moved on each time, but I was quite aware that we were unprepared should the wolves start killing dogs, which has been a problem with ranches in the Rockies. I have always had a feed yard but it was never "wolf proof". The grant project enabled me to use 5 x 16 ft welded	I had difficulties saving a copy of the electronically completed grant application. Otherwise the instructions were very clear and well-organized. I had more than a few challenges completing the project. I had major back surgery in December, and a longer recovery than expected. Plus a very late spring. I was very grateful for the deadline extension. In the future, I might suggest that a Sept 1 to Aug 31 period is actually easier to work with as most people are going to be very busy in the Spring lambing or calving.	Yes I do. Helping farmers adapt to wolves is a very sensible idea. My experience has been that electrified fencing, livestock guard dogs, and secure yards are essential to preventing depredation. The grant is providing these things, and also helps other farmers gain ideas as to how they can stop depredation.

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
		panels to make a sturdy fence that, with the sheep and dogs on the inside, should be able to prevent any depredations should another large pack return. My experience has been that if we can prevent wolves from getting a meal, they will move on in a week or so. So the fortress is a place to put the sheep and dogs temporarily until the pack moves on.		
32	11/4/2019	I the past I have had a problem with wolves taking my calves when they were very young and newborn. I had problems both in the fall and spring calving. We built a fence with woven wire and electricity for a calving area along with adding a donkey for a guard animal.	The problems I had were not with the grant program, the coordinators were very accommodating as I was having trouble getting the fence built due to the weather.	Yes, I feel this will help with the wolf problem with the woven wire fence should keep them out of the calving area but now I had problems with the wind, and cold due to moving the calving area to a more open/less wooded area.
35	11/13/2018	We have had wolf problems for many years. Sometimes we find remains and others the calves are just gone from the pasture. This fence will keep the wolves out during calving but once the cattle are out in the pasture it won't help. We had a guard dog and that helped a little.	The biggest problem was time. We were busy with other farm work especially haying and couldn't spend the time on additional work. We called and got an extension. Then when we started it rained so much we were working in the mud which delayed it again.	It should help during calving but to protect the cattle during the rest of the summer we would have to fence the entire farm and that would be impossible. When the wolves are hungry they will find a way to get food. If there was a bounty there would be a balance. As it is we hunt the deer so the wolves have to find a different source for food.
36	8/29/2018	The 9-R Ranch has been a chronic wolf predation farm for the 40 years we have been operating it, with nearly annual claims/documentated losses thru the MDA program. The 9-R Ranch is primarily a beef cow/calf operation that also raises a small flock of sheep and a few goats for both meat and fiber. We have experienced both cattle and sheep/goat losses. Because the farm is primarily a cattle operation, fencing consists of a combination of barbed wire and high-tensile electric. This fencing has proved problematic for keeping the sheep close to the farmstead where the wolf traffic is less. To help prevent future wolf predation, our project set up two	The challenged I had with the grant application was understanding what detail was needed in describing the type of barrier/fencing we wanted to construct and how to account for the cost, as some supplies were already owned and some products had a significant price hike after submitting the grant. Another challenge was due to the cool and wet spring, which did not allow us to start the fencing project when we had hoped to. The weather also caused our other farming projects including spring field work, calving, and breeding season to further impact our fencing timeline. I ended up applying for and receiving an extension to the completion date. And finally, we had to modify our original fencing plans. We had to sink the T-posts further into the ground to ensure their stability and	This project should definitely reduce wolf-livestock conflict on our farm. The woven wire perimeter fencing is already proving to be wolf-resistant as even our farm dogs cannot penetrate it to get into the fields. Recent thunderstorms caused the flock to scatter, and they remained contained in the woven wire fenced pasture. It appears that it will successfully keep the sheep in their pasture and keep wolves, coyotes, and bear out. Maintaining a healthy group of donkeys seems to be a worthwhile addition to the farm. Wolf presence has been documented on our farm this spring and summer and to date we cannot

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
		<p>connected pastures with perimeter fencing that would effectively contain the sheep, including the lambs. These pastures are located alongside the main farmyard, minimizing wolf traffic exposure. The perimeter fenced is comprised of woven wire topped with high-tensile electric wire, gates and an electric energizer for the portable netting that would further sub-divide the two pastures to maximize grazing potential. Grazing efficiency should allow the flock to be supported in this woven-fenced area, eliminating the need to station the flock in more vulnerable fields fenced by traditional cattle fencing. Please note that our original plans were to top the woven-wire fence line with 2 strands of high-tensile wire, however sinking the T-posts deep enough to be secure in our soil did not allow enough post height for two strands. The single strand does carry a sufficient charge to discourage animal crossing. Additional wolf predation prevention measures include establishing 5 guard donkeys with the cow/calf herd. This herd is pastured in adjacent and outlying acreage to the sheep pastures. The donkeys seem to have discouraged wolf predation over the past 3 years, and having them with the cows helps keep the wolves further from the sheep flock. Maintaining the donkey's mobility is key to their effectiveness. Our grant project allowed the farrier to service the donkeys twice, and included the sedation necessary to safely do this work.</p>	<p>ability to withstand pressure of both sheep and cattle, which is necessary to keep the fence intact as a predator barrier. This change allowed up to top the woven wire fencing with only one high-tensile wire instead of 2. In testing the wire, it does carry enough charge to discourage animal pressure. Going with taller T-posts would have been cost-prohibitive, especially since the one electric wire carries a potent charge.</p>	<p>document any calf losses due to predation. The donkeys are alert and healthy and move continuously amongst the cow/calf herd. I feel this project made good use of grant dollars, allowing us to better manage our livestock to both keep them safe and productive, and to reduce the incidence of wolf-livestock predation conflicts.</p>
37	7/1/2019	<p>They have killed baby lambs and calves in the past. Having donkeys out with cows and sheep keeps predators like wolves at bay.</p>	<p>No, overall thought the process went good.</p>	<p>Yes</p>

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
41	7/25/2018	Wolves have harassed cattle giving birth in the past. Lost one calf in 2017. The chainlink fence blocks access to cattle during calving. This protects the calves during this vulnerable stage of production.	The largest challenge was the short timetable involved.	Yes, the chainlink fence will eliminate wolf-cattle contact during calving. Should be 100% effective.
43	11/14/2018	No Final Report Submitted		
45	7/10/2018	Our 317 acre farm in Hubbard Co is within MN wolf range. We have no documented losses from wolves thus far, but wolves have been sighted on our farm and it is more common for people in our neighborhood to witness sightings of wolves. The completed fencing project will provide wolf-livestock conflict prevention in the future.	No, it was clearly defined. We appreciated the extended deadline.	Yes, by installing boundary panelled fencing around our feeding and lambing area will provide protection to our sheep in the winter months and for spring lambing when they are most vulnerable. Spring is also a time when the wolves are deprived since wild prey are hard for them to capture.
46	8/27/2018	Our operation consists of spring and fall calving season. We have wolf issues at calving and again at grass turn out. This project should help prevent the taking of calves at birth. Someday need to do the entire pasture so our cows can utilize the pasture again instead of being subsidized all year on feed.	Didn't realize that we could have applied for the 2nd round grant. Trouble finding a contractor that could do the project in the time we needed or even in the same year.	Shortly after completion of the woven wire and electric our fall cows started calving and as of today, we are approaching halfway finished and so far no wolf depredation. We wish we could afford to do the whole farm. Last year at this time we had 4 wolf kills and 2 injured. Lots of wolf sign out there, hope they stay our there. All of this to fence out wildlife wolves that are overpopulated and causing us to invest extra money to protect our livelihood on property we own.
48	5/25/2018	In the past we've had issues with predators getting at our livestock in late winter and early spring when food sources are getting tough for them to find. With this project the coral panels and windbreak panels should deter any roaming predators from getting at our young stock and threatening our livelihood.	In my opinion the application process and agreement process were both very simple. Everything was explained in detail and the instructions were easy to follow. As for completing my project, everything went well with that as well.	I feel this project will help reduce conflict in the future.
49	11/28/2018	We used to shepherd our sheep on the 20 acres of open pasture without our guard dogs for protection. We have found tracks larger than a coyote and also bear tracks at a carcass.	No, we did not have any particular challenges with either the grant process or getting our project completed. We were surprised to receive the \$1500	Yes, with the 20 additional acres fenced, we now have safer grazing area for our sheep. The guard dogs can now also guard

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
		We cannot always be certain of the predators but possibly could be wolves or coyotes. We have, however, saw a coyote actually come onto property and kill a lamb.	after our original application was denied for the \$2500. We thought we were out of the running.	the sheep and we longer have to worry about them dogs wandering off.
50	8/6/2018	Wolves have been a constant problem on our farm. We have had 17 confirmed kills and have had the federal trappers at our farm seven different times. We have been reimbursed over \$10,000 over the years. Calving season has been a difficult time with wolves coming into our pasture and taking young calves. With the panels that we purchased with the grant money, we were able to create a pen behind the barn in a lighted area keeping the cattle in a more confined area rather than having them calve through the pasture. It is connected to the barn enabling us to bring calves into the barn if needed. Also, the panels have bars close together at the bottom and are close to the ground to help keep the wolves out of the penned area.	The grant was not very well publicized. We heard about it from another farmer just days before the deadline so we had to hurry to get the application in on time. I was unable to download some of the forms. The amount of money we received from the grant got our project started but was not enough to do all we wanted. We were hoping to make the penned area larger and add a separate area for our heifers that were calving. With the original completion date in June, it was a quick turnaround to finish the project. We had to order the panels from our supplier and wait until he was able to get them all made before we could complete the project. When we finally got the panels and were starting to create the pen it was late spring and very wet which made it difficult to get the panels in place. It help when we were able to get an extension to finish the project.	Yes, by having the cows in a confined well-lit area connected to our barn, we have more control when they are calving. It helps protect the newborn calves when they are most vulnerable to attack and allows them to stay in a more projected area until they are able to run with the herd. The panels also make it more difficult for wolves to enter the area than the barbed wire fence.
51	7/12/2018	I had one documented cow kill and one documented calf kill in recent years due to wolf depredation. Other calves have disappeared, but without proof of a carcass, documentation could not be verified. I have had wolf hair on fencelines and wolf tracks in my driveway as well as seeing wolves on my property. I am sure this project will be very helpful in reducing depredation because the wolves will not have access to the newborn calves in the pens, where they are the most vulnerable.	The application process itself was acceptable, but included too much contractual paperwork that does not apply to this grant. I was also disappointed that I was not immediately contact that this grant money was originally available, especially because of my prior documented wolf kills. As far as completing m project I was very happy to receive the funding that I got, but the money was not sufficient to fully complete the plan I had for my project.	The project will most definitely help in the context of wolves killing newborn calves and cow in the calving pens. The project had to be reduced greatly from my original plan as I was only able to fence the perimeter of the calving area next to the calving building. Without being able to fully complete the proper fencing to include the immediate pasture loafing area that the cow/calf pairs have to go into after one week in the calving pen area, it will not reduce the depredation as much as my original project intent.
52	8/29/2018	Our farm backs up to Rocky Run and associated wetlands. Knowing that there is no way to change the wildlife moving along the stream corridor I chose to work on keeping	The application process and grant agreement was quite simple and straightforward. The weather did provide some challenges to getting started, as did the need to	I do feel that this will be a great measure to reduce wolf-livestock conflict. Lambing in March, the snow conditions often reduce the effectiveness of electric fence resulting

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
		lambs safe by assuring that the fence system keeps them in a secure area close to our barn and adult animals. Replacing 5-strand electric fence with woven wire will keep new born and young lambs from wandering through the fence and into the woods or large pastures, eliminating the opportunity for wolf depredation.	get the work done during the busiest time of the year with lambing, general farm maintenance and haying.	in a perimeter that was not completely reliable. We now have an area on the south side of our barn that is well lit and keeps ewes - that like to hide in the darkest corners to lamb, secure in our barnyard. The south paddock will deter predators attracted by the smell of the birth, from finding a way through the perimeter electric fence. In addition, newborn lambs, often ignored as the ewe has a second or third lamb, will not be able to roll under or through the fence. The lamb paddock on the north side of our barn will allow the groups of curious young lambs (who are not always interested in sticking close to their mothers), to be secure in the new woven wire sheep fencing and unable to wander into the adjacent woodlot.
54	9/10/2018	No depredation to date, however we have past sightings and hearing of wolves in the area. The calf shelters and blockade will provide excellent protection for newborn calves.	Grant application went well including extension. One challenge was the delay from the shelter supplier completing our order. Another was only finding the blockades in South Dakota and having to pay SD sales tax. Steel prices increased greatly from last years application time to actual purchase time.	Yes! I feel confident this will give our cattle the protection needed at calving time.
22	7/5/2018	I have had wolf problems since the 1990's and lost many cattle since right up to last year. The panels will play a major part in helping control the conflict of wolves killing newborn calves as well as other cattle. However, I needed to reduce the planned project because of insufficient funds I received.	Being this is the first grant I have applied for, I found this hard to fill out. For the simple farmer, steps should be an easy 1,2,3 - filling out the application. The contract included was repetitive and not applicable to this grant. Due to the fact I have documented losses I felt I should have been automatically informed about the program from the start. I only found out about it in the farm paper a week before the application deadline.	I greatly appreciate the grant funds for prevention of wolf-livestock conflict, but I had 12 calves killed and could only confirm one by a wolf due to necessary proof. I received \$1050 for that one calf and \$0 for the other 11 because wolves ate the whole calf. It's not uncommon for wolves to eat the whole calf in a 24 hr period. This program should be extended on an annual basis. The funds for this project should definitely deter wolves from getting at the newborns in the future.
27	9/4/2019	No Final Report Submitted		

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
39	In progress			

FY19 Wolf-Livestock Conflict Prevention Grants

The FY19 request for proposal was announced on May 3, 2018, with an application deadline of June 29, 2018. A total of 39 eligible applications were requesting a total of \$608,006. Proposed projects for the FY19 grant cycle were generally for higher dollar amounts than in the FY18 grant cycle (Table 3).

The geographic distribution of applications was similar to the FY18 grant cycle (Figure 6) as was the breakdown of requested funds by activity, with the greatest requests again coming for fencing and shelters (Figure 7).

Grant applications were reviewed and ranked by a panel consisting of representatives from Minnesota Cattlemen, Minnesota Lamb and Wool Producers, Minnesota Farm Bureau, Minnesota Farmer’s Union, University of Minnesota, MN DNR, USDA APHIS Wildlife Services, and the MDA. Criteria used to evaluate proposals included:

- Documented losses from wolves (up to 10 points)
- Past grant funds received (up to 10 points)
- Completeness of application (up to 5 points)
- Demonstrated knowledge (up to 5 points)
- Effectiveness of tactics (up to 5 points)
- Cost efficiency (up to 5 points)

The final applications to receive grant funds were selected by the Commissioner of Agriculture. Of the 39 applications made for the FY19 grant cycle, 24 projects were initially selected for funding and the earliest projects began in October 2018. One grant recipient withdrew from the program after the end of FY19 when the funds could no longer be granted to another applicant.

A total of 23 projects remain, 14 are completed, and nine are scheduled to be completed by June 30, 2020. A summary of these projects can be found in Table 4. As with the FY18 grant cycle, at the end of their project, each grantee was asked to complete a final report and answer three questions:

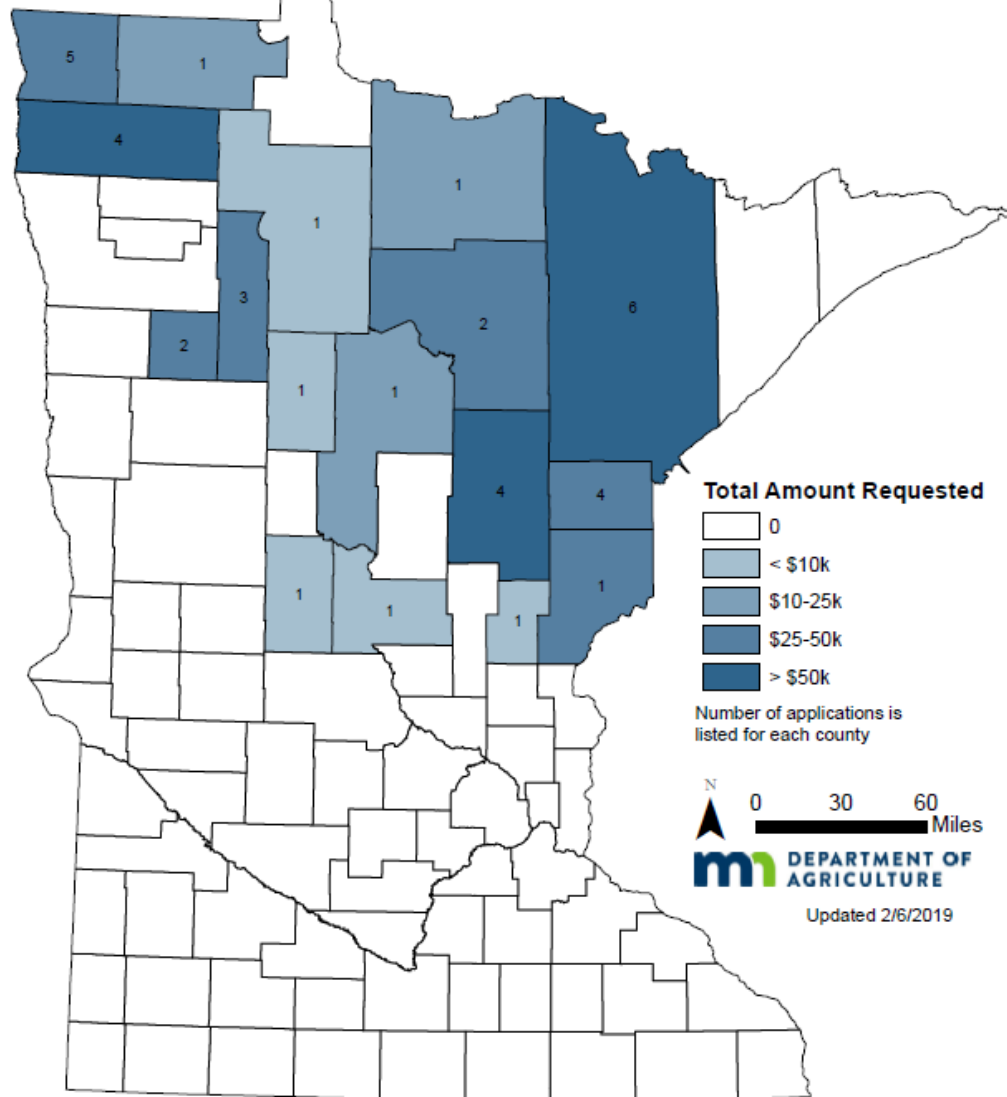
1. Please describe past issues with wolf depredation and how this project should reduce future depredation.
2. Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?
3. Do you feel this project will reduce future wolf-livestock conflict? If no, why not?

Like the FY18 participants, the FY19 participants were optimistic that their projects would reduce future losses to wolves. The information from the FY19 reports received can be found in Table 5.

Table 3. Comparison of FY18 and FY19 grant applications.

	FY18	FY19
Total applications	53	39
Total \$ requested	\$611,336	\$608,006
Maximum \$ requested	\$52,809	\$70,050
Minimum \$ requested	\$336	\$334
Mean \$ request	\$11,537	\$15,590
Median \$ request	\$5,883	\$10,740

Wolf-Livestock Conflict Prevention Grants 2018-2019



In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651/201-6000. TTY users can call the Minnesota Relay Service at 711 or 1-800-627-3529. The MDA is an equal opportunity employer and provider.

Figure 6. Numbers and total amounts requested by county for FY19 grant applications.

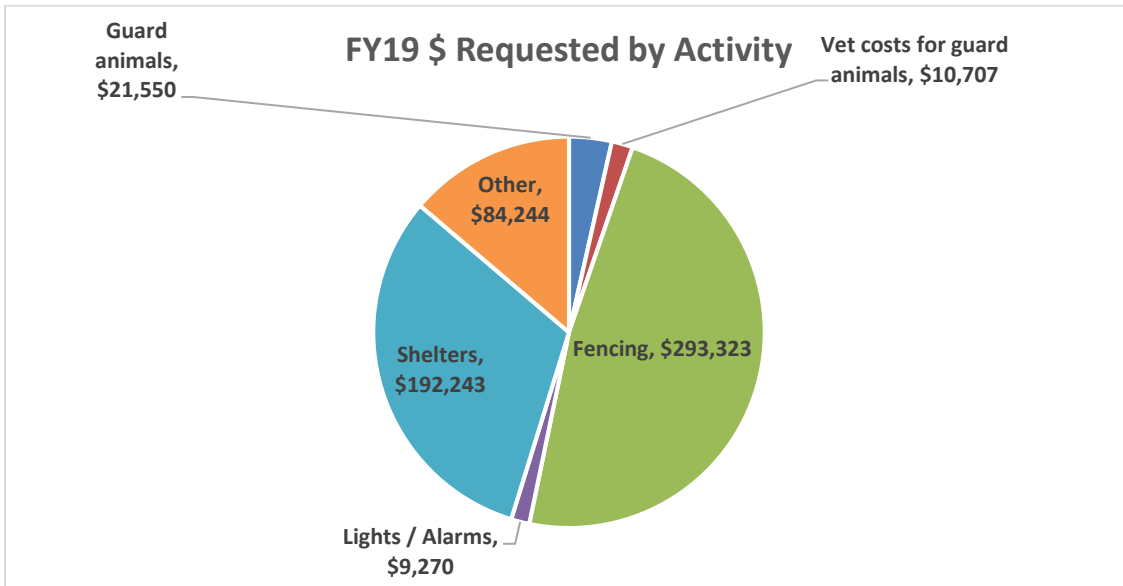


Figure 7. Amounts requested in FY19 wolf-livestock grant applications by activity.

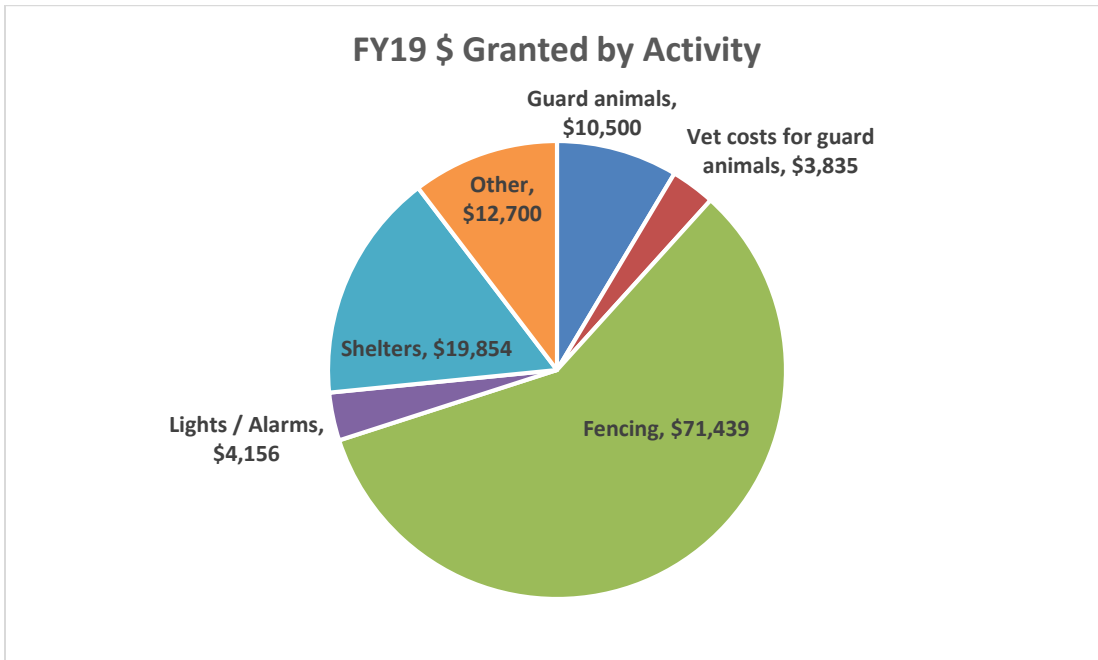
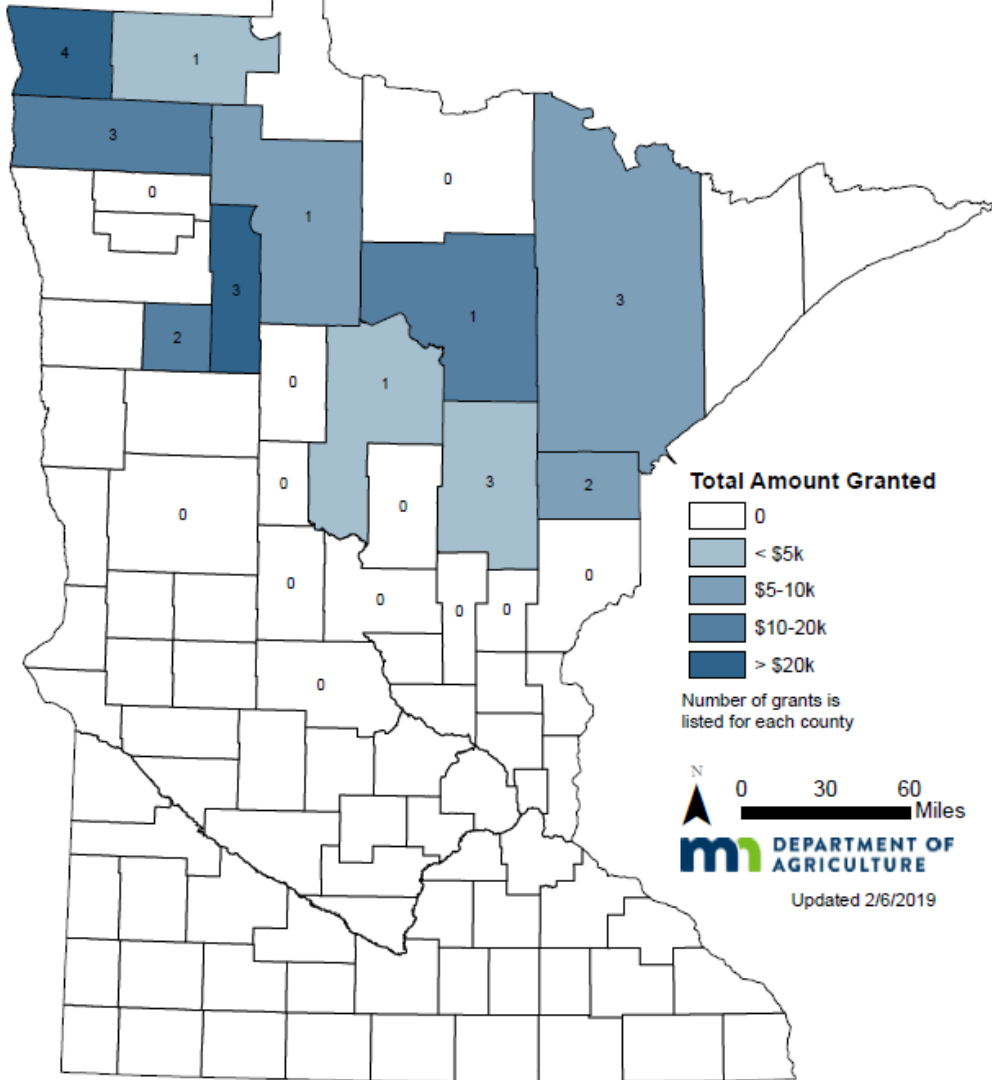


Figure 8. Amounts awarded for FY19 wolf-livestock grants by activity.

Wolf-Livestock Conflict Prevention Grants 2018-2019



In accordance with the Americans with Disabilities Act, this information is available in alternative forms of communication upon request by calling 651/201-6000. TTY users can call the Minnesota Relay Service at 711 or 1-800-627-3529. The MDA is an equal opportunity employer and provider.

Figure 9. Number of grants and total amounts awarded for FY19 grants by county.

Table 4. Summary of FY19 grant projects.

ID	County	Livestock Type*	Past Losses Score*	Amount Granted	Project	Completion Date	Spent
2	Marshall	Sheep, cattle	2	\$4,906	Guard dogs, vet care and lights		\$2,250
3	Kittson	Cattle, goats	4	\$2,488	Barriers	5/14/2019	\$2,488
4	Aitkin	Cattle	2	\$1,405	Vet care for existing animals and fencing	9/19/2019	\$1,405
7	Cass	Cattle, sheep, goats	2	\$5,000	Fencing and lights	7/26/2019	\$4,945
9	Kittson	Cattle	6	\$5,020	Donkeys and vet care, fencing and lights		
10	Roseau	Cattle	2	\$3,000	Fencing	4/19/2019	\$3,000
11	Carlton	Sheep, poultry	6	\$7,148	Guard dogs and vet care, fencing, lights and shelter		
13	Aitkin	Cattle, goats, poultry	2	\$700	Fencing and lights		
15	Beltrami	Cattle	4	\$6,583	Fencing	10/29/2019	\$6,583
16	Marshall	Cattle	10	\$10,000	Calving shelter	Withdrew	
17	Mahnomen	Cattle	6	\$7,853	Calving shelter	12/12/2018	\$7,853
21	Clearwater	Cattle	4	\$1,700	Guard dogs and vet care	7/2/2019	\$1,700
30	Anoka	Cattle	4	\$4,000	Calving shelter	7/25/2019	\$3,690
31	Aitkin	Sheep, poultry, cattle	2	\$2,000	Guard dogs and vet care	10/7/2019	\$911
33	Mahnomen	Cattle	2	\$3,500	Fencing		
34	Clearwater	Cattle	2	\$4,000	Calving shelter	6/21/2019	\$4,000
38	Aitkin	Cattle	10	\$15,000	Barriers	11/1/2019	
42	Kittson	Cattle	6	\$5,000	Fencing		\$1,863
44	Kittson	Cattle	6	\$7,500	Fencing, lights	3/20/2019	\$7,500
47	Itasca	Sheep, cattle	8	\$15,000	Fencing		
53	Marshall	Cattle	10	\$3,600	Donkeys, lights	3/20/2019	\$3,600
23 ^a	Saint Louis	Cattle	4	\$4,000	Barriers	7/23/2019	\$4,000
28 ^a	Carlton	Cattle	4	\$380	Lights		
40 ^a	Marshall	Cattle, poultry	8	\$2,000	Fencing		

*2 = No past documented losses

4 = Past documented losses but not in last 2 years

6 = Losses during past 2 years < \$2,000

8 = Losses during past 2 years \$2,000-\$5,000

10 = Losses during past 2 years > \$5,000

^asame producer also received grant in FY18 cycle

Table 5. Information provided by grantee's in FY19 grant reports.

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
2	In Progress			
3	5/14/2019	The past problems I have had is wolves killing newborn to very young calves. This grant will allow me to make barriers around the barn that has existing lights so I will be able to protect newborn calves and this will also allow me to move newborn calves more easily into the barn to protect them.	Not other than some repetitive paperwork.	This project will reduce the number of conflicts between wolves and my newborn and very young calves, which is what I have had a problem with in the past. I do still worry about my older calves once they are on pasture and vulnerable to wolf attacks.
4	9/19/2019	In the past we have lost calves to wolf depredation. Currently we have observed a significant wolf population near our farm. When we decided to add meat goats to our farm we began implementing depredation control measures immediately. The guardian dogs have been an invaluable benefit to keeping predators, such as wolves, out of the smaller livestock pastures. I appreciate that they protect by persuading predators not to come closer rather than going out and killing them. In order to be a responsible owner I need to maintain their vaccinations, health checks, and nutritional well-being. The healthier they are, the more effectively they do their job. In addition, visitors always ask about the dogs, how they work, and the benefit to owning them. Keeping the dogs health and properly maintained helps me convince others of their value. The benefit of adding in more woven wire fencing along the river is that it is providing a physical barrier both to keep wolves on the outsides of the pens as well as to allow them a safe passageway along the riverbank to move through their territory. I can expand my grazing areas to double graze cows and goats which is helping me improve pastures and	I felt like the entire process was pretty smooth and I was able to quickly access assistance from Nicole when I did have questions. This grant process has definitely been a positive experience for me.	Absolutely. As I mentioned above, I am looking towards long-term solutions that allow me to continue increasing and improving livestock production while also providing wildlife management and improved living areas along the river bank and back wooded areas that are more beneficial to the wildlife then to my livestock. My goal is to improve my farming, continue to improve the land around me, and make choices that also benefit the naturally found wildlife. So far it feels like it has been going well.

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
		improve my livestock management techniques. I am working on long-term solutions that reduce the conflict rather than just short-term problem solving.		
7	7/26/2019	We have lost multiple young and small livestock. Wolves are very predominant in our area, we have weekly sightings. Our hopes are that with the woven wire fence and gate panels, we can ease our minds a little bit by knowing the predators cannot access our young calves in the spring and our sheep during the summer.	The grant application itself was easy and simple to understand. After receiving the grant agreement some minor details were hard to comprehend. However, NiCole was great to work with. She made all details clear.	I am not sure yet. We did have an attack inside the fence. We lost four sheep in one night. Another has a severe bite wound but she is healing well. I believe the problem was my gates were too short. I purchased longer gate panels. I am thinking the tall panels will prevent future intrusion. However, until the wolves are taken off the endangered list, I don't truly feel the problem can be fully addressed. I am grateful for the state of Minnesota trying to help ranchers while our hands are tied by the federal government. Please continue to offer these grants. They are much needed and appreciated.
9	In Progress			
10	4/19/2019	I have lost many cows-calves to timberwolves over the years. By having a better corral system I will be able to hold cows in longer, avoiding calving on pasture issues. The last calf killed by timberwolves, I was not paid by the State. Game warden said just because a timberwolf was eating my calf doesn't mean he killed it. The calf was fine the day before death.	No, everything went really smooth.	Yes, having better control on cattle herd will really help
11	In Progress			
13	In Progress			
15	10/29/2019	No Final Report Submitted		
16	Withdrew from Project			
17	12/12/2018	Our calf losses happen in the first 10 days after birth, especially with our younger cows. Calving our younger cows in the sheltered area	The grant was very easy to complete and follow. Our actual expenses came in slightly higher due to increase	We feel this project will help to reduce future wolf-livestock conflict. The older the calves are, the smarter they become. They

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
		will give them time to bond with their calf and become better mothers to them before turning them out into the larger pasture where the wolves are more likely to be.	in cost of lumber and tin. We didn't expect to have to pay tax on the cattle panels since they are for the farm.	learn to stay closer to their moms and have a better chance of being able to run away and get to safety. The shelter is being used right now to help provide a safe area for our calves that we weaned.
18	5/29/2018	Wolves came to where cows were alone with their young calves and got the new babies. Now we can lock up the cows until the calves are big enough to go with the herd.	Everything was pretty easy to follow. If you didn't have a computer it would be more difficult	Yes, for the reasons above
19	4/16/2018	Past issues with wolves have been at night on pasture. Using this herding dog to bring sheep home every night should alleviate that issues unless wolves move into yard.	The contract person (mark) was exceptionally good to work with, answering questions immediately. The application and grant agreement process went smoothly. Finding a trained farm dog wasn't easy. Was very fortunate to find Mick. Thank you to everyone for this wonderful and positive opportunity.	Getting the sheep into the yard close to the house should be a big deterrent. Should the wolves move into the yard, we would have a problem. I think this will definitely help reduce future wolf-sheep conflict.
20	6/21/2018	As you are aware, the timber wolf is a very illusive animal and changes its territory at times. This year as of yet I have had a pair of wolves that were here in early May or end of April but have not killed or bothered the cattle at this time. I have the Jack and the Jenny in separate pastures, they may be doing their job and I am not aware because you rarely see the wolves to begin with. I haven't had any calves killed or attacked. If I have the opportunity to witness either pasture where they would be chasing either a coyote or wolf I will let you know. Thank you for the help.		
21	7/2/2019	In the past 13 years we have lost 5 baby calves to wolves and coyotes. All of our neighbors have lost calves to predators. The deer population has also gone down drastically. We have 2 female livestock guardian dogs who are now 1.5 years old. So far, no more kills.	We had a hard time locating some puppies. We ended up buying 2 before the grant came into effect. We used the grant money for vet bills. We have no complains about the grant process. Everyone had great advice and was very helpful.	I do believe that the guardian dogs are helping. One of our neighbors bought 3 boys that we hope to breed to our girls. The neighbor across the road would like a pup or two. All of our neighbors seem to have respect for the dogs and are in awe when they see them out with the herd. They call them the "polar bears"

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
23	7/23/2019	I have wolf problems since 1990's and lost many cattle up to last year. One late calf to coyotes four week old. This project has helped keep cattle penned and wolves out.	No, I learned a lot from the first grant application and NiCole help a lot.	Yes, I feel this project will reduce future wolf-livestock conflict. But there are so many wolf in the area. Thank you for the help of this program.
28	In Progress			
30	7/25/2019	Have had problems with wolves for many years and lost cattle. This project will keep cattle contained and housed so calves will be bigger when they go out to pasture, giving them protection.	My first application and NiCole Rawski helped me through it, greatly appreciated.	Yes, this will help but still concerned about all the wolves in the area.
31	10/7/2019	<p>From 1999 to 2009, wolf packs travelling along the Willow River adjacent to my farm became increasingly bold, even coming right into the homestead yard where I had two Australian cattle dogs. The dogs did not discourage the wolves at all. Interaction between my work horses and wolves and coyotes was a concern too. In 2009, I acquired two Great Pyrenees livestock guardian puppies. From that time on, I didn't see wolves in close proximity to the farmstead. One of those dogs is now deceased from natural causes; the other is very elderly. I used some of the money from this grant to purchase a puppy from an established sheep farmer and livestock guardian dog breeder. That pup is expected to be available in June. I have a younger female Great Pyrenees that is just starting to work to protect the sheep. She will require additional training, but that seems to be working well. Last year (2018) I took in two livestock guardians that were abandoned on a farm in Remer, Minnesota. I was hoping they would adjust to being part of my pack, but one had to be rehomed. The other is getting trained and seems to be working out fairly well. The grant funds helped me get those dogs vetted and neutered, which was a great help. To maintain protection, I need a</p>	<p>The process is fairly straightforward, but I had some difficulty getting a pup in the right time frame to be trained with lambs in the spring. Also, there seem to be quite a few breeders that are selling pups with no experience with livestock, and who have been raised around other breeds. This is detrimental to their ability to guard. I was fortunate to be able to secure a pup from Ms. McNally at Tamarack Sheep and Wool, near Pine City.</p>	<p>I do believe that the project will help reduce wolf-livestock conflict. It's a small amount of help, but the expenses associated with maintaining a pack of working dogs are very significant, especially during an economic downturn such as farmers are experiencing right now.</p>

ID	Completion date	Please describe past issues with wolf depredation and how this project should reduce future depredation:	Were there any particular challenges that you had with the grant application process, grant agreement process or completing your project?	Do you feel this project will reduce future wolf-livestock conflict? If no, why not?
		continuous pipeline of mature and experience, up-and-coming and young dogs. This grant has helped me do that.		
33	In progress			
34	6/21/2019	We open pasture calves and have had wolves around while calving and cows are able to go where we can't keep an eye on them and if they have issues they become easy prey. The shelter built with this grant will keep them closer to home, more contained and in an area wolves can't reach them.	Nothing specific, everything seemed pretty self-explanatory.	Yes, I do
38	11/1/2019	I have had calves killed by wolves most years this barrier should keep wolves out of corral.	None	Yes
40	In Progress			
42	In Progress			
44	3/20/2019	Our past issue was wolves traveling through or near our farm and taking young calves as they did. Our blue haler dogs have helped us immensely over the years but we needed more protection. The rigid panels to keep wolves out of pens will be a great advantage along with the bright lighting to keep our barn yard illuminated.	We have had no challenges throughout. The process was seamless and the MDA staff was easy to work with and we have greatly appreciated the cooperation.	Yes, we have more tools to reduce and hopefully end the depredation on our farm.
47	In Progress			
53	3/20/2019	The summer of 2017 in one pasture we had 124 cow calf pairs, when we took them home we were short 13 calves. Summer of 2018 a friend of mine sold his sheep and gave me his donkey and I put him in the pasture with those cows and came home in the fall with 100% calves.	No, it was just to find someone who could find the donkeys as one group where they had been used for wolf protection	Yes

Impact of Wolf-Livestock Conflict Prevention Grants on Wolf Depredation Claims

The most direct way to evaluate the impact of the grants on wolf depredation claims is to compare claims on farms before and after grant projects. However, many projects have yet to be completed or have only recently been completed. As a result, the best comparisons will be on farms that have had documented losses to wolves very recently. However, a relatively small proportion of the applicants to the grant program fell into that category.

For example, of the 53 applicants to the FY18 grant cycle, only 12 had documented wolf losses in the previous two years. This is a breakdown of those 12:

- Three were for expenses that were not eligible (purchase of ATVs and funding range riders).
- One grantee withdrew from the program.
- Eight projects for the FY18 grant cycle remained with recent wolf depredation claims.

In the FY19 grant cycle, 10 of the 39 applications received were from applicants with recent depredation claims. This is a breakdown of those 10:

- All 10 were awarded grants.
- One grantee has since withdrawn from the program.
- Six of the remaining nine have been completed.

Combining the projects from both grant cycles provides 14 projects (eight from FY18 and six from FY19) with recent wolf losses and a completed project. However, two of the projects were for the same producer who received grants in both FY18 and 19, leaving 13 farms for comparison.

The number of claims were calculated for each of the 13 farms from the start of FY10 (for historical comparison), from the start of FY17 until the date the project was completed (claims before project), and from the day after the project was completed until the time this report was prepared on December 10, 2019 (claims after project). The number of days that fell into the before-project timeframe and the after-project timeframe were calculated so that claim numbers could be standardized for comparison (Table 6).

One comparison is to calculate the number of days per wolf claim for the before-project and after-project timeframes. The greater the days per wolf claim means fewer wolf claims occurred over that timeframe. For the before-project timeframe for the 13 farms, a total of 11,751 days passed on those farms between July 1, 2016, and the end of their projects. Twenty-four wolf claims occurred on these farms during that time which equals 490 days per wolf claim.

For the after-project timeframe for the 13 farms, a total of 4,577 days passed between the end of their projects and December 10, 2019. Five wolf claims occurred on these farms during that time which equals 915 days per wolf claim (fewer wolf claims than the before-project timeframe). One important caveat is that one of the farms accounted for three of the five wolf claims. This farm is a sheep and cattle operation. The project they completed was related to a lambing shelter but the claims that occurred after the end of the project were for calves on pasture. Considering that the project could not have prevented these losses, these claims should be removed from the comparison, resulting in two claims over the cumulative 4,577 days or 2,289 days per wolf claim. This limited data set indicates that these projects greatly reduced wolf losses on the farms where they were implemented.

It is worth noting that wolf claims declined statewide from FY18 when there were 117 claims for \$165,912 to FY19 when there were 75 claims for \$103,410. It is not clear if the grant program played any role in that decline (Figure 10).

Table 6. Wolf losses before and after completed grant projects for relevant farms.

Year	Producer County / Livestock Type	ID	Claims since FY 2010	Claims FY 2017 to project completed (# days)	Project	Completion Date	Claims after project completion (# days)
FY18	Pine / Cattle and Sheep	8	8	1 (782)	Fence for lambing area	8/22/2018	3 (474 days) cattle
FY18	Pine / Cattle	14	4	3 (707)	Donkeys as guard animals	6/8/2018	1 (549)
FY19	Beltrami / Cattle	15	2	2 (1215)	Fencing	10/29/2019	0 (41)
FY19	Mahnomen / Cattle	17	1	1 (894)	Calving shelter	12/12/2018	0 (362)
FY18	Mahnomen / Cattle	20	3	1 (720)	Guard donkeys	6/21/2018	0 (536)
FY18-19	St Louis / Cattle	22-23	5	1 (1097)	Barriers	7/3/2019	0 (159)
FY18	Cass / Cattle	24	3	0 (789)	Calving shelter	8/29/2018	1 (467)
FY18	Itasca / Cattle	35	2	2 (865)	Fencing	11/13/2018	0 (391)
FY19	Aitkin / Cattle	38	14	3 (1218)	Barriers	11/1/2019	0 (38)
FY19	Kittson / Cattle	44	1	1 (992)	Barriers, lights	3/20/2019	0 (264)
FY18	Pine / Cattle	46	4	3 (787)	Fencing	8/27/2018	0 (469)
FY18	Kittson / Cattle	48	2	2 (693)	Fencing	5/25/2018	0 (563)
FY19	Marshall / Cattle	53	8	4 (992)	Donkeys, lights	3/20/2019	0 (264)
	Sum		57	24			5

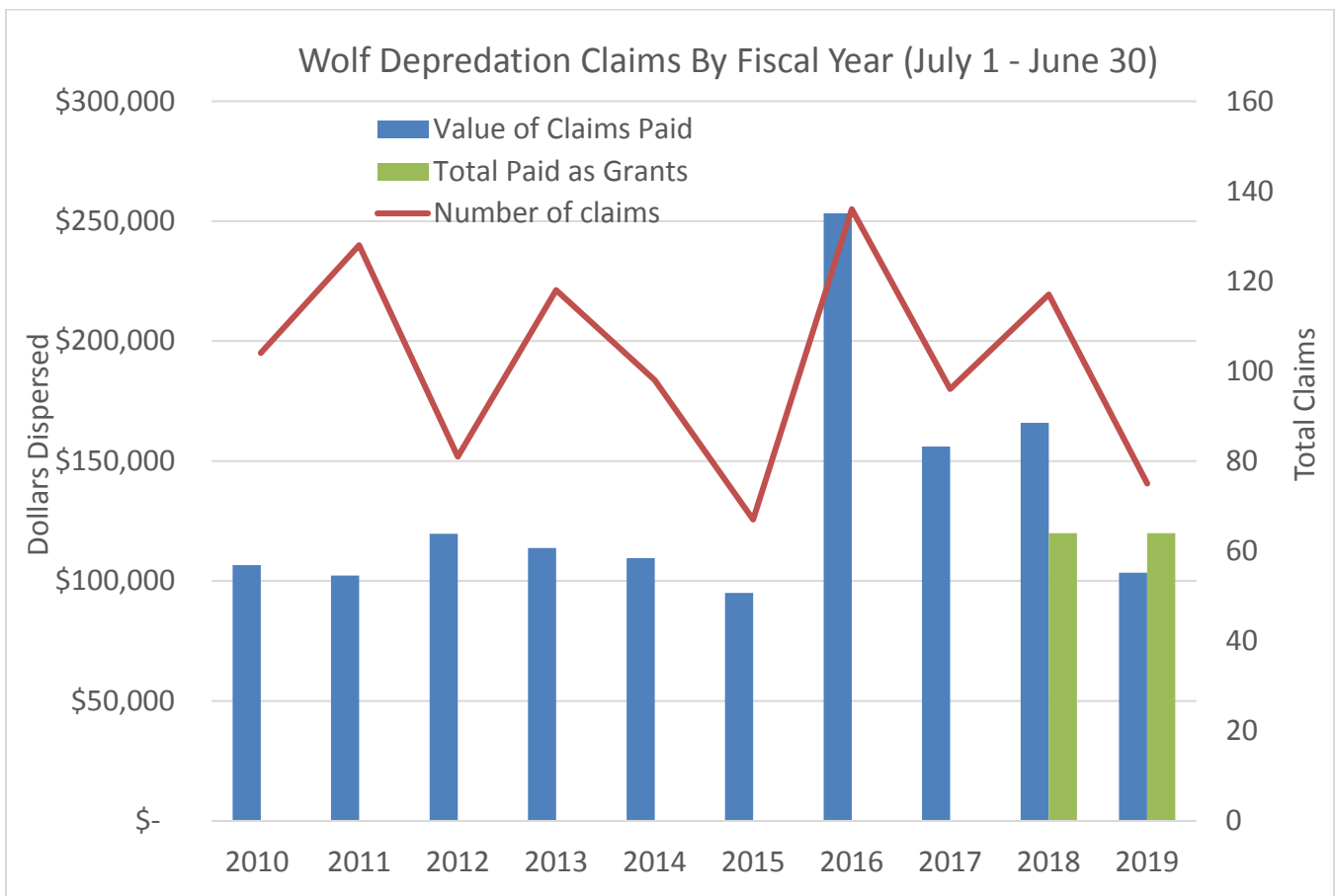


Figure 10. Wolf depredation claims by number and total amount paid as well as dollars granted by fiscal year.