

**Rocky Mountain Region Office**

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[www.defenders.org](http://www.defenders.org)

EXHIBIT 11  
DATE 1-31-13  
HB 322

**Testimony of Defenders of Wildlife  
Before the Montana House Agriculture Committee  
January 31, 2013  
Re: House Bill 323 and House Bill 322**

On behalf of Defenders of Wildlife and our more than 4,000 members and supporters in Montana, thank you for the opportunity to testify. We are submitting relevant information to the Committee based on our own Grizzly Compensation Program, and our wolf and grizzly bear coexistence programs. We are testifying in support of HB323, and recommending one change to HB322.

Relevant Information

*Grizzly Compensation Trust:*

Defenders began compensating livestock producers for losses to grizzly bears in 1997. We compensated for livestock lost to wolves from 1987 to 2011. Our Grizzly Compensation Trust is a voluntary program funded by our members and donors designed to build tolerance for grizzly bears as they return to more parts of their historic range, and establish a successful model for state and federal programs. Defenders pays full market value for livestock verified to be killed by a grizzly bear and 50% for livestock *probably* killed by a grizzly bear. The decision to pay for *probable* losses is made on a case by case basis. We work closely with Montana Fish Wildlife and Parks and Wildlife Services in identifying and processing these requests.

Since 1997 Defenders has paid \$377,085 to livestock producers for losses due to grizzly bears, almost all in Montana. In 2012, we paid \$89,205 in 44 payments (58 cattle, 81 sheep, 3 goats, 64 poultry, 3 pigs and 1 injured horse). However, as grizzly populations recover and are removed from the federal Endangered Species List, the funding for this program in areas where bears are delisted will expire and we will continue to shift our focus to our Grizzly Bear Coexistence Program. We are submitting our yearly totals, as well as a full list of our grizzly bear livestock loss payments since 1997 excluding 2012 which we have not finished compiling yet.

Defenders Grizzly Bear  
Compensation Trust  
Totals By Year

2012	\$89,205
2011	\$46,090
2010	\$43,940
2009	\$22,363
2008	\$16,489
2007	\$17,939
2006	\$10,078
2005	\$18,999
2004	\$12,795
2003	\$19,629
2002	\$10,698
2001	\$16,691
2000	\$13,543
1999	\$17,669
1998	\$12,523
1997	\$8,980

**National Headquarters**

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*Grizzly Bear Coexistence Program:* Since 1997, Defenders has spent over \$508,000 on projects designed to reduce conflicts with grizzly bears. In 2012 we spent just over \$30,000 on grizzly bear deterrents. We have spent significantly more on wolf conflict prevention projects. Most of our projects are recommended or supported by state, tribal, or Wildlife Service biologists. We are submitting a full list of our grizzly and wolf prevention projects to give the Committee a sense of the type and amount of projects that can be expected.

### **HB323**

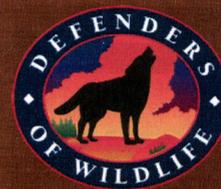
We offer unqualified support for HB323. We believe state programs designed to prevent conflicts between recovering large predators and compensate for inevitable losses are important tools for both wildlife conservation and livestock management and husbandry. We believe there is a greater federal role in helping communities and livestock producers with the transition to having large predators back on the landscape and have long supported greater federal funding for these programs as well.

### **HB322**

While HB322 has many laudable aspects, we and others are concerned that the entire \$400,000 in the Livestock Loss Reduction Restricted Account could be passed through to Wildlife Services. While the Montana Livestock Loss Board may not do this, we do not believe this is the intent of the legislation. We recommend amending the language to funding is allocated at least equally between a potential pass-through to Wildlife Services and programs implemented by the Livestock Loss Board to prevent losses in the first place. The intent of preventative projects is to end the perpetual cycle of killing predators only to have them replaced by other predators who are equally likely to come into conflict with wildlife. If the Committee does not dedicate funding to nonlethal predator prevention tools the opportunity to explore strategies to break this cycle may never be realized.

Defenders of Wildlife

# Defenders of Wildlife Grizzly Compensation Trust



The Defenders of Wildlife Grizzly Compensation Trust is a model of the incentives that might be offered to private landholders for supporting threatened and endangered species. Through this program, Defenders pays full market value for livestock *verified* to be killed by a grizzly bear and 50% for livestock *probably* killed by a grizzly bear but not verified. The decision to pay for probable losses is made on a case-by-case basis by evaluating circumstantial evidence.

Total Payments from 1997 through December 2012: \$376,832

Total Number of Compensation Payments Paid to Livestock Producers: 382

Total Number of Verified Livestock Losses:

Cattle: 374 Sheep: 344 Fowl: 652 Goat: 21 Pig: 21 Guard dog: 1 Horse: 7 Llama: 6

#### COMPENSATION TOTALS BY YEAR

2012	\$89,205
2011	\$46,090
2010	\$43,940
2009	\$22,363
2008	\$16,489
2007	\$17,939
2006	\$10,078
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1997	\$ 8,980

# Defenders of Wildlife Defenders of Wildlife Grizzly Compensation Trust



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Total Payments from 1997 through December 2011:

\$289,627

Total Number of Compensation Payments Paid to Livestock Producers: 338

Total Number of Verified Livestock Losses:

Cattle: 316 Sheep: 263 Fowl: 588 Goat: 18 Pig: 18 Guard dog: 1 Horse: 6 Llama: 6

## COMPENSATION TOTALS BY YEAR

2011	\$46,090
2010	\$43,940
2009	\$22,363
2008	\$16,489
2007	\$17,939
2006	\$10,078
2005	\$18,999
2004	\$12,795
2003	\$19,629
2002	\$10,698
2001	\$16,691
2000	\$13,543
1999	\$17,669
1998	\$12,523
1997	\$ 8,980

## Defenders of Wildlife Grizzly Compensation Trust

1997

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Choteau, MT	2 calves	\$1,698
June	Dupuyer, MT Condon, MT	1 ewe 1 calf	\$75 \$150
July	Babb, MT East Glacier, MT	1 calf 5 calves (1 confirmed, 4 probable)	\$480 \$2,052
August	August, MT	1 calf	\$480
September	Babb, MT Augusta, MT Babb, MT Dupuyer, MT	1 cow 3 calves (1 confirmed, 2 probable) 1 cow 3 ewes	\$700 \$1,070 \$825 \$375
October	Dupuyer, MT Babb, MT	5 turkeys, 5 ducks 1 calf	\$250 \$425
November	East Glacier, MT	1 calf	\$400

1998

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Heart Butte, MT Augusta, MT Heart Butte, MT	1 cow 1 calf 1 cow	\$800 \$600 \$850
May	Kiowa, MT Dupuyer, MT Helmville, MT	1 calf (probable) 1 ewe 7 sheep, 1 lamb	\$250 \$110 \$640
July	St. Mary, MT	1 steer	\$637

For the latest updates, visit [www.defenders.org/grizzlycompensation](http://www.defenders.org/grizzlycompensation)

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Defenders of Wildlife Grizzly Compensation Trust

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
August	August, MT	1 cow	\$850
August	Babb, MT	1 cow	\$850
	Bynum, MT	1 calf (probable)	\$225
	Babb, MT	1 bull	\$1,500
	St. Ignatius, MT	2 cows (One cow killed, another injured. Loss in value was paid.)	\$1,500
September	Choteau, MT	2 calves (probable)	\$440
	Whitefish, MT	3 goats	\$400
	Choteau, MT	1 ram	\$350
	Augusta, MT	1 calf	\$390
	Augusta, MT	1 cow	\$850
October	Heart Butte, MT	2 pigs	\$400
	Choteau, MT	2 ewes	\$170

1999

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
March	Lincoln, MT	2 calves	\$1,000
	Ovando, MT	2 calves	\$1,000
April	Ovando, MT	1 calf	\$500
	Depuyer, MT	1 calf	\$513.50
May	Augusta, MT	1 cow	\$900
	Helmville, MT	1 ram	\$500
	Choteau, MT	1 ewe, 1 lamb (lamb, probable)	\$200
June	Heart Butte, MT	1 cow	\$576
July	Browning, MT	1 cow, 1 calf	\$1,378
	East Glacier, MT	1 cow	\$576
	Island Park, ID	1 calf	\$450
	Big Fork, MT	11 chickens	\$60

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DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST*	AMOUNT COMPENSATED
August	Bigfork, MT	11 chickens, 1 goose	\$65
	Gardiner, MT	11 geese, 12 chickens, 3 turkeys	\$279
	Ashton, ID	1 cow	\$775
	Ashton, ID	1 calf	\$400
	Browning, MT	1 calf	\$504
	St. Mary, MT	1 calf	\$550
	St. Mary, MT	1 cow, 1 calf	\$1,350
	Big Timber, MT	24 sheep (all probable)	\$1,002
September	Bynum, MT	2 ewes	\$240
	East Glacier, MT	1 calf	\$516
	Browning, MT	1 calf	\$479.50
October	East Glacier, MT	1 horse	\$2,000
November	Babb, MT	1 calf	\$581
	Browning, MT	1 cow	\$800
	Troy, MT	1 goat	\$150

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST*	AMOUNT COMPENSATED
April	Babb, MT	3 calves (probable)	\$900
	Emigrant, MT	1 calf (probable)	\$250
	Babb, MT	1 steer	\$630
	Choteau, MT	2 calves (1 confirmed, 1 probable)	\$940.50
	Lincoln, MT	1 calf	\$600
May	Choteau, MT	2 calves	\$1,255
	Pendroy, MT	1 sheep	\$150
	Heart Butte, MT	1 cow	\$900
	Browning, MT	1 cow, 1 calf	\$1,450
June	Pendroy, MT	1 ewe	\$150
	Dupuyer, MT	1 ewe	\$150
July			

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	Choteau, MT	2 lambs	\$200
	Browning, MT	1 calf	\$528
August	Big Timber, MT	1 ewe, 1 guard dog	\$1,800
September	Browning, MT	1 calf	\$520
	Augusta, MT	2 calves	\$842
	East Glacier, MT	1 cow	\$900
October	Browning, MT	1 cow	\$650
	Augusta, MT	2 calves	\$728

2001

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Ovando, MT	1 calf	\$600
	Depuyser, MT	2 calves	\$938
	Heart Butte, MT	2 calves	\$940
	Augusta, MT	6 calves (4 confirmed, 2 probable)	\$3,376
May	Browning, MT	1 cow, 1 calf	\$1,685
June	Browning, MT	1 calf	\$600
	Atee, MT	40 chickens, 2 ducks, 1 goose	\$369
	Emigrant, MT	20 chickens, 1 goose, 1 turkey	\$180
July	Choteau, MT	2 calves (1 confirmed, 1 probable)	\$975
	Choteau, MT	2 calves	\$1,187
August	Augusta, MT	4 calves (3 confirmed, 1 probable)	\$2184
	Big Timber, MT	3 ewes, 1 lamb	\$386
September	Fairfield, MT	1 sheep	\$85
	Babb, MT	1 calf	\$600
October			

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	Augusta, MT	1 ram, 3 ewes	\$550
	Shelby, MT	1 calf	\$551
	Augusta, MT	1 ewe	\$130
	Augusta, MT	1 ewe	\$80
	East Glacier, MT	1 cow, 1 calf (cow confirmed, calf probable)	\$1,275

2002

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Dupuyer, MT	1 calf	\$583
May	Dupuyer, MT	2 cows, 2 calves (cows, 1 calf confirmed, 1 calf probable)	\$1,575
	Dupuyer, MT	1 calf	\$550
	Heart Butte, MT	1 calf	\$450
	Heart Butte, MT	1 calf	\$750
June	Helmville, MT	1 steer calf	\$751.75
	Dupuyer, MT	1 calf	\$475
July	Babb, MT	1 cow	\$500
	Big Timber, MT	9 ewes	\$720
August	Big Timber, MT	9 lambs	\$774
September	Charlo, MT	1 steer calf	\$100
	Bynum, MT	3 sheep (2 confirmed, 1 probable)	\$225
October	St. Mary, MT	1 cow	\$950
	St. Mary, MT	1 calf	\$500
	Choteau, MT	1 buck, 2 ewes	\$700
	Heart Butte, MT	1 cow	\$950
	Lincoln, MT	1 rooster, 11 chickens, 4 geese	\$144

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2003 DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
March	Choteau, MT	1 calf	\$616
April	Browning, MT	1 calf	\$520
	Bynum, MT	1 calf	\$540
	East Glacier, MT	3 cows, 1 steer calf	\$3,650
May	Heart Butte, MT	1 calf	\$570
	Heart Butte, MT	1 calf	\$2,000
	Browning, MT	1 calf	\$550
	Heart Butte, MT	1 steer calf	\$650
	Choteau, MT	5 ewes, 6 lambs	\$1,720
	Choteau, MT	1 ewe, 3 lambs	\$560
	Helmville, MT	3 ewes	\$600
June	Choteau, MT	1 ewe	\$200
	Choteau, MT	2 sheep	\$300
July	McLeod, MT	1 ewe, 5 lambs	\$620
	Choteau, MT	8 sheep	\$1,400
August	Heart Butte, MT	1 cow	\$1,000
	Choteau, MT	1 ewe	\$200
	Big Timber, MT	5 sheep	\$600
September	Lincoln, MT	17 sheep	\$1,673
October	Lincoln, MT	1 cow	\$950

2004 DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
May	Bynum, MT	1 steer calf	\$650
	Babb, MT	1 horse	\$2,000
	Ennis, MT	3 lambs, 2 chickens	\$395

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June	Pendroy, MT	1 ewe	\$175
July	Choteau, MT	3 sheep	\$525
	Kiowa, MT	1 cow, 1 calf (probable)	\$1,219
	Choteau, MT	1 calf	\$630
	Heart Butte, MT	1 cow, 1 calf (probable)	\$1,440
	Babb, MT	1 calf	\$651
August	Choteau, MT	1 calf	\$600
September	Babb, MT	1 steer calf	\$750
	Cardwell, MT	1 steer calf (probable)	\$400
	Heart Butte, MT	1 cow	\$1,100
	Choteau, MT	3 ewes	\$1,125
October	Dupuyer, MT	1 calf	\$650
	Bowman's Corner, MT	1 ewe	\$200
December	Pray, MT	1 lamb, 1 ewe	\$285

2005 DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
March	Heart Butte, MT	1 cow, 1 calf (probable)	\$1,475
	Columbia Falls, MT	40 chickens	\$100
April	Babb, MT	1 cow	\$1,300
	Browning, MT	2 steer calves	\$1,560
	Browning, MT	1 calf, 1 calf (probable)	\$900
	Heart Butte, MT	1 calf	\$550
	Heart Butte, MT	1 calf	\$550
June	Choteau, MT	5 ewes, 5 lambs (probable)	\$1,062

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DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
<b>2006</b>			
July	Valter, MT	Vet bills and loss in value of calf	\$359
	Tereeton, ID	1 ewe, 2 ewes (probable)	\$210
<b>August</b>			
	Babb, MT	1 Angus steer calf	\$756
	Browning, MT	1 steer calf	\$780
	Dupuyer, MT	1 ewe, 2 lambs	\$440
	Valter, MT	1 steer calf	\$672
<b>September</b>			
	Chocteau, MT	1 ewe	\$110
	Dupuyer, MT	3 calves	\$2,280
	Kiowa, MT	1 cow	\$1,200
	Heart Butte, MT	1 calf	\$622
	Chocteau, MT	1 ewe lamb	\$200
<b>October</b>			
	Babb, MT	1 heifer calf	\$653
	East Glacier, MT	13 chickens	\$61.75
	St. Mary, MT	1 calf	\$646
	East Glacier, MT	1 cow	\$1,200
	Dupuyer, MT	1 calf	\$612
	Babb, MT	1 cow (probable)	\$700

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Heart Butte, MT	1 calf	\$837
<b>May</b>			
	Browning, MT	1 cow, 1 calf	\$1,720
	Babb, MT	1 cow, 1 calf	\$1,975
	Ronan, MT	10 laying hens	\$60
<b>June</b>			
	Dupuyer, MT	1 calf	\$833
	Dupuyer, MT	1 calf	\$650
<b>August</b>			
	Browning, MT	1 calf	\$750
	Eureka, MT	1 goat	\$150

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DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
<b>2007</b>			
September	East Glacier, MT	1 calf	\$750
	Eureka, MT	1 sheep	\$125
<b>October</b>			
	Browning, MT	1 calf	\$662
	Browning, MT	1 calf	\$807
	Augusta, MT	1 calf	\$759

DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Browning, MT	1 cow, 1 calf	\$1,800
	Browning, MT	1 calf, 1 calf (probable)	\$981
<b>May</b>			
	Ronan, MT	1 calf (probable)	\$253
	Chocteau, MT	1 calf	\$575
	Heart Butte, MT	1 calf	\$600
	Browning, MT	1 calf, 1 calf probable, vet bills	\$1,140
<b>July</b>			
	Augusta, MT	1 calf, 1 cow	\$1,878
	Chocteau, MT	1 calf	\$718
	Heart Butte, MT	1 calf	\$825
	Browning, MT	1 calf	\$624
<b>August</b>			
	Heart Butte, MT	1 calf	\$667
<b>September</b>			
	Chocteau, MT	2 sheep	\$400
	Augusta, MT	1 calf	\$935
	Browning, MT	1 cow	\$1,100
	Dupuyer, MT	1 calf	\$875
	Augusta, MT	1 calf	\$840
	Heart Butte, MT	1 cow	\$1,200
	Valter, MT	1 calf	\$660
<b>October</b>			
	Bynum, MT	2 sheep	\$200
	Kiowa, MT	3 calves	\$1,668

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2008 DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
May	Dupuyer, MT	1 calf	\$673
June	Dupuyer, MT	1 calf	\$2,194
	Heart Butte, MT	1 calf	\$690
July	Browning, MT	1 heifer, 1 calf	\$1,228
	Choteau, MT	4 ewes, 1 lamb	\$700
	Browning, MT	1 calf	\$600
August	Cutbank, MT	1 calf	\$589
	Choteau, MT	1 ewe	\$150
	Augusta, MT	1 calf	\$605
	Browning, MT	1 horse	\$3,000
September	Heart Butte, MT	2 calves and 1 cow	\$2,672
	Choteau, MT	3 ewes	\$450
	Dupuyer, MT	1 ewe	\$150
	Augusta, MT	1 cow (confirmed), 2 cows (probable)	\$2,000
	St. Ignatius, MT	27 chickens	\$189
October	Heart Butte, MT	1 cow	\$600

2009 DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Dupuyer, MT	1 llama	\$850
May	Browning, MT	1 colt	\$500
	East Glacier, MT	1 calf	\$672
	Browning, MT	1 calf (confirmed), 1 calf (probable)	\$826
	Dupuyer, MT	1 llama	\$1,000
June	Loma, MT	1 sheep	\$75
July			

	Choteau, MT	4 ewes, 2 lambs	\$700
	Trego, MT	1 horse	\$1,500
	Choteau, MT	3 ewes	\$600
	Dupuyer, MT	1 llama	\$400
	Choteau, MT	3 ewes	\$600
	Augusta, MT	4 calves	\$2,668
August	Augusta, MT	2 calves (confirmed), 1 calf (probable)	\$1,885
	Heart Butte, MT	1 horse	\$1,500
September	Dupuyer, MT	1 ram (confirmed), 2 rams (probable)	\$1,000
	Dupuyer, MT	1 calf	\$550
	Augusta, MT	1 calf	\$675
	Heart Butte, MT	1 calf	\$751
	Condon, MT	3 ewes	\$225
October	Browning, MT	1 calf	\$1,200
	Browning, MT	1 calf	\$578
	Browning, MT	1 calf	\$583
	Dupuyer, MT	2 lambs (confirmed), 2 sheep (probable)	\$150
	St. Ignatius, MT	15 chickens	\$600
November	Livingston, MT	1 calf	\$600
December	Heart Butte, MT	1 calf (confirmed), 1 cow (probable)	\$1,376

2010 DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Little Badger Creeks, MT	1 calf (confirmed)	\$725
	Browning, MT	1 calf (confirmed)	\$675
	Browning, MT	1 calf (confirmed)	\$675
	Browning, MT	1 calf (confirmed)	\$675
May	Ronan, MT	16 chickens	\$128
	Pablo, MT	5 chickens, 10 turkeys, 6 ducks	\$308
	Ronan, MT	2 geese, 19 chickens	\$192

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	Little Badger Creek, MT	1 steer (confirmed)	\$1,050
June	Ronan, MT	2 pigs	\$100
	Ignatius, MT	1 Nubian milking goat, 2 other goats	\$300
	Ronan, MT	11 chickens, 1 duck	\$98
	Conrad, MT	3 ewes, 7 lambs (confirmed)	\$1,860
	Heart Butte, MT	1 calf (confirmed)	\$648
	Valter, MT	1 ewe, 2 lambs (confirmed)	\$480
	Whitefish, MT	2 pigs, 2 guard lambs, 4 goats	\$1,196
	Charlo, MT	21 calves (confirmed)	\$14,175
July	Cur Bank, MT	1 calf	\$630
	Ronan, MT	6 chickens	\$48
	Fairfield	3 goats	\$358
	Choctau, MT	1 cow (probable)	\$362
	Ashton, ID	1 cow (confirmed)	\$1,006
	Polebridge, MT	38 chickens (confirmed)	\$304
	Browning, MT	1 calf (confirmed)	\$336
August	Helenville, MT	2 calves, 1 cow (probable)	\$1,200
	Choctau, MT	3 ewes (confirmed)	\$600
	Dupuyer, MT	2 cows (confirmed)	\$2,400
	Ignatius, MT	15 chickens (confirmed)	\$1,200
	Choctau, MT	1 ewe (confirmed)	\$225
	Choctau, MT	2 sheep (confirmed)	\$450
	Choctau, MT	4 sheep (confirmed)	\$900
	Choctau, MT	3 sheep (confirmed)	\$450
	North Blackfoot, ID	1 calf (confirmed)	\$764
September	Sheep Creek, MT	1 ram (confirmed)	\$750
	Ignatius, MT	9 chickens (confirmed)	\$72
	Valter, MT	1 calf (confirmed)	\$800
	Ignatius, MT	38 chickens (confirmed)	\$304
	Ignatius, MT	2 roosters, 17 hens (confirmed)	\$152
	Browning, MT	1 heifer (confirmed)	\$867
	Gross Creek, MT	1 cow, 1 calf (confirmed)	\$1,850
	Ignatius, MT	5 chickens (confirmed)	\$40
	Choctau, MT	7 ewes (confirmed)	\$2,100
	Choctau, MT	1 sheep (confirmed)	\$225
	Browning, MT	1 calf (confirmed)	\$756

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Defenders of Wildlife Grizzly Compensation Trust

	Emigrant, MT	1 calf (confirmed)	\$700
	Bigfork, MT	1 llama (confirmed)	\$500
	Ignatius, MT	23 chickens (confirmed)	\$184
October	Goss Creek, MT	1 cow (confirmed)	\$1,200
2011			
DATE	LOCATION OF INCIDENT	LIVESTOCK VERIFIED LOST	AMOUNT COMPENSATED
April	Augusta, MT	1 calf	\$76
	Bynum, MT	1 calf	\$50
	Dupuyer, MT	1 steer calf	\$1,087
	Canyon Creek, MT	1 calf	\$972
	Valter, MT	1 calf	\$1,080
May	Birch Creek, MT	1 calf	\$928
	Duck Lake, MT	1 cow, 2 calves	\$2,760
June	Browning, MT	2 calves	\$2144
	Trego, MT	10 hens, 3 goats	\$680
	Augusta, MT	1 pregnant cow (probable)	\$875
	Duck Lake, MT	1 cow	\$1,500
	Avon, MT	2 calves (probable)	\$800
July	Thompson Falls, MT	5 hogs	\$1,250
	Thompson Falls, MT	1 hog	\$250
	Valter, MT	1 calf	\$800
	Augusta, MT	1 calf	\$1,000
	Fairfield, MT	7 ewes, 4 lambs	\$2,200
August	Alder, MT	2 calves	\$2,000
	Cutbank, MT	1 cow	\$2,000
	West Glacier, MT	97 chickens	\$873
	Powell, WY	1 cow (confirmed), 1 calf (confirmed), 2 cows (probable)	\$4,200
September	Columbia Falls, MT	2 pigs	\$460
	Columbia Falls, MT	1 pig	\$230

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## Defenders of Wildlife Grizzly Compensation Trust

	Heart Butte, MT	1 milkcow	\$2,000
	Powell, WY	1 cow, 1 calf	\$2,100
October			
	Helmville, MT	1 calf	\$1,000
	East Glacier, MT	1 calf	\$1,125
	Dupuyer, MT	1 calf (probable)	\$350
	Duck Lake, MT	1 calf	\$1,200
	Browning, MT	2 bulls, 1 heifer, 2 calves	\$8,800
November			
	Flathead Valley, MT	3 pigs	\$600

## Proactive Grizzly Bear Projects 2012

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Apr-12	NCDE	Seeley Lake, MT	Purchased 10 bear-resistant drums for community check out program	\$819.00	10	1
May-12	NCDE/BE	Huson/Six Mile, MT	Cost share with Elk Meadows homeowners association for the construction of a bear resistant cage for multi-homeowner garbage site	\$1,000.00	1	1
Jun-12	NCDE	Lincoln, MT	Assisted with costs associated with annual bear fair and outreach event	\$500.00	1	1
Jun-12	CYE	Libby, MT	Cost-shared with USFWS on portable electric fencing kits for checkout by bear management specialists to residences with conflicts with grizzlies	\$2,010.00	2	1
Aug-12	NCDE	Coram, MT	Assisted with costs associated with annual bear fair and outreach event	\$500.00	1	1
Sep-12	NCDE	Trego, MT	Cost share on an electric fence to keep grizzlies from depredating on livestock	\$1,500.00	1	1
Sep-12	NCDE	Georgetown Lake, MT	Purchased 32 bear-resistant garbage containers for the community of Georgetown Lake, MT	\$8,207.00	32	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Sep-12	NCDE	Georgetown Lake, MT	Purchased materials for Anaconda Job Corp to complete bear-resistant garbage container holsters for the community	\$3,138.00	20	1
Oct-12	NCDE	Simms, MT	Assisted with the cost of an additional livestock guard dog to protect sheep from grizzly bears	\$500.00	1	1
Dec-12	Northern Rockies	Northern Rockies	40 electric fences installed as part of the third year of the Electric Fencing Incentive Program to secure grizzly bear attractants. In an expanded program, landowners were reimbursed 50% the cost of an electric fence up to a maximum reimbursement of \$500, around a grizzly bear attractant	\$12,000.00	40	40
				<b>\$30,174.00</b>	<b>109</b>	<b>49</b>

## Proactive Grizzly Bear Projects 1998-2012

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Dec-98	NCDE	Choteau, MT	Paid for electric fencing to protect four beeyards that had experienced regular conflicts with grizzly bears	\$1,780.00	4	4
Jan-99		NW Montana	Paid for Karelian bear dogs to haze grizzly bears away from houses and humans	\$12,000.00	1	1
Apr-99	NCDE	Blackfeet Reservation, MT	Paid for electric fencing for eight beeyards that had been damaged by grizzly bears	\$3,219.00	8	8
Jun-00	NCDE	Choteau, MT	Purchased electric fencing to provide security for sheep at a site where grizzly bears caused chronic losses	\$1,034.00	1	1
Aug-00	NCDE	Pendroy, MT	Purchased electric fencing to provide secure night pasture for sheep; five grizzlies had been moved from this site in the last two years	\$1,498.00	1	1
Nov-00	NCDE	Blackfeet Reservation, MT	Paid for electric fence to protect a honey warehouse that had been broken into by a grizzly bear	\$200.00	1	1
May-01	NCDE	Blackfoot Valley, MT	Purchased electric fencing to prevent grizzlies from damaging 12 beeyards	\$3,973.00	12	12

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
May-01	NCDE	Ovando, MT	Purchased electric fencing for calving ground. Three bears had been removed from this ranch for livestock depredations	\$6,727.00	1	1
Jun-01	NCDE	Choteau, MT	Bought fence for two priority beeyards in bear habitat	\$1,436.00	2	2
Jul-01	NCDE	Blackfeet Reservation, MT	Built an electric fence around a beeyard damaged by a grizzly bear	\$450.00	1	1
Dec-01	GYE	Driggs, ID	Provided incentive to retire 16,370-acre sheep grazing allotment to conserve the area as habitat for grizzly bears	\$28,000.00	1	1
Dec-01	NCDE	Blackfoot Valley, MT	Purchased signs and bear-resistant dumpsters for rural communities	\$5,000.00	1	1
Feb-02	NCDE	Glacier National Park, MT	Purchased bear-resistant food storage lockers for front country camp sites	\$2,500.00	1	1
May-02	GYE	Yellowstone Ecosystem, WY	Purchased 100 locking mechanisms for 55 gallon drums to serve as bear-resistant garbage cans for area residents	\$542.00	1	1
May-02	GYE	Wapiti, WY	Purchased fencing supplies for rural schoolyard. Seven grizzlies had been removed from the area in 2001	\$2,447.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
May-02	NCDE	Whitefish, MT	Bought electric fencing for beeyards in bear habitat	\$1,243.00	1	1
Jul-02	NCDE	Dupuyer, MT	Built and electric fence around six beeyards that had a history of damage by grizzly bears	\$3,470.00	6	6
Jul-02	CYE	Lincoln County, MT	Provided funding for study to evaluate the effectiveness of bear-resistant dumpsters	\$500.00	1	1
Jul-02	BE	Bitterroot Ecosystem MT/ID	Partnered with other non-governmental organizations to purchase 31 bear-resistant dumpsters for campsites	\$5,000.00	31	1
Aug-02	GYE	Yellowstone Ecosystem, WY	Purchased 100 fasteners for 55 gallon barrels to use as bear-resistant residential garbage cans	\$550.00	1	1
Oct-02	GYE	Yellowstone Ecosystem, WY	Purchased locking mechanisms for 55 gallon barrels to use as bear-resistant garbage cans for rural residents	\$435.00	1	1
Oct-02		Northern Rockies	Purchased materials for electric night pen for sheep	\$1,254.00	1	1
Oct-02		Northern Rockies	Purchased materials for electric night pen	\$756.00	1	1
Nov-02	NCDE	Northwest Montana	Funding aversive conditioning of grizzly bears through the use of Karelian bear dogs	\$5,000.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Dec-02	NCDE	Ovando, MT	Electric fencing of calving ground to prevent grizzly bear depredations and serve as a demonstration project	\$5,202.00	1	1
Feb-03	NCDE	NCDE	Commissioned study of attractant sites to identify problem areas and prioritize proactive funds	\$5,000.00	1	1
Mar-03	GYE	Dubois, WY	Purchased bear-resistant dumpsters for community	\$4,000.00	1	1
Apr-03	NCDE	Blackfeet Reservation, MT	Purchased eight bear-resistant dumpsters for Glacier National Park's eastern gateway communities	\$6,477.00	8	1
May-03	GYE	Livingston, MT	Constructed predator resistant fence to protect sheep	\$3,800.00	1	1
Jun-03	BE	Bitterroot Ecosystem MT/ID	Partnered with other non-governmental organizations to purchase 17 bear-resistant dumpsters, 29 garbage can lockers for campsites and two bear-resistant pannier kits for loan to 10 guides and outfitters	\$5,000.00	48	1
Jun-03	NCDE	Choteau, MT	Provided electric fencing for a sheep pasture with chronic bear depredations	\$4,200.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Sep-03	NCDE	Choteau, MT	Provided a gate for an electric fence enclosure protecting sheep	\$375.00	1	1
Sep-03	GYE	Near Grand Teton National Park	Retirement of the Moose Creek sheep allotment, thus making the area secure bear and wolf habitat	\$2,000.00	1	1
Sep-03	NCDE	Northern Rockies	Produced resource guide explaining hot to reduce bear/human conflicts	\$450.00	1	1
Sep-03	NCDE	Dupuyer, MT	Provided electric fencing for large sheep pasture	\$2,000.00	1	1
Nov-03	NCDE	Babb, MT	Provided electric fencing for beeyards	\$323.00	1	1
Dec-03	NCDE	NCDE	Education and outreach support for Wind River Bear Institute's "Partners for Life" program	\$5,000.00	1	1
Dec-03	GYE	Island Park, ID	Contributed toward project to retire three sheep allotments near Island Park, ID	\$5,000.00	3	3
Mar-04	NCDE	Glacier National Park, MT	Purchased four bear-resistant food storage boxes for front country campgrounds to prevent grizzly bears from getting access to food	\$4,000.00	4	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Apr-04	NCDE	Helmville, MT	Contributed toward construction of an electric fence around a sheep bedding ground with a history of grizzly depredations	\$2,750.00	1	1
May-04	GVE	Yellowstone National Park, WY	Provided funding for National Park Service staff to educate visitors about bears to help prevent conflicts between bears and humans	\$9,000.00	1	1
May-04	NCDE	Whitefish, MT	Provided supplies for three electric fence for beeyards	\$1,271.00	3	3
Jun-04	NCDE	Seeley Lake, MT	Provided nine bear-resistant dumpsters	\$10,440.00	9	1
Jul-04	NCDE	Blackfeet Reservation, MT	Provided 10 bear resistant dumpsters for priority location throughout the Blackfeet Reservation	\$6,780.00	10	1
Jul-04	NCDE	Blackfeet Reservation, MT	Provided supplies for the installation of electric fencing for two beeyards	\$834.00	2	2
Aug-04	NCDE	West, East and South of NCDE	Provided 20 bear-resistant garbage containers for loan to rural residents	\$3,500.00	20	1
Sep-04	GVE	Shoshone National Forest	Provided poles for use by hunters and recreationists to hang food and quarry safely in the backcountry	\$5,000.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Oct-04	GYE	Valley, WY	Provided fencing supplies for fencing around Valley School (in town of Valley) southwest of Yellowstone National Park, WY	\$2,129.00	1	1
Oct-04	NCDE	Dupuyer, MT	Provided 20 bear-resistant garbage bins for the community of Dupuyer, MT so that garbage at all private residences, local park is no longer accessible to bears	\$2,500.00	20	1
Oct-04	NCDE	Condon, MT	Constructed electric fencing around two dumpsters that bears had been feeding from	\$222.00	2	1
Oct-04	NCDE	Beaverhead Deerlodge National Forest	Purchased bear-resistant panniers for the Forest Service to loan to outfitters	\$1,990.00	1	1
Nov-04	NCDE	Blackfoot Valley, MT	Provided energizers for six beeyard fences	\$3,126.00	6	6
Dec-04	NCDE	Swan Valley, MT	Purchased three bear-resistant dumpsters for the Swan Valley	\$2,358.00	3	1
Dec-04	NCDE	Whitefish, MT	Provided bear-resistant trash containers for city parks in Whitefish, MT	\$2,000.00	1	1
Jan-05	GYE	West Yellowstone, MT	Sponsored attendance for a participant at a workshop on preventing conflicts between grizzly bears and humans	\$758.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Apr-05	GYE	Yellowstone National Park, WY	Provided funding for National Park Service staff to educate visitors about bears to help prevent conflicts between bears and humans Contributed to a voluntary grazing lease retirement that will eliminate chronic sheep depredation conflicts with wolves and grizzlies in 74,000 acres of public lands core habitat areas	\$5,000.00	1	1
Apr-05	GYE	Absaroka Beartooth Wilderness	Contributed to the campaign to retire a sheep grazing allotment with a history of conflicts with grizzly bears and wolves	\$5,000.00	1	1
Jun-05	GYE	North of Yellowstone National Park, MT	Electric fencing of two beeyards	\$1,073.00	2	2
Jun-05	NCDE	Babb, MT	Purchased six bear-resistant dumpsters in linkage area for grizzly bears	\$7,200.00	6	1
Aug-05	NCDE	Ninemile, MT	Electric fence in key bear travel corridor	\$1,600.00	1	1
Aug-05	GYE	National Forests around Yellowstone National Park	24 temporary electric fence kits for loan to guides and outfitters to help keep a clean camp	\$5,500.00	24	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Sep-05	NCDE	Rocky Mountain Front	Purchased two temporary electric fencing kits to loan out preventing conflicts with bears	\$1,200.00	2	1
Oct-05	NCDE NCE	Glacier National Park, MT and North Cascades Ecosystems	Training for agency personnel in aversive conditioning techniques and use of Karelian Bear dogs	\$5,000.00	1	1
Oct-05	NCDE	Seeley Lake, MT	Purchase of six bear-resistant dumpsters for local businesses	\$3,162.00	6	1
Nov-05	NCDE	Beaverhead Deerlodge National Forest	Maintenance and establishment of 24 food hanging poles	\$5,250.00	24	1
Nov-05	NCDE	Blackfoot Valley, MT	Cost-shared the construction of a predator deterrent fence at calving ground	\$2,000.00	1	1
Feb-06	NCDE	Southern Portions of Northern Continental Divide Ecosystem	Contributes to the employment of a grizzly conflict specialist to prevent conflicts between humans and grizzly bears and develop tolerance among residents for grizzly bear recovery in the region	\$5,000.00	1	1
Mar-06	NCE	Okanogan and Wenatchee National Forests	Helped purchase 16 bear-resistant containers for camp sites	\$4,000.00	16	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Apr-06	NCDE	West side of NCDE and Blackfeet Indian Reservation. MT	Purchased 23 bear-resistant dumpsters for grizzly bear conflict specialists to loan out	\$4,450.00	23	1
May-06	NCDE	Condon, MT	Cost-shared the purchase of a bear-resistant dumpster to keep bears out of the garbage at a local resort	\$911.00	1	1
Jun-06	NCDE	Choteau, MT	Paid for electric fencing of a beeyard located in bear habitat	\$471.00	1	1
Jun-06	NCDE	Spotted Bear Ranger District, Lewis and Clark National Forests, MT	Provided 15 bear-resistant containers for backcountry cabins that were damaged by bears	\$2,700.00	15	1
Jun-06	NCDE	Flathead Indian Reservation, MT	Provided five bear-resistant bins for Confederated Salish and Kootenai Tribe's wildlife staff to loan to rural residents to keep bears out of garbage	\$900.00	5	1
Jul-06	CYE	Eureka, MT	Cooperated with U.S. Fish and Wildlife Service to construct electric fences around four beeyards in an area with an expanding grizzly population	\$2,000.00	4	4

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Jul-06	NCDE	Seeley Lake, MT	Cost-shared on a project to place an electric fence around a local garbage dump. Bears had been found inside the large dumpsters gorging on garbage	\$4,978.00	1	1
Jul-06	NCDE	Babb, MT	Provided electric fencing for four beeyards in an area with numerous grizzly bears	\$485.00	4	4
Aug-06	GYE	Red Lodge, MT	Purchased 10 bear-resistant garbage bins for loan to local residents	\$1,865.00	10	1
Aug-06	GYE	Gravelly, Centennial and Madison Range of West Yellowstone National Park	Cost-shared for the purchase of storage panniers for loan to guide and outfitters using the backcountry	\$934.00	1	1
Aug-06	GYE	North Fork of the Shoshone River, WY	Provided seed money to Bear Smart citizen's group to address garbage issues	\$10,000.00	1	1
Sep-06	NCDE	Flathead Indian Reservation, MT	Purchased ten bear-resistant bins for Confederated Salish and Kootenai Tribes to loan to rural residents	\$1,000.00	10	1
Dec-06	GYE	Island Park, ID	Purchased five bear-resistant containers for the community	\$4,000.00	5	1
May-07	NCDE	Whitefish, MT	Provided fencing for four beeyards in grizzly bear habitat	\$1,939.00	4	4

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
May-07	NCDE	Ninemile, MT	Purchased six bear-resistant bins for loan to rural residents in a key grizzly bear linkage area	\$1,491.00	6	1
May-07	NCDE	Choteau, MT	Provided fencing for a beeyard located in excellent bear habitat. A sheep operation, located adjacent to the beeyard has experienced conflicts with bears in the past	\$1,398.00	1	1
Jun-07	NCDE	Ronan, MT	Provided fencing supplies for livestock pasture with a history of depredations and recent grizzly bear activity	\$566.00	1	1
Jun-07	NCDE	Missoula, MT	Purchased four hid-a-bag containers for busy trailheads in the Lolo National Forest	\$3,158.00	4	1
Jun-07	CYE	Eureka, MT	Provided funding to fence a garbage transfer station for a bear sanitation project in the Cabinet/Yaak Ecosystem	\$5,000.00	1	1
Jul-07	GYE	Bridger Teton National Forest, WY	Contributed towards the retirement of cattle grazing allotments in key grizzly bear and wolf habitat east of Yellowstone National Park	\$10,000.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Jul-07	NCDE	Babb, MT	Installed electric fencing around 5 bee yards in an area with an expanding grizzly population	\$2,772.00	5	5
Jul-07	NCDE	Dupuyer, MT	Provided six miles of electric fencing for a sheep pasture on the Rocky Mountain Front with a history of grizzly bear and other predator depredations	\$4,817.00	1	1
Jul-07	NCDE	Pendroy, MT	Temporary electric fence for sheep bedding ground in an area with chronic losses caused by grizzly bear	\$5,700.00	1	1
Sep-07	NCDE, CYE, GYE	NCDE, CYE, GYE	Purchased 32 bear-resistant bins for grizzly bear conflict specialists to loan out to rural residents located in Montana	\$7,690.00	32	1
Nov-07	NCDE	Ninemile, MT	Purchased 10 bear-resistant containers to contribute to the 9 Mile Ranger station community loaner program establishing connectivity to the Bitterroot Ecosystem through habitat sanitation for large carnivores and other wildlife	\$2,865.00	10	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Nov-07	NCDE	Seeley Lake, MT	Built a bear-resistant cage around the garbage dumpsters at the elementary school	\$857.00	1	1
Feb-08	GYE	Yellowstone Ecosystem, WY	Contributed to grazing allotment retirement in key grizzly bear habitat	\$5,000.00	1	1
Apr-08	SE	Priest Lake, ID	Purchased 12 bear-resistant food storage lockers for campgrounds	\$5,500.00	12	1
May-08	NCE	Okanogan and Wenatchee National Forests	Bought seven bear-resistant garbage dumpsters in areas with high black bear conflicts	\$15,392.00	7	1
May-08	NCE	North Cascades National Park	Purchased three food storage lockers for campsites in prime grizzly bear habitat	\$3,454.00	3	1
May-08	NCDE	Dupuyer, MT	Helped build a fence along the playground at the rural school to keep bears away	\$2,000.00	1	1
May-08	NCDE	Choteau, MT	Built an electric fence around property in grizzly bear travel zone	\$1,684.00	1	1
Jun-08	GYE	Island Park, ID	Contributed to the purchase of four bear-resistant dumpsters for the Boy Scouts of America camp	\$2,500.00	4	1
Jun-08	GYE	Island Park, ID	Helped to establish a bear-resistant bin subsidy program for the citizens of Island Park, ID	\$2,000.00	1	1

Month	Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Dec-08	GYE		Island Park, ID	Contributed to the cost of bear-resistant dumpsters	\$2,500.00	1	1
Dec-08	NCDE		Swan Valley, MT	Contributed towards the purchase of bear-resistant garbage containers	\$6,000.00	1	1
Jan-09	GYE		Northern Yellowstone N.P., MT	Contributed towards the Wind River Bear Institute's effort to reduce conflicts between people and grizzly bears	\$5,000.00	1	1
Jan-09	NCDE		Northern Rockies	Provided funding for educational displays to prevent encounters between humans and grizzly bears	\$3,000.00	1	1
Feb-09	NCDE		Lincoln, MT	Contributed to fencing constructed around a local dump to prevent attracting grizzly bears	\$2,000.00	1	1
May-09	NCDE		Rocky Mountain Front	Contributed to the purchase of GPS collars for the RMF to identify grizzly bear corridors in the prairie for land protection	\$2,000.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Apr-09	GYE	Island Park, ID	Contributed to bear-resistant bin subsidy program for local citizens. To prevent attracting grizzly bears into the area the program encourages proper disposal of garbage and the containment of livestock feed	\$2,000.00	1	1
Jun-09	NCDE	Blackfeet Reservation, MT	Contributed to the cost of fencing for beeyards to reduce conflicts with grizzly bears	\$152.50	1	1
Aug-09	NCDE	Blackfeet Reservation, MT	Contributed to the purchase of bear-resistant containers for securing food, trash, and recycling safely beyond the accessibility of bears	\$2,985.00	1	1
Sep-09	NCDE	Northwest Montana	Provided support towards hiring range riders to monitor cattle to prevent conflicts with wolves and grizzly bears	\$4,000.00	1	1
Sep-09	NCDE	Augusta, MT	Provided fencing supplies to prevent conflicts with llamas and grizzly bears. The project was a part of joint project with Partners with Fish and Wildlife	\$2,789.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Sep-09	GYE	Gallatin National Forest, MT	Contributed towards retirement of Wapiti livestock allotment to prevent conflicts between livestock and grizzly bears	\$5,000.00	1	1
Sep-09	NCDE	Blackfeet Reservation and south of Augusta, MT	Contributed to the purchase of a portable electric fence to prevent conflicts with grizzly bears	\$1,438.70	1	1
Sep-09	NCDE	Rocky Mountain Front Choteau and Blackfeet Reservation on Private lands	Contributed to the purchase of solar powered batteries for 10 beeyards as part of a joint project with Partners for Fish and Wildlife	\$1,677.50	10	10
Nov-09	NCDE	Western Montana	Provided funding for 15 bear-resistant dumpsters to be used in various locations in Western Montana	\$2,985.00	15	1
Nov-09	NCDE	Lolo National Forest, MT	Provided labor and equipment for bear resistant garbage enclosure to prevent attracting grizzly bears in key linkage corridor	\$2,890.00	1	1
Dec-09	NCDE	Dupuyer, MT	Contributed toward the purchase of an additional livestock guard dog to assist in grizzly bear and livestock coexistence efforts	\$800.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Dec-09	NCDE	Western Montana	Contributed towards the purchase of 10 food storage boxes to Montana Fish Wildlife and Parks for campgrounds in NW Montana	\$8,197.00	10	1
Mar-10	NCDE	Western Montana	Purchased recreating in grizzly country video for MTFWP's to use in all hunter education programs in Western Montana	\$179.55	1	1
May-10	GYE	Island Park, ID	Cost share to purchase bear-resistant garbage containers for residents in Island Park, ID	\$1,000.00	1	1
Jun-10	NCDE	Georgetown Lake, MT	Purchased bear aware signage for U.S. Forest Service Campgrounds in the Georgetown Lake area. This locale has begun to experience grizzly activity with southern expansion of the NCDE grizzly population	\$225.90	1	1
Jun-10	NCDE	Georgetown Lake, MT	Purchased 35 bear-resistant garbage containers for placement at U.S. Forest Service lease cabins	\$7,139.00	35	1
Jun-10	NCDE	Georgetown Lake, MT	Provided Anaconda Job Corp with materials to weld bear-resistant garbage holsters for the community of Georgetown Lake, MT	\$2,478.00	20	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Jun-10	NCDE	Seeley Lake, MT	Purchased 10 bear-resistant containers for placement at residences in Seeley Lake, MT	\$1,539.80	10	1
Jun-10	NCDE	Flathead Indian Reservation, MT	Purchased 3 bear-resistant containers for the Flathead Reservation in MT	\$611.90	3	1
Jul-10	NCDE	Northwest Montana	Cost shared on electric fencing to protect livestock	\$1,295.00	1	1
Jul-10	NCDE	Flathead Indian Reservation, MT and Western Montana	Cost shared on portable electric fencing kits for bear-mgmt specialists loaner programs	\$515.00	2	1
Jul-10	NCDE		Cost shared on large pasture electric fence for llamas and other small livestock	\$1,295.00	1	1
Jul-10	NCDE/BE	Linkage corridor between NCDE and Bitterroot Ecosystem, MT	Cost shared on bear resistant food storage lockers at MTFWP campgrounds	\$2,592.00	4	1
Jul-10	NCDE	Rocky Mountain Front	Range Rider cost share for large livestock operation with a long history of grizzly and wolf conflicts	\$1,000.00	1	1
Jul-10	NCDE/BE	St. Regis, MT	Cost share with waste hauler on bear-resistant locking mechanisms for large round garbage dumpsters	\$2,000.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Jul-10	NCDE	Drummond, MT	Cost-share on electric fence for local garbage dump with a history of black bear conflicts and the potential for grizzly conflicts with southern grizzly expansion from the NCDE	\$1,040.00	1	1
Aug-10	Northern Rockies	Northern Rockies	6 electric fences installed as part of the first year of the Electric Fencing Incentive Program to secure grizzly bear attractants. This program reimbursed landowners \$100 towards the cost of an electric fence	\$579.00	6	6
Sep-10	NCDE	Valier, MT	Cost shared on an electric fence on a ranch with a history of grizzly bear conflicts	\$500.00	1	1
May-11	NCDE	Community outside the eastern border of Glacier National Park	Purchased 1 bear-resistant dumpster for popular restaurant outside Glacier National Park	\$1,699.00	1	1
Jul-11	CYE	Kootenai Falls, Lincoln County, MT	Cost shared with the county to purchase bear resistant garbage containers for popular recreation site	\$1,184.00	1	1
Jul-11	SE	Priest Lake, ID	Cost share with USFS for the purchase of 5 food storage lockers for Idaho Panhandle National Forest Priest Lake, ID	\$3,783.00	5	1

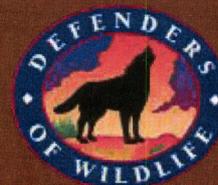
Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Jul-11	NCDE	Polebridge, MT	Co-sponsored annual bear fair with USFS and other partners	\$200.00	1	1
Jul-11	NCDE	Polebridge, MT	Purchased two bear-resistant garbage containers for the Northern Lights Saloon in prime grizzly habitat outside Glacier National Park	\$399.94	1	1
Jul-11	NCDE	Missoula, MT	Purchased doorhangers for chronic black bear/ human conflict neighborhood in Missoula, MT	\$500.00	1	1
Aug-11	NCDE	Helmville, MT	Purchased a new energizer for electric fence for calving pasture	\$349.00	1	1
Aug-11	NCDE	Georgetown Lake, MT	Purchased 41 bear-resistant garbage containers for placement around Georgetown Lake, MT	\$7,458.00	41	1
Aug-11	NCDE	Georgetown Lake, MT	Purchased materials for Anaconda Job Corp to complete bear-resistant garbage container holsters for the community	\$530.00	1	1
Oct-11	NCDE	Hot Springs, MT	Range Rider cost share for livestock operation on Flathead Reservation for wolves and grizzlies	\$2,600.00	1	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Nov-11	CYE	Lincoln County, MT	Cost-shared on an electric fence for the Salvage Lake garbage dump and for an additional sanitation project in Lincoln County	\$4,000.00	2	1
Dec-11	NCDE	Seeley Lake, MT	Assisted with costs associated with a local presentation by MTFWP regarding the removal of a local femal grizzly and the subsequent deaths of her cubs	\$40.00	1	1
Dec-11	NCDE/BE	St. Regis, MT	Purchased a 400 gallon fully automated garbage container for testing at the Grizzly Wolf and Discovery Center in West Yellowstone	\$500.00	1	1
Dec-11	SE	Priest Lake, ID	Cost Share to purchase food storage locker for the the Priest Lake are in ID	\$900.00	1	1
Dec-11	Northern Rockies	Northern Rockies (MT/ID)	12 electric fences installed as part of the second year of the Electric Fencing Incentive Program to secure grizzly bear attractants. This program reimbursed landowners \$100 towards the cost of an electric fence	\$1,200.00	12	12
Apr-12	NCDE	Seeley Lake, MT	Purchased 10 bear-resistant drums for community check out program	\$819.00	10	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
May-12	NCDE/BE	Huson/Six Mile, MT	Cost share with Elk Meadows homeowners association for the construction of a bear resistant cage for multi-homeowner garbage site	\$1,000.00	1	1
Jun-12	NCDE	Lincoln, MT	Assisted with costs associated with annual bear fair and outreach event	\$500.00	1	1
Jun-12	CYE	Libby, MT	Cost-shared with USFWS on portable electric fencing kits for checkout by bear management specialists to residences with conflicts with grizzlies	\$2,010.00	2	1
Aug-12	NCDE	Coram, MT	Assisted with costs associated with annual bear fair and outreach event	\$500.00	1	1
Sep-12	NCDE	Trego, MT	Cost share on an electric fence to keep grizzlies from depredating on livestock	\$1,500.00	1	1
Sep-12	NCDE	Georgetown Lake, MT	Purchased 32 bear-resistant garbage containers for the community of Georgetown Lake, MT	\$8,207.00	32	1
Sep-12	NCDE	Georgetown Lake, MT	Purchased materials for Anaconda Job Corp to complete bear-resistant garbage container holsters for the community	\$3,138.00	20	1

Month_Year	Grizzly Bear Recovery Area	General Location	Description	Amount Spent	Total Projects	Grouped Projects
Oct-12	NCDE	Simms, MT	Assisted with the cost of an additional livestock guard dog to protect sheep from grizzly bears	\$500.00	1	1
Dec-12	Northern Rockies	Northern Rockies	40 electric fences installed as part of the third year of the Electric Fencing Incentive Program to secure grizzly bear attractants. In an expanded program, landowners were reimbursed 50% the cost of an electric fence up to a maximum reimbursement of \$500, around a grizzly bear attractant	\$12,000.00	40	40
				\$508,882.79	822	277

Defenders of Wildlife



# Defenders of Wildlife Proactive Carnivore Conservation Fund

## Proactive Nonlethal Measures Taken by Defenders of Wildlife to Prevent Conflict Between Humans and Large Carnivores

Projects completed from 1998 through March 2010: 266  
Total expenditures\*: \$949,353

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March 2010	WISCONSIN	Costshared the purchase of two miles of fladry to help prevent interactions between wolf and livestock.	\$1,800
January 2010	PAYETTE NATIONAL FOREST, ID	Costshared the purchase of livestock guarding dogs to reduce conflicts between wolves and livestock.	\$1,350
December 2009	MONTANA STATE FAIRGROUNDS	Contributed towards the purchase of food storage boxes to Montana Fish, Wildlife & Parks for campgrounds in Montana.	\$8,197
December 2009	DUPUYER, MT	Contributed toward the purchase of an additional livestock guard dog to assist in grizzly bear and livestock coexistence efforts.	\$800
November 2009	LOLO NATIONAL FOREST	Provided labor and equipment for bear resistant garbage enclosure to prevent attracting grizzly bears into the area.	\$2,890
November 2009	WESTERN MONTANA	Provided funding for bear-resistant dumpsters to be used in various locations in Western Montana.	\$2,985

## Defenders of Wildlife Proactive Carnivore Conservation Fund

September 2009	ALONG THE ROCKY MOUNTAIN FRONT ON PRIVATE LANDS BETWEEN CHOTEAU AND THE BLACKFEET RESERVATION	Contributed to the purchase of solar-powered batteries for 10 beeyards as part of a joint project with Partners for Fish & Wildlife.	\$1,677.50
September 2009	BLACKFEET RESERVATION AND SOUTH OF AUGUSTA, MT	Contributed to the purchase of a portable electric fence to prevent conflicts with grizzly bears.	\$1,438.70
September 2009	GALLATIN NATIONAL FOREST, MT	Contributed towards retirement of Wapiti livestock allotment to prevent conflicts between livestock and grizzly bears.	\$5,000
September 2009	AUGUSTA, MT	Provided fencing supplies to prevent conflicts with llamas and grizzly bears. The project was part of joint project with Partners for Fish & Wildlife	\$2,789
September 2009	NORTHWEST MONTANA	Provided support towards hiring range riders to monitor cattle to prevent conflicts with wolves and grizzly bears.	\$4,000
August 2009	BLACKFEET RESERVATION, MT	Contributed to the purchase of bear-resistant containers for securing food, trash and recycling safely beyond the accessibility of bears.	\$2,985
July 2009	NORTHERN BORDER OUTSIDE OF YELLOWSTONE NATIONAL PARK	Contributed towards hiring range riders to monitor cattle and reduce conflicts between wolves and livestock.	\$5,500
July 2009	SAWTOOTH NATIONAL RECREATION AREA, ID	Purchased five collars with spikes for livestock guarding dogs to protect them from wolves. Similar nonlethal deterrents have been used to protect livestock guard dogs in Europe.	\$385

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

July 2009	CENTRAL IDAHO	Contracted assistance to help monitor sheep bands and wolf activity, which will help to reduce livestock depredations in the Big Wood River Valley	\$31,787
June 2009	BLACKFEET RESERVATION, MT	Contributed to the cost of fencing for beeyards to reduce conflicts with grizzly bears.	\$152.50
June 2009	APACHE- SITGREAVES NATIONAL FOREST, AZ	Contributed towards hiring range riders to protect cattle and reduce conflicts between wolves and livestock.	\$6,000
June 2009	GILA NATIONAL FOREST, NM	Contributed funds toward a fencing project to help prevent interactions between wolf and livestock.	\$3,675
April 2009	ISLAND PARK, ID	Contributed to a bear-resistant bin subsidy program for local citizens. To prevent attracting grizzly bears into the area, the program encourages the proper disposal of garbage and the containment of livestock feed.	\$2,000
May 2009	ROCKY MOUNTAIN FRONT	Contributed towards the purchase of GPS collars for Rocky Mountain Front to identify grizzly bear corridors in the prairie for land protection.	\$2,000
April 2009	APACHE- SITGREAVES NATIONAL FOREST, AZ	Contributed towards permanent fencing costs to help reduce conflicts between livestock and wolves.	\$7,000
March 2009	PAYETTE NATIONAL FOREST, ID	Cost-shared the purchase of four livestock guarding dogs for use in sheep operations to reduce conflicts with wolves.	\$1,350
March 2009	BOISE NATIONAL FOREST, ID	Cost-share the purchase of three livestock guarding dogs for use in sheep operations to reduce conflicts with wolves.	\$1,012

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

February 2009	LINCOLN, MT	Contributed to fencing constructed around the local dump to prevent attracting grizzly bears into the area.	\$2,000
January 2009	NORTHERN ROCKIES REGION	Provided funding for educational displays to prevent encounters between humans and grizzly bears.	\$3,000
January 2009	NORTHERN BORDER OF YELLOWSTONE NATIONAL PARK, MT	Contributed towards the Wind River Bear Institute's effort to reduce conflicts between people and grizzly bears.	\$5,000
December 2008	SWAN VALLEY, MT	Contributed towards the purchase of bear-resistant garbage containers.	\$6,000
December 2008	ISLAND PARK, IDAHO	Contributed to the cost of bear-resistant dumpsters.	\$2,500
September 2008	GILA NATIONAL FOREST IN THE SW	Provided fencing to reduce conflicts between horses and wolves.	\$2,000
September 2008	WHITE MOUNTAIN, AZ	Provided funding for cattle herding and other nonlethal preventative methods.	\$576
August 2008	GILA NATIONAL FOREST IN THE SW	Provided funding to purchase fencing to prevent conflicts between goats and wolves.	\$250
August 2008	GILA NATIONAL FOREST IN THE SW	Provided funding to purchase fencing materials to prevent conflicts with wolves.	\$689
August 2008	APACHE-SITGREAVES NATIONAL FOREST, AZ	Costshared the purchase, implementation and the hiring of two employees to maintain and move turboladry to prevent conflicts between sheep and wolves.	\$5,438

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

July 2008	NORTHERN ROCKIES REGION	Contributed to the research evaluating new wolf population monitoring methods.	\$2,500
July-November 2008	CENTRAL IDAHO	Contracted assistance to help monitor sheep bands and wolf activity, which will help to reduce livestock depredations in the Big Wood River Valley	\$23,273
June 2008	ISLAND PARK, ID	Helped to establish a bear-resistant bin subsidy program for the citizens of Island Park, Idaho.	\$2,000
June 2008	ISLAND PARK, ID	Contributed to the purchase of four bear-resistant dumpsters for the Boy Scouts of America camp.	\$2,500
June 2008	SOUTH CENTRAL MONTANA	Contributed to the cost of a range rider program, which will help to prevent conflicts with wolves.	\$2,250
June-December 2008	SOUTH CENTRAL MONTANA	Contributed to hire a range rider to help reduce conflicts with wolves.	\$5,500
June 2008	CENTRAL IDAHO	Purchased hay to provide an alternative pasture for cattle to graze.	\$2,500
June 2008	SOUTH CENTRAL MONTANA	Shared the cost of purchasing three livestock guarding dogs to reduce conflicts between wolves and goats.	\$1,038
May 2008	BABB, MT	Cost-shared providing an alternative pasture and supplemental hay for cattle. Through this funding, cattle were moved from a pasture near a den site to help reduce conflicts with wolves.	\$6,920
May-September 2008	WEST CENTRAL MONTANA	Hired range riders to help reduce livestock conflicts with wolves in western Montana for the summer/fall grazing season.	\$6,750
May 2008	CHOTEAU, MT	Built an electric fence around property in grizzly bear travel zone.	\$1,684

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

May 2008	DUPUYER, MT (NCDE)	Helped build a fence along the playground at the rural school to keep bears away.	\$2,000
May 2008	NORTH CASCADES NATIONAL PARK (NCE)	Purchased three food storage lockers for campsites in prime grizzly bear habitat.	\$3,454
May 2008	OKANOGAN/W ENATCHEE NATIONAL FORESTS, WA (NCE)	Bought seven bear-resistant garbage dumpsters in areas with high black bear conflicts.	\$15,392
April 2008	PRIEST LAKE, ID (SE)	Purchased 12 bear-resistant food storage lockers for campgrounds.	\$5,500
March-April 2008	WEST CENTRAL MONTANA	Cost-shared payment for range riders to monitor cattle during the winter calving season.	\$1,520
February 2008	YELLOWSTONE ECOSYSTEM	Contributed to grazing allotment retirement in key grizzly bear habitat.	\$5,000
November 2007	SEELEY LAKE, MT (NCDE)	Built a bear-resistant cage around the garbage dumpsters at the elementary school.	\$857
November 2007	9 MILE RANGER STATION, MT	Purchased 10 bear-resistant containers to contribute to the 9 Mile Ranger station community loaner program establishing connectivity to the Bitterroot Ecosystem through habitat sanitation for large carnivores and other wildlife.	\$2,865
September 2007	GRANGEVILLE, ID	Cost-shared the purchase of hay to provide an alternative pasture for horses located near wolf country.	\$11,250

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

September 2007	NORTHERN CONTINENTAL DIVIDE, CABINET /YAAK & YELLOWSTONE ECOSYSTEMS	Purchased 32 bear-resistant bins for grizzly bear conflict specialists to loan out to rural residents located in Montana.	\$7,690
September 2007	ISLAND PARK, ID	Cost-shared with the Forest Service, Fish and Wildlife Service and Boy Scouts to purchase 12 bear-resistant containers to place at a boy scout camp with increasing bear activity.	\$5,000
August 2007	WEISER, ID	Cost-shared the purchase of six livestock guard dogs to prevent conflicts between sheep and wolves in Payette National Forest.	\$1,875
August 2007	UPPER PENINSULA OF MICHIGAN	Shared the purchase of four Great Pyrenees livestock guard dogs to be placed with farmers in wolf country.	\$2,425
August 2007	KEMMERER, WY	Shared the purchase of two livestock guarding dogs with sheep to prevent conflicts with wolves.	\$625
July 2007	WINSTON, NM	Hired a range rider for four weeks to prevent cattle losses caused by wolves.	\$1,500
July 2007	ARCO, ID	Payment for proactive, non-lethal methods for wolves/livestock training presentation.	\$531
July 2007	PHILLIPSBURG, MT	Payment for signal modifications for telemetry equipment used for proactive non-lethal wolf project.	\$372
July 2007	PENDROY, MT (NCDE)	Temporary electric fence for sheep bedding ground in an area with chronic losses caused by grizzly bears.	\$5,700
July 2007	ENNIS, MT	Cost-sharing of materials and labor for construction of range-rider cabin to reduce conflicts with wolves.	\$3,000

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

July 2007	DUPUYER, MT	Provided six miles of electric fencing for a sheep pasture on Rocky Mountain Front with history of grizzly bear and other predator depredations.	\$4,817
July 2007	HAILEY, ID	Purchased radio telemetry equipment to support wolf conservation efforts.	\$910
July 2007	BABB, MT (NCDE)	Installed electric fences around several bee yards in an area with expanding grizzly bear populations.	\$2,772
July 2007	BRIDGER- TETON NATIONAL FOREST, WY (GYE)	Contributed towards the retirement of cattle grazing allotments in key grizzly bear and wolf habitat east of Yellowstone National Park. .	\$10,000
June 2007	EUREKA, MT (CYE)	Provided funding to fence a garbage transfer station for a bear sanitation project in the Cabinet/Yaak Ecosystem.	\$5,000
June 2007	MISSOULA, MT (NCDE)	Purchased four hid-a-bag containers for busy trailheads in the Lolo National Forest.	\$3,158
June 2007	RONAN, MONTANA (NCDE)	Provided fencing supplies for livestock pasture with a history of depredations and recent grizzly bear activity.	\$566
June 2007	BABB, MT (NCDE)	Electric fencing of several beeyards in key grizzly bear habitat on the Blackfeet Indian Reservation.	\$2,772
May 2007	CLAYTON, ID	Installed a radio-activated guard box in a grazing pasture near a wolf den site	\$200
May-November 2007	ROSCOE, MT	Hired range rider to help reduce livestock conflicts with wolves in south-central Montana.	\$6,000
May 2007	CHOTEAU, MT (NCDE)	Provided fencing for a beeyard located in excellent bear habitat. A sheep operation, located adjacent to the beeyard, has experienced conflicts with bears in the past.	\$1,398

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

May 2007	NINE MILE, MT (NCDE)	Purchased six bear-resistant bins for loan to rural residents in a key grizzly bear linkage zone.	\$1,491
May 2007	CODY, WY	Payment for expenses related to site evaluations for proactive projects at Cody ranches.	\$600
May 2007	WHITEFISH, MT (NCDE)	Provided fencing for four beeyards in grizzly bear habitat.	\$1,939
May 2007	HAILEY, ID	Purchased two solar energizers to loan to a ranch during this grazing season for use with electric fencing at night corrals.	\$400
May 2007	PHILLIPSBURG, MT	Purchase of radio telemetry equipment to be loaned to range riders to prevent wolf-livestock conflicts.	\$2,254
May 2007	MADISON VALLEY, MT	Shared the cost for two livestock guard dogs to help reduce livestock losses to wolves.	\$625
May, 2007	DIXON, MT	Shared the cost for alfalfa and grass hay to keep cattle off grazing pasture near where wolves are raising young pups.	\$6,000
May-November 2007	PHILLIPSBURG, MT	Hired range riders to help reduce livestock conflicts with wolves in western Montana for the summer/fall grazing season	\$10,357
May 2007-January 2008	CODY, WY	Hired range riders to help reduce livestock conflicts with wolves in northwestern Wyoming	\$7,829
March 2007	EMMETT, ID	Shared the cost for two livestock guard dogs to help reduce livestock losses to wolves.	\$625
March – October 2007	NORTHERN ROCKIES	Field work conducted in the northern Rockies to help prevent wolf-livestock conflicts	\$19,659

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

February 2007	NORTHERN ROCKIES	Purchase of fladry, turbofladry and solar-powered battery system to prevent conflicts between wolves and livestock.	\$7,300
February 2007	MIMBRES, NM	Contributed toward the purchase of a dog kennel/fencing project in an area of the Gila National Forest occupied by wolves.	\$5,000
February 2007	NAMIBIA, AFRICA	Provide support for the continuation of the Wild Dog Project that works towards greater awareness and the acceptance of predator conservation in farmlands and rangelands, education on responsible predator management, and other related activities promoting a long-term conservation ethic.	\$4,000
December 2006	NORTHERN ROCKIES	Field work conducted in the northern Rockies region to prevent wolf depredations.	\$3,687
December 2006	ISLAND PARK, ID (GYE)	Purchased five bear-resistant containers for the community.	\$4,000
September 2006	NORTHERN ROCKIES	Purchased one mile of turbofladry and a solar power system to prevent conflicts with wolves in this region.	\$4,900
September 2006	ROSCOE, MT	Provided range rider support to prevent conflicts with wolves north of Yellowstone near Red Lodge.	\$2,000
September 2006	NORTHERN ROCKIES	Field work conducted to prevent livestock conflicts with wolves in the Yellowstone region surrounding the park.	\$5,698
September 2006	PHILLIPSBURG, MT	Hired range riders to help reduce cattle depredation conflicts with wolves in western Montana.	\$8,148
September 2006	FLATHEAD INDIAN RESERVATION, MT (NCDE)	Purchased ten bear-resistant bins for Confederated Salish and Kootenai Tribes to loan to rural residents.	\$1,000

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

August-September 2006	BIG TIMBER, MT	Continued range rider support to prevent cattle depredation conflicts with wolves in Big Sky, Montana, east of Yellowstone.	\$1,607
August 2006	NORTH FORK OF THE SHOSHONE RIVER, WY (GYE)	Provided seed money to Bear Smart citizen's group to address garbage problem.	\$10,000
September 2006	MICHIGAN'S UPPER PENINSULA	Purchased fladry for use to prevent conflicts between wolves and livestock.	\$2,000
September 2006	MICHIGAN'S UPPER PENINSULA	Provided financial support for fieldwork analyzing the effectiveness of livestock guard dogs for reducing livestock losses from wolves.	\$2,000
August 2006	HAILEY, ID	Cost-shared the purchase of turbofladry, which will be used to build night corrals to protect sheep from wolf predation in the Sawtooth National Forest in central Idaho.	\$2,350
August 2006	NORTHERN ROCKIES	Purchased radio telemetry equipment and photo equipment to be used to support proactive, non-lethal wolf conservation efforts.	\$1,849
August 2006	GRAVELLY CENTENNIAL AND MADISON RANGE WEST OF YELLOWSTONE NATIONAL PARK (GYE)	Shared the cost for the purchase of storage panniers for loan to guide and outfitters using the backcountry.	\$934
August 2006	RED LODGE, MT (GYE)	Purchased 10 bear-resistant garbage bins for loan to local residents.	\$1,865
July 2006	BABB, MT (NCDE)	Provided electric fencing for four beeyards in an area with numerous grizzly bears.	\$485

## Defenders of Wildlife Proactive Carnivore Conservation Fund

July 2006	SEELEY LAKE, MT (NCDE)	Cost-shared on a project to place an electric fence around a local garbage dump. Bears had been found inside the large dumpsters gorging on garbage.	\$4,978
July 2006	EUREKA, MT (CYE)	Cooperated with U.S. Fish and Wildlife Service to construct electric fences around four beeyards in an area with expanding grizzly bear populations.	\$2,000
June 2006	FLATHEAD INDIAN RESERVATION, MT (NCDE)	Provided five bear-resistant bins for Confederated Salish and Kootenai Tribes wildlife staff to loan to rural residents to keep bears from getting into garbage.	\$900
June 2006	SPOTTED BEAR RANGER DISTRICT, LEWIS AND CLARK NATIONAL FOREST, MT (NCDE)	Provided 15 bear-resistant containers for backcountry cabins that were damaged by bears.	\$2,700
June 2006	CHOTEAU, MT (NCDE)	Paid for electric fencing of a beeyard located in bear habitat.	\$471
June 2006	CLAYTON, ID	Costs for turbofladry supplies to address conflicts between livestock and the Buffalo Ridge pack.	\$1,571
May-June 2006	NORTHERN ROCKIES	Field work conducted by the Greater Yellowstone Wolf Guardian Project. This work helps to identify trends in wolf-livestock mortality in the northern Rockies to strategically determine Defenders' 2006 proactive efforts.	\$5,113
May 2006	NORTHERN ROCKIES	Purchased turbofladry for various proactive projects to prevent conflicts between wolves and livestock.	\$4,982
May 2006	CONDON, MT (NCDE)	Cost-shared the purchase of a bear-resistant dumpster to keep bears out of the garbage at a local resort.	\$911

## Defenders of Wildlife Proactive Carnivore Conservation Fund

April 2006	WEST SIDE OF NCDE AND BLACKFEET INDIAN RESERVATION (NCDE)	Purchased 23 bear-resistant dumpsters for grizzly bear conflict specialists to loan out.	\$4,450
April 2006	ALPINE, AZ	Cost-shared the purchase of fladry to reduce wolf conflicts around calving pastures in wolf-occupied areas, including locations near den sites.	\$1,875
March 2006	OKANOGAN AND WENATCHEE NATIONAL FORESTS (NCE))	Helped purchase 16 bear-resistant containers for camp sites.	\$4,000
February 2006	SOUTHERN PORTION OF THE NORTHERN CONTINENTAL DIVIDE ECOSYSTEM (NCDE)	Contributes to the employment of a grizzly conflict specialist to prevent conflicts between humans and grizzly bears and develop tolerance among residents for grizzly bear recovery in the region.	\$5,000
November 2005	BLACKFOOT VALLEY, MT (NCDE)	Cost-shared the construction of a predator deterrent fence at a calving ground.	\$2,000
November 2005	BEAVERHEAD DEERLODGE NATIONAL FOREST, MT (NCDE)	Maintenance and establishment of 24 food hanging poles.	\$5,250
November – December 2005	GREATER YELLOWSTONE ECOREGION	Field work conducted by contractor for the Greater Yellowstone Wolf Guardian Project. This work helps to identify trends in wolf-livestock mortality in the northern Rockies to strategically determine Defenders' 2006 proactive efforts.	\$3,568

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

October 2005	YELLOWSTONE NATIONAL PARK	Purchased a VHS collar for placement on a wild Yellowstone wolf, as part of the ongoing Yellowstone wolf recovery program.	\$2,000
October 2005	SEELEY LAKE, MT (NCDE)	Purchase of six bear-resistant dumpsters for local businesses.	\$3,162
October 2005	GLACIER NATIONAL PARK AND NORTH CACADES ECOSYSTEM (NCDE & NCE)	Training for agency personnel in aversive conditioning techniques and use of Karelian bear dogs.	\$5,000
October 2005	NEW MEXICO	Range rider hired to provide herding and monitoring assistance in wolf-occupied area for four months.	\$5,400
October 2005	CRUZVILLE, NM	Provided welded wire fencing and reinforcement materials to prevent conflicts.	\$3,148
October 2005	NEAR CATRON COUNTY, NM	Hired range rider to monitor wolves and calves during calving season for two months.	\$3,100
September 2005	ROCKY MOUNTAIN FRONT (NCDE)	Purchased two temporary electric fencing kits to loan out prevent conflicts with bears.	\$1,200
August 2005	NATIONAL FORESTS AROUND YELLOWSTONE NATIONAL PARK (GYE)	24 temporary electric fence kits for loan to guides and outfitters to help keep a clean camp.	\$5,500
August 2005	CHOTEAU, MT (NCDE)	Electric fence in key bear travel corridor.	\$1,600
July – November 2005	GALLATIN MOUNTAIN RANGE, MT	Shared the cost of hiring a range rider during the 2005 summer/fall grazing season to monitor and deter wolves from livestock.	\$2,440

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

August 2005	NINE MILE VALLEY, MT (NCDE)	Purchased six bear-resistant dumpsters in linkage area for grizzly bears.	\$7,200
June 2005	BABB, MT (NCDE)	Electric fencing of two beeyards.	\$1,073
June 2005	NORTH OF YELLOWSTONE NATIONAL PARK, MT	Contributed to the campaign to retire a sheep grazing allotment with a history of conflicts with grizzly bears and wolves.	\$6,000
June 2005	BOISE NATIONAL FOREST, ID	Shared the cost of purchasing a Pyrenees livestock guarding dog to prevent wolf conflicts with sheep.	\$625
June 2005	WISCONSIN	Provided funding to Wisconsin Department of Natural Resources to conduct aerial monitoring and radio collaring of wolves, which helps determine precise wolf population information about pack size, territory size and range.	\$5,000
June 2005	BLUE, AZ	Provided funding to move livestock onto private land and supplementing the herd with feed during calving/denning seasons and increasing monitoring of livestock located in three wolf pack territories.	\$6,000
May 2005	WEISER, ID	Cost-shared the purchase of six livestock guard dogs to prevent conflicts between wolves and sheep.	\$1,875
May 2005	EAGLE RIVER, AK	Promotion of the "Safe Neighborhoods – Wild Bears" program. Through this program, Eagle River residents pledged to properly store bear attractants, like garbage and birdseed, and to put out trash the morning of pickup.	\$2,637
April 2005	UMATILLA, FL	Purchased six reconditioned solar chargers for electric fencing around apiaries to deter bears from damaging honey production operations.	\$689

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

April – May 2005	CLAYTON, ID	Provided funding for turbo fladry supplies. This method incorporates electric fencing with fladry to discourage wolf predation on livestock.	\$2,906
April 2005	ABSAROKA BEARTOOTH WILDERNESS (GYE)	Contributed to a voluntary grazing lease retirement that will eliminate chronic sheep depredation conflicts with wolves and grizzly bears in 74,000 acres of public lands' core habitat areas.	\$5,000
April 2005	YELLOWSTONE NATIONAL PARK, WY (GYE)	Provided funding for National Park Service staff to educate Yellowstone National Park visitors about bears to help prevent conflicts between bears and humans.	\$5,000
April 2005	SOUTHWEST NM	Provided funding for range rider to monitor wolf activity and prevent conflicts with livestock.	\$5,555
January 2005	WEST YELLOWSTONE, MT (GYE)	Sponsored attendance for a participant at a workshop on preventing conflicts between grizzly bears and humans.	\$758
December 2004	WHITEFISH, MT (NCDE)	Provided bear-resistant trash containers for city parks in Whitefish.	\$2,000
December 2004	SWAN VALLEY, MT (NCDE)	Purchased three bear resistant dumpsters for the Swan Valley.	\$2,358
November 2004	BLACKFOOT VALLEY, MT (NCDE)	Provided energizers for six beeyard fences.	\$3,126
November-December 2004	PARADISE VALLEY, MT	Provided funding to construct a night corral for sheep.	\$12,370
October 2004	BEAVERHEAD- DEERLODGE NATIONAL FOREST (NCDE)	Purchased bear-resistant panniers for the Forest Service to loan to outfitters.	\$1,990

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

October 2004	CONDON, MT (NCDE)	Constructed electric fencing around two dumpsters that bears had been feeding from.	\$222
October 2004	DUPUYER, MT (NCDE)	Provided 20 bear resistant bins for the community of Dupuyer, MT so that garbage at all private residences, as well as the local park, is no longer accessible to bears.	\$2,500
October 2004	VALLEY, WY (GYE)	Provided fencing supplies for fencing around Valley School (in the town of Valley) southwest of Yellowstone National Park in Wyoming.	\$2,129
September 2004	SHOSHONE NATIONAL FOREST (GYE)	Provided poles for use by hunters and recreationists to hang their food and quarry safely in the backcountry.	\$5,000
August 2004 – April 2005	GREATER YELLOWSTONE ECOREGION	<u>Field work</u> conducted by contractors for the Greater Yellowstone Wolf Guardian Project.	\$20,190
September 2004	IDAHO	Purchased field equipment to assist sheep herders to camp close to sheep and avoid wolf depredations	\$2,490
September 2004	PAYETTE NATIONAL FOREST, ID	Funded aerial wolf monitoring to help reduce sheep depredations in the Payette National Forest.	\$2,427
August 2004	IDAHO AND MONTANA	Purchased materials for fladry construction. Fladry will be used as a nonlethal deterrent in areas experiencing wolf depredations in the northern Rockies region.	\$2,700
August 2004	WEST, EAST AND SOUTH OF THE NORTHERN CONTINENTAL DIVIDE ECOSYSTEM (NCDE)	Provided 20 bear-resistant trash bins for loan to rural residents.	\$3,500

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August 2004	NEGEV DESERT IN SOUTHERN ISRAEL	Provided funding to install fencing to protect gazelles from predation by Arabian wolves.	\$5,000
August 2004	MCCALL, ID	Aerial monitoring to determine precise wolf population information about pack size and territory size and range.	\$770
August 2004	MICHIGAN	Supported research for livestock guarding dog project.	\$2,500
August 2004	YELLOWSTONE NATIONAL PARK	Sponsored a Global Positioning System (GPS) collar for the Yellowstone Wolf Project. The collars monitor wolf activity and gather data on wolves in Yellowstone National Park.	\$5,000
July 2004	WEISER, ID	Contributed toward the purchase of four guard dogs to prevent wolf conflicts near Payette National Forest.	\$1,000
July 2004	BLACKFEET INDIAN RESERVATION, MT (NCDE)	Provided supplies for the installation of electric fencing for two beeyards.	\$834
July 2004	BLACKFEET INDIAN RESERVATION, MT (NCDE)	Provided 10 bear resistant dumpsters for priority location throughout the Blackfeet Indian Reservation.	\$6,780
June 2004	SEELEY LAKE, MT (NCDE)	Provided nine bear resistant dumpsters.	\$10,440
May 2004	WHITEFISH, MT (NCDE)	Provided supplies for three electric beeyard fences.	\$1,271
May 2004	FAIRFIELD, NC	Provided funding for habitat enhancement for red wolves.	\$2,000

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

May 2004	WINDHOEK, NAMIBIA	Contributed to the education and outreach efforts of the Wild dog Project administered by the Namibia Nature Foundation. The project works towards greater awareness and acceptance of predator conservation in farmlands and rangelands and responsible predator management.	\$1,000
May 2004	SALMON CHALLIS NATIONAL FOREST	Purchased hay to provide alternative pasture to graze cattle away from the Buffalo Ridge pack.	\$5,000
May 2004	YELLOWSTONE NATIONAL PARK, WY (GYE)	Provided funding for National Park Service staff to educate visitors about bears to help prevent conflicts between bears and humans.	\$9,000
April 2004	ALASKA	Contributed to the "Be Bear Aware" campaign administered by Alaska Department of Fish and Game, City & Borough of Juneau, Sitka Conservation Society, Center for Biological Diversity, Sitka Bear Working Group and Defenders of Wildlife.	\$3,000
April 2004	HELMVILLE, MT (NCDE)	Contributed toward construction of an electric fence around a sheep bedding ground with a history of grizzly depredations.	\$2,750
April 2004	WEST CENTRAL WISCONSIN	Purchased guardian dogs to protect sheep from wolves.	\$275
March 2004	NORTH CAROLINA	Provided funding for a study to assess the economic benefits of ecotourism in North Carolina.	\$11,500
March 2004	GLACIER NATIONAL PARK, MT (NCDE)	Purchased four bear-resistant food storage boxes for front country campgrounds to prevent grizzly bears from getting access to food.	\$4,000

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

March 2004	RICE LAKE, WI	Contributed toward the installation of a well, which provided an additional grazing pasture for cattle experiencing conflicts with wolves.	\$8,500
January 2004	GREAT LAKES REGION	Study to test fladry as a potential non-lethal control tool for reducing wolf-caused livestock losses in Michigan.	\$3,000
December 2003	ISLAND PARK, ID (GYE)	Contributed toward project to retire three sheep allotments near Island Park, Idaho.	\$5,000
December 2003	NORTHERN CONTINENTAL DIVIDE ECOSYSTEM, MT (NCDE)	Education and outreach support for Wind River Bear Institute's "Partners in Life" program.	\$5,000
November 2003	BABB, MT (NCDE)	Provided electric fencing for beeyards.	\$323
September 2003	DUPUYER, MT (NCDE)	Provided electric fence for large sheep pasture.	\$2,000
September 2003	NORTHERN ROCKIES	Produced resources guide explaining how to reduce bear/human conflicts.	\$450
September 2003	NEAR GRAND TETON NATIONAL PARK (GYE)	Retirement of the Moose Creek sheep allotment, thus making the area secure bear and wolf habitat.	\$2,000
September 2003	CHOTEAU, MT (NCDE)	Provided a gate for an electric fence enclosure protecting sheep.	\$375
July 2003	WEKIVA SPRINGS STATE PARK AND ONE FOR SEMINOLE STATE FOREST, FL	Purchased two bear-resistant dumpsters for a state park and forest.	\$2,600
June 2003	PORT WING, WI	Purchased guardian dog to protect sheep from wolves.	\$300
June 2003	CHOTEAU, MT (NCDE)	Provided electric fencing for a sheep pasture with chronic bear depredations.	\$4,200

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

June 2003	BITTERROOT ECOSYSTEM, MT/ID (BE)	Partnered with other non-governmental organization to purchase 17 bear-resistant dumpsters, 29 garbage can lockers for campsites and two bear-resistant pannier kits for loan to 10 guides and outfitters.	\$5,000
June 2003	CHALLIS, ID	Provided materials and labor for electric fencing and purchased hay for alternate grazing in order to prevent depredations by the Buffalo Ridge wolf pack.	\$3,000
May-June 2003	CHALLIS, ID	Purchased hay to prevent livestock from grazing near the Buffalo Ridge den site.	\$4,420
May 2003	TAHOE CITY/WEST SHORE, CA	Purchased 130 bear-resistant dumpsters for city project.	\$33,890
May 2003	LIVINGSTON, MT	Constructed predator resistant fence to protect sheep.	\$3,800
April 2003	ALBERTA, CANADA	Cooperative agreement with The Alberta Beef Producers and Southern Alberta Conservation Cooperative to assist southern Alberta ranchers with a various non-lethal techniques to reduce wolf predation.	\$10,000
April 2003	WISCONSIN	Purchased two donkeys as guardian animals to provide additional protection for sheep threatened by wolves.	\$400
April 2003	BLACKFEET INDIAN RESERVATION, MT (NCDE)	Purchased eight bear-resistant dumpsters for Glacier National Park's eastern gateway communities.	\$6,477
March 2003	WEKIWA SPRINGS STATE PARK, FL	Purchased bear-resistant dumpsters to deter black bears from breaking into dumpsters.	\$6,963
March 2003	DUBOIS, WY (GYE)	Purchased bear-resistant dumpsters for community.	\$4,000

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

February 2003	NORTHERN CONTINENTAL DIVIDE ECOSYSTEM, MT (NCDE)	Commissioned study of attractant sites to identify problem areas and prioritize proactive funds.	\$5,000
January 2003	WISCONSIN	Aerial monitoring to determine precise wolf population information about pack size and territory size and range.	\$5,000
January 2003	GREAT LAKES REGION	Study to test non-lethal control measure for reducing conflict in semi-agricultural landscapes.	\$4,800
December 2002	OVANDO, MT (NCDE)	Electric fencing of calving ground to prevent grizzly bear depredations and serve as demonstration project.	\$5,202
December 2002	ARIZONA	Provide herding workshop to train herdsmen to protect sheep from wolves.	\$6,994
November 2002	DUBOIS, WY	Provided assistance to move cattle to alternative pasture to avoid wolf depredations.	\$1,940
November 2002	NORTHWEST MONTANA (NCDE)	Funded aversive conditioning of grizzly bears through the use of Karelian bear dogs.	\$5,000
October 2002	NORTHERN ROCKIES	Purchased materials for an electric night pen.	\$756
October 2002	NORTHERN ROCKIES	Purchased materials for an electric night pen for sheep.	\$1,254
October 2002	HAILEY, ID	Purchased seven Great Pyrenees guardian dogs to provide additional protection for sheep threatened by wolves.	\$350
October 2002	YELLOWSTONE ECOSYSTEM, WY (GYE)	Purchased locking mechanisms for 55 gallon barrels to use as bear-resistant garbage cans for rural residents.	\$435

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October 2002	SONORA, MEXICO	Repaired roads in order to maintain access to ranches involved with the Northern Jaguar Project.	\$815
September 2002	SONORA, MEXICO	Designed a livestock watering system to help draw cattle away from jaguars and pumas.	\$295
September 2002	NORTHERN ROCKIES	Purchased two Radio Automated Guard (RAG) boxes.	\$4,327
September 2002	SAWTOOTH NATIONAL FOREST	Airplane monitoring of the Wild Horse pack.	\$259
August 2002	NINE MILE VALLEY, MT	Purchased materials for an electric night pen to protect llamas from wolf predation.	\$880
August 2002	NINE MILE VALLEY, MT	Purchased materials for an electric night pen to protect llamas from wolf predation.	\$656
August 2002	SAWTOOTH NATIONAL FOREST	Airplane monitoring of the Wild Horse Wolf pack.	\$479
August 2002	NINE MILE VALLEY, MT	Purchased materials for an electric night pen to prevent wolf predations.	\$1,441
August 2002	MONTANA	Provided funding for a variety of proactive projects including fladry, RAG box and wolf monitoring.	\$3,000
August 2002	NORTHERN WISCONSIN	Purchased wolf enclosures to aid in the relocation of seven wolves (2 adults, 5 pups) onto tribal land.	\$2,620
August 2002	YELLOWSTONE ECOSYSTEM, WY (GYE)	Purchased 100 fasteners for 55 gallon barrels to use as bear-resistant residential garbage cans.	\$550
August 2002	IDAHO	Purchased fladry materials to be used in an experimental project testing the use of fladry as a wolf deterrent.	\$2,500

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July 2002	BITTERROOT ECOSYSTEM, MT/ID (BE)	Partnered with other non-governmental organization to purchase 31 bear-resistant dumpsters for campsites.	\$5,000
July 2002	LINCOLN COUNTY, MT (CYE)	Provided funding for study to evaluate the effectiveness of bear-resistant dumpsters.	\$500
July 2002	DUPUYER, MT (NCDE)	Built electric fences around six beeyards that had a history of damage by grizzly bears.	\$3,470
June 2002	DELL, MT	Purchased a guardian dog to provide additional protection for sheep threatened by wolves.	\$250
May 2002	WHITEFISH, MT (NCDE)	Bought electric fencing for beeyards in bear habitat.	\$1,243
May 2002	WAPITI, WY (GYE)	Purchased fencing supplies for rural schoolyard. Seven grizzlies had been removed from the area in 2001.	\$2,447
May 2002	YELLOWSTONE ECOSYSTEM, WY (GYE)	Purchased 100 locking mechanisms for 55 gallon drums to serve as bear-resistant garbage cans for area residents.	\$542
May 2002	MONTANA	Purchased four adult livestock guarding dogs to provide additional protection for sheep threatened by wolves.	\$1,800
May 2002	MONTANA	Purchased one livestock guarding pup to provide additional protection for sheep threatened by wolves.	\$250
May 2002	WYOMING	Purchased one livestock guarding adult dog to provide additional protection for sheep threatened by wolves.	\$250
February 2002	GLACIER NATIONAL PARK, MT (NCDE)	Purchased bear-resistant food lockers for front country camp sites.	\$2,500

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December 2001	BLACK FOOT VALLEY, MT (NCDE)	Purchased signs and bear-resistant dumpsters for rural communities.	\$5,000
December 2001	DRIGGS, ID (GYE)	Provided incentive to retire 16,370-acre sheep grazing allotment to conserve the area as habitat for grizzly bears.	\$28,000
July 2001	BLACKFEET RESERVATION, MT (NCDE)	Built an electric fence around a beeyard damaged by a grizzly bear.	\$450
June 2001	MONTVIEW, ID	Purchased hay to hold cattle off allotment until wolves were hazed out.	\$3,754
June 2001	CHOTEAU, MT (NCDE)	Bought fence for two priority beeyards in bear habitat.	\$1,436
May 2001	DUBOIS, WY	Purchased extra hay to keep horses in alternative corral away from Washakie pack habitat.	\$1,500
May 2001	DUBOIS, WY	Paid for additional hay to keep cow herd in alternative pasture away from the Washakie pack's denning location.	\$3,000
May 2001	OVANDO, MT (NCDE)	Purchased electric fencing for calving ground. Three bears had been removed from this ranch for livestock depredation.	\$6,727
May 2001	BLACKFOOT VALLEY, MT (NCDE)	Purchased electric fencing to prevent grizzlies from damaging 12 beeyards.	\$3,973
November 2000	BLACKFEET RESERVATION, MT (NCDE)	Paid for electric fence to protect a honey warehouse that had been broken into by a grizzly bear.	\$200
August 2000	PENDROY, MT (NCDE)	Purchased electric fencing to provide a secure night pasture for sheep; five grizzlies had been moved from this site in the last two years.	\$1,498

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

July 2000	GOODING, ID	Purchased two livestock guarding dogs after wolves from the Twin Peaks pack killed six sheep.	\$432
July 2000	GARDINER, MT	Paid for alternate pasture so a local outfitter could graze his horses away from private pasture immediately adjacent to the den site of the Chief Joseph wolf pack.	\$690
June 2000	CHOTEAU, MT (NCDE)	Purchased electric fencing to provide security for sheep at a site where grizzly bears caused chronic losses.	\$1,034
April 2000	WEISER, ID	Purchased 12 livestock guarding dogs to test effectiveness of using larger numbers of dogs to protect sheep.	\$2,258
April 2000	BUCKHORN, NM	Hired herdsman for a 3-month period during calving season to monitor the interaction between wolves and livestock utilizing aversive control techniques when necessary.	\$3,000
March 2000	CHALLIS, ID	Purchased a second scare device triggered by wolves' radio collars.	\$2,000
July 1999	CLAYTON, ID	Purchased hay so a livestock producer could feed his livestock on private land instead of grazing on a public allotment near the den site of the White Clouds pack.	\$1,697
July 1999	EMIGRANT, MT	Purchased alternate grazing so rancher did not graze livestock on his private land where the Sheep Mountain pack had a den site; hired a rider for two weeks to help keep the wolves away from the livestock.	\$1,340
July 1999	GARDINER, MT	Hired a rider for five days to help protect livestock threatened by the Sheep Mountain pack.	\$500
April 1999	BLACKFEET RESERVATION, MT (NCDE)	Paid for electric fencing for eight beeyards that had been damaged by grizzly bears.	\$3,219

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## Defenders of Wildlife Proactive Carnivore Conservation Fund

March 1999	FLORENCE, MT	Purchased a first-of-its-kind scare device triggered by a signal from a wolf's radio collar.	\$1,904
January 1999	EMIGRANT, MT	Purchased three livestock guarding dogs to provide additional protection for sheep threatened by wolves from the Chief Joseph pack.	\$615
January 1999	NW MONTANA (NCDE)	Paid for Karelian bear dogs to haze grizzly bears away from houses and humans.	\$12,000
December 1998	CHOTEAU, MT (NCDE)	Paid for electric fencing to protect four beeyards that had experienced regular conflicts with grizzly bears.	\$1,780

\*includes project-related expenses and staff support

NCDE – Northern Continental Divide Ecosystem

GYE – Greater Yellowstone Ecosystem

CYE – Cabinet-Yaak Ecosystem

BE – Bitterroot Ecosystem

NCE – North Cascades Ecosystem

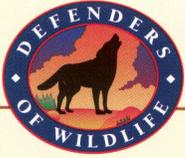
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EXHIBIT 11  
DATE 1-31-13  
HB 322



# Livestock and Wolves

A Guide to Nonlethal Tools and Methods to Reduce Conflicts





## DEFENDERS OF WILDLIFE

Defenders of Wildlife is a national, nonprofit membership organization dedicated to the protection of all native wild animals and plants in their natural communities.

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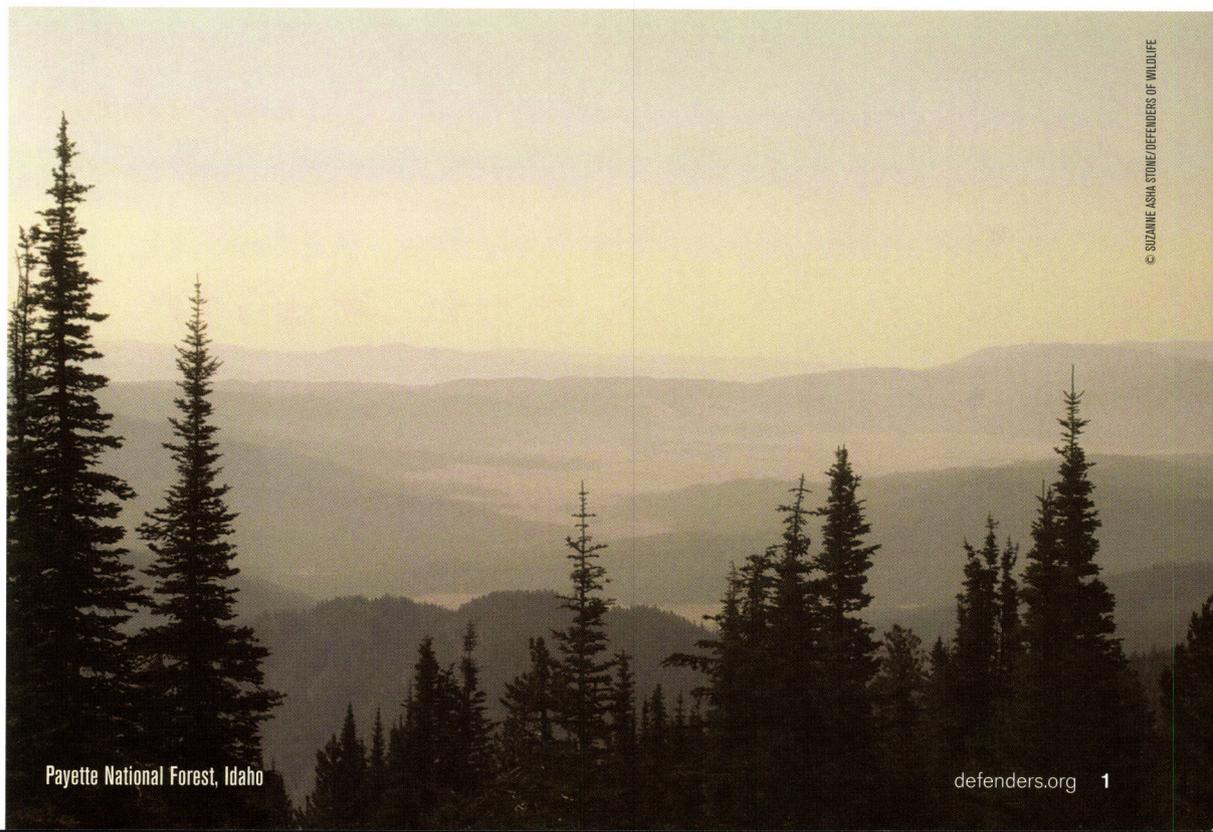
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# Table of Contents

<i>Introduction</i> .....	2
1. Assessing Your Needs .....	3
2. Reducing Attractants .....	5
3. Working with Livestock Guarding Dogs .....	6
4. Erecting Barriers: Fencing, Fladry and Penning .....	9
5. Increasing Human Presence: Range Riders and Herders.....	11
6. Using Scare Tools and Tactics: Alarms, Shock Collars and Nonlethal Ammunition .....	13
7. Switching Grazing Sites.....	16
8. Other Methods Worth Considering.....	17
<i>Resource Directory</i> .....	19
<i>Bibliography</i> .....	22



# Introduction

As a livestock producer or resource manager operating in areas where wolves live, you have no doubt wondered how you can keep your animals safe in an economically viable way. You may have raised livestock for decades before wolves returned to your region and may be unsure of what to do to prevent livestock losses should wolves show up near your operations. In some areas, wolves are protected under federal, state or provincial law, so you need to know what conflict-prevention strategies you can legally use. Most important, you need to know what will work best in your particular situation.

Sometimes wolves are killed to prevent additional livestock losses. This lethal control may relieve conflicts temporarily. However, new wolves will often move into the vacated territory, and the cycle of loss will continue—unless the root cause is addressed. The purpose of this guide is to show you what you can do to address the root cause in economical ways that protect both livestock and wolves. It covers nonlethal

tools, methods and strategies that work and offers real-life examples of successful solutions devised by livestock producers, agency managers and researchers working together.

Chapter 1 describes key factors to consider when evaluating your own livestock operation. Chapters 2 through 8 provide examples of the different approaches and their benefits and limitations. This guide covers the basics, but it is not intended as a substitute for expert advice. You may still need the help of wolf management professionals to evaluate and tailor nonlethal control measures to your situation. You can find these experts through the state-by-state directory of resources at the end of the guide. For even more information, check the references and additional reading in the bibliography.

We hope you find this guide helpful and welcome your feedback. Please contact any of the Defenders field offices listed at the end of this guide to share your thoughts and experiences. Your feedback is valuable and may help other livestock producers or resource managers in the future.



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## HOW THIS GUIDE EVOLVED

In 1999, Defenders of Wildlife and The Bailey Wildlife Foundation worked together to create The Bailey Wildlife Foundation Proactive Carnivore Conservation Fund. One of the main purposes of this fund is to support research and on-the-ground use of tools, methods and strategies to reduce livestock deaths and therefore reduce lethal control of wolves. Five years

later, Defenders established the Livestock Producer Advisory Council to provide advice from a producer's viewpoint.

In 2006, Defenders brought together wildlife conservationists, university researchers, agency staff who work on wolf-livestock conflicts, biologists and members of the Livestock Producer Advisory Council for a Yellowstone-area

workshop to evaluate proactive livestock protection tools and nonlethal methods and strategies that are helping to reduce livestock losses to wolves. This manual incorporates the experiences, insights and recommendations of the workshop participants and from ongoing discussions and interactions with livestock producers and researchers.

# 1. Assessing Your Needs

Deciding which tools, methods and strategies are suitable for protecting your livestock depends on many different factors. Start by contacting local wildlife managers to help you evaluate your situation and identify what will work best for you.

What type of livestock you need to protect is an important consideration. Research suggests that when wolves attack livestock, they focus on the animals that are easiest to kill. For instance, wolves rarely attack adult cattle and horses. They tend to prey more on sheep, goats and calves, and, in some areas, yearlings. Another key consideration is where your livestock are grazing. Livestock on large grazing allotments—publicly owned lands where grazing is allowed by permits issued by the federal government—can be one of the most difficult wolf-livestock conflict situations to resolve. Many of these allotments are in remote and rugged terrain with very dense trees and brush, making it harder for sheepherders, range riders or wranglers and livestock managers to spot a potential conflict.

Overall, the important factors to consider include:

- Number, age and type of livestock needing protection
- Season
- Location and accessibility of site
- Size of grazing area
- How often people directly supervise the livestock

## Thinking like a wolf

When developing a strategy for reducing risk to your livestock, it helps to understand things from a wolf's perspective.

Wolves are natural hunters but are also scavengers, which means they feed on dead animals, too, and the smell of a rotting carcass will attract them. Their hunting patterns are designed to detect the most vulnerable prey and to avoid injury by their prey, other predators or humans. Wolves often focus on the weakest animals in a herd or band and are adept at detecting injured or diseased animals. A wolf can usually tell if a healthy adult prey animal it normally would not attack has somehow become disadvantaged—hindered from escape by deep snow, for example. In addition, wolves are quick learners and can overcome their fear of certain scare devices such as sounds or lights, especially if exposed to the same device repeatedly for long periods.

Depending on your situation, to remain effective you may need to change devices and methods frequently to keep wolves from getting used to them and losing their natural wariness. Increasing the wolf's perception of risk can help reduce the chances of wolf-caused livestock injury or death, but working proactively to prevent carnivores from being attracted to your livestock operation in the first place (see Chapter 2) is often the best strategy of all.

A range rider surveys a livestock watering hole on a Wyoming grazing allotment.



### Livestock stress and permit considerations

When practical, the best solution may be to build small night corrals to protect livestock within a small pasture, rather than fence large multi-acre pastures, which can be too costly. However, penning livestock every night can present challenges.

Penning can stress animals not accustomed to it, and increased stress may affect the condition of the animals and, in the case of sheep not used to penning, the quality of their wool. The permits that allow grazing on national forest land may not allow the erection of pens. Moreover, penning can harm native plants if you do not move the livestock frequently and the vegetation is overgrazed or trampled.

Some livestock producers who are now successfully using electric night pens are using them on private pastures where the livestock can more easily adapt to these night-time enclosures.

One band of sheep in Montana is now so well-adapted to their night pen that, like chickens coming home to roost, they often seek it out at the end of the day. In New Mexico, a rancher using a two-strand electric fence system to create small, easy-to-monitor pastures reports that his cattle are so accustomed to their routine that he can move his entire herd in less than half an hour using only a whistle, two dogs and a load of fresh feed. Chapter 4 provides more information on fencing.

### Seasonal and location-based considerations

Some projects require different strategies depending on the season or location. For example, if you decide to use guard dogs to protect your animals, you should not use them near wolf den sites in spring when wolves will aggressively defend their young from other canines (dogs, coyotes or other wolves that are not members of their pack).

Using livestock guarding dogs in these areas at this time of year would actually increase the likelihood of conflicts with wolves. However, using guarding dogs at other times of the year with sheepherders or range riders present to assist the dogs appears to help greatly reduce livestock losses to wolves. Chapter 3 addresses these issues and more on guarding dogs.

### The importance of record-keeping

Good record-keeping can be a valuable tool in solving wolf-livestock conflicts. Records of interactions and related observations can help producers identify trends, problem areas and vulnerable times of year, which can help improve the effectiveness of targeted, preventative measures.

Solid information will help inform decisions on the type of devices or activities that are most appropriate and help guide their use. This can reduce the need for experimentation and improve the likelihood of success.

For example, good record-keeping can help identify pastures where repeated predator problems occur at certain times of the

year. Simply changing grazing schedules to use problem pastures at other times or for less vulnerable livestock may reduce or eliminate losses.

In addition to keeping good records of wolf-livestock interactions and other observations, it is important to count your livestock regularly when possible. This is especially true in large pastures or areas with dense vegetation and/or rugged terrain where dead livestock could go undetected for weeks or months.

Producers who do not regularly count their animals can suffer substantial losses before they even discover that their livestock are missing. This makes it more difficult to identify and put into action timely and appropriate loss-avoidance techniques that could reduce livestock casualties and the need for wolf control. It can also complicate the cause-of-death determinations typically required where compensation payments are available.

### Communication, agreement and evaluation

Working with agency staff, fellow livestock producers and others to figure out a strategy as a team and to share the costs of a project is highly recommended. As one rancher puts it, this is “a great place to start,” because “the collaborative process works and can help those with divergent opinions resolve misunderstandings without damaging the value of one another as human beings.”

A written agreement that clearly defines expected roles and responsibilities and fosters good communication is essential whenever you are collaborating with others. A mechanism for evaluating the project should also be included as each project, whether successful or not, helps provide valuable information about the effectiveness of methods in varying situations. ■

#### KEY POINTS: Assessing Your Needs

- ✦ Contact state and federal wildlife managers to help evaluate your situation and identify appropriate techniques for your operation.
- ✦ Consider the number, age and type of livestock; the season; the size of the grazing area and how often people check on the livestock.
- ✦ Be proactive by taking actions to reduce attractants to your livestock operation in the first place.
- ✦ Evaluate your livestock protection strategies often to ensure that you are using the best options for your situation.
- ✦ When working with a team from different agencies or organizations, draw up a written agreement describing duties and roles.
- ✦ Keep records of what you are doing so you can evaluate, compare and make modifications as needed.

## 2. Reducing Attractants

Like other canines, wolves have a very good sense of smell and can detect prey two or more miles away. An appealing scent or vulnerable animal is enough to draw a wolf into an area or onto your property. Any type of dead, diseased or dying animal left out in the open is an attractant for scavengers and easily identified as vulnerable prey by predators. Once animals that are both scavengers and hunters—such as wolves, bears and eagles—get a taste for dead livestock, it is not a big step to go from feeding on a carcass to hunting and killing live cattle or sheep if they are nearby. The afterbirth from calving can also be a powerful attractant for wolves, a fact to consider when planning the timing and location of calving activities (see Chapter 8).

Hauling away, burying or burning livestock carcasses rather than leaving them in the field to rot reduces the chances of attracting predators. It also limits the food supply in the area, which can result in a lower number of predators in general. Once a wolf becomes used to a food source, such as dead livestock lying on the ground or in an open pit, it is more difficult to stop it from returning to look for an easy meal. Thus, preventing the attraction in the first place is important.



A wolf shares a deer carcass with a flock of ravens in Minnesota. Scavengers as well as predators, wolves are strongly attracted by dead animals.

### Constructing a carcass pit

Many livestock producers use carcass pits where possible to dispose of dead livestock and reduce the presence of attractants on their operations. To be effective, a carcass pit must be properly constructed and maintained. When possible, the pit should be located away from your livestock, home, sensitive agricultural areas or any other place to which you do not want to lure pred-

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Fencing around a deep carcass pit is an added barrier to wolves and other scavenging predators drawn to the area.

tors unintentionally. The pit should be at least eight feet deep to discourage scavengers from entering.

By regularly burning or burying carcasses in the pit, you help prevent attracting wolves to your area or keeping them there if they happen to visit. Surrounding the pit with predator-resistant fencing provides an additional barrier. If your pit is poorly constructed or maintained, however, it can attract carnivores, which will wander off their regular routes to visit the pit. If constructing a carcass pit or burying carcasses is not an option, a rendering facility or commercial landfill are alternatives you can explore. ■

### KEY POINTS: Reducing Attractants

- ✦ Remove diseased or dying animals from areas where they can attract wolves and other animals.
- ✦ Haul away carcasses or dispose of them in properly constructed and maintained pits whenever possible.
- ✦ Make your carcass pit at least eight feet deep to discourage scavengers from entering it.
- ✦ Routinely burn your carcass pit or cover it with dirt.
- ✦ Install fencing around your carcass pit to further reduce the chances of wildlife getting into it to feed on carcasses.

### 3. Working with Livestock Guarding Dogs

Livestock producers around the globe have long relied on dogs to protect livestock from carnivores such as wolves, bears and lions. In some instances, the mere presence of dogs seems to help keep wolves away from livestock; in other cases, dogs play a more active role by alerting herders to predators in the area.

The ability of a guarding dog to protect livestock is partly a result of genetics and careful breeding and partly a result of socialization and proper training. Over the centuries, people have selected the best working dogs for breeding purposes to pass along valuable traits to future generations. Dogs that harassed or harmed livestock were typically relieved of duty and not permitted to breed, thereby removing undesirable traits from the gene pool. Socializing and bonding guard dogs with livestock from a young age is a crucial part of their training (see page 7). The climate and landscape in which the dogs live, the distances they travel, the diseases they are exposed to and the food supply available to them also influence their behavior.

In North America, the use of livestock guarding dogs has been growing since the mid-1970s, mainly to protect sheep and goats from coyotes and domestic dogs. Great Pyrenees, Anatolian shepherds, Akbash and other breeds that have been used for centuries in Europe, Asia and Africa are now used to protect livestock throughout the United States and Canada.

Breeds that make good livestock guarding dogs are not the ones that make good livestock herders. The two functions, guarding and herding, are quite different, and the dogs that do best at each task have been bred for their specific tasks. In other words, border collies and Australian shepherds are born to herd; Great Pyrenees and Anatolian shepherds are born to guard.

How effective are livestock guarding dogs? Researchers at Hampshire College in Amherst, Massachusetts, the U.S. Fish and Wildlife Service's National Wildlife Research Center in Colorado and the United States Sheep Experiment Station in Idaho addressed this question by placing dogs on farms and ranches throughout the United States. Almost immediately, they received reports of fewer livestock losses from predators. Most of the cases studied focused on coyote attacks on sheep and goats, although other predators such as domestic dogs, mountain lions and wolves were included. The researchers also looked at losses of other livestock such as turkeys, llamas and ostriches.

The ability of livestock guarding dogs to protect cows from wolves in northern Minnesota and Michigan has also been tested, and some dogs demonstrated that, if managed correctly, they could be effective. Interviews with cattle ranchers in Kenya, Turkey and Italy also suggest that, if properly managed, livestock guarding dogs can play a valuable role in protecting against a wide variety of predators.

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The Anatolian shepherd is one of several breeds developed to guard livestock.

#### Choosing and using guarding dogs

To determine if livestock guarding dogs would be a valuable aid for a specific livestock operation, consider your primary needs and how such a dog could fit into your current operation. Professionals at the U.S. Department of Agriculture, local agriculture extension agents, other livestock producers who work with livestock guarding dogs, and breeders and breed clubs can help you evaluate your situation and advise you on the selection and use of guardian dogs (see the Resource Directory for contact information.)

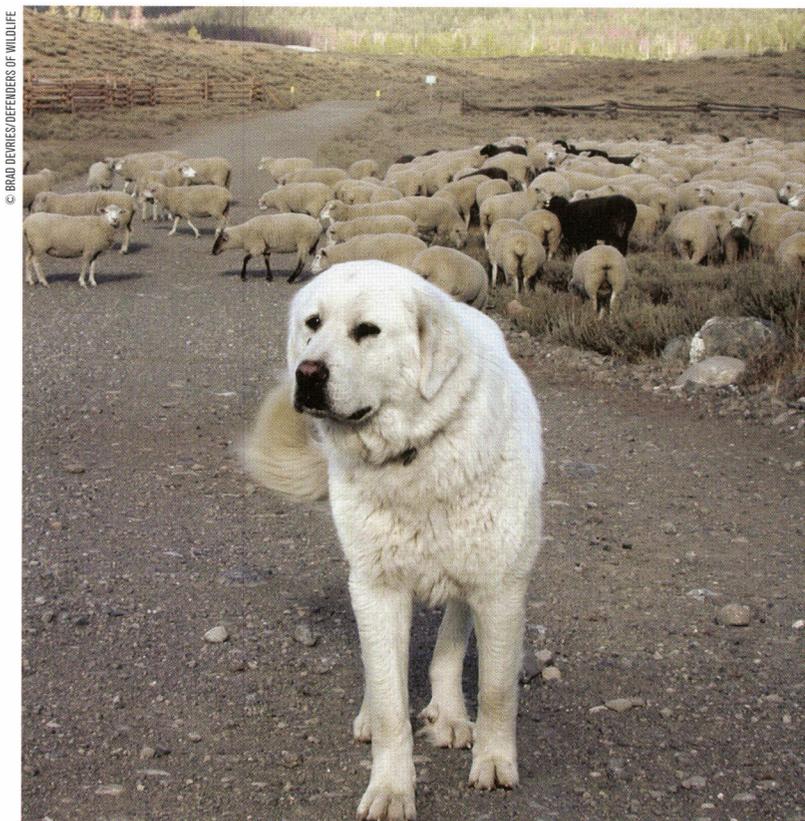
Selecting your pups from breeding stock that is doing what you want your dog to do is important. Pups learn from their mothers, so make sure she has the characteristics of a good livestock guarding dog. Base your selection on a dog's working potential, rather than the fact that it is registered and meets the breed's physical standards. Pups can learn behavior, but not all registered livestock guarding dogs have the instincts necessary to do well at the work for which they were bred. The right livestock guarding dog for you is the one that demonstrates the traits necessary to work well in your particular setting. Desirable livestock guarding dogs stay with their livestock and successfully defend them by alerting people to the presence of threatening predators. Ultimately, the best livestock

guarding dogs are attentive and protective of livestock and always alert to potential risks to their charges.

Livestock owners in Europe and Asia often use livestock guarding dogs alone, without herders present, to reduce wolf conflicts. However, wolf managers in the northern Rockies typically advise supporting livestock guarding dogs with a human presence, such as a herder or rider who can add other methods as necessary to scare wolves away.

Open range operations with large flocks or herds of livestock usually require more dogs than a small operation. To the extent possible, the herders or wranglers should make sure the livestock guarding dogs stay with the livestock rather than allow the dogs to try to chase down or attack wolves (or other large predators). A dog permitted to give chase will end up far away from the herder and in the risky position of going one-on-one against a wolf, a situation that can result in the injury or death of the guarding dog.

When wolf packs have new pups, generally from April through June, keep livestock guarding dogs away from known wolf den sites whenever possible and use other means (such as fladry, grazing location alternatives or devices that scare wolves away) to avoid conflicts with wolves. Livestock guarding dogs pose little threat to wolves or their offspring, but wolves appear to be far more aggressive toward dogs. The wolves apparently perceive the dogs as a threat, much as they would perceive strange wolves, and may try



A Great Pyrenees stands guard on an Idaho sheep ranch.

## RAISING AND TRAINING LIVESTOCK GUARD DOGS

If you decide to breed and raise your own livestock guarding dogs from pups, it is crucial that they are well socialized with livestock.

Experts recommend raising guarding dogs right in the corrals with livestock, starting when the pups are four to five weeks old. Promptly scold pups that stray from the corral and return them to the livestock.

Minimize the handling and petting of livestock guard dogs and do not treat them like pets. A good dog will come when it is called and allow the owner to handle it (for vaccinations and other health-related needs), but should not seek attention from people.

Provide the pups with nutritious dog

food, and don't keep them in dugouts or doghouses (except in extreme and threatening weather conditions). Instead, encourage pups to dig their own dirt beds and sleep among the livestock as they will have to do on grazing pastures.

When the pups are old enough, allow them to accompany livestock to the rangeland. Discourage unacceptable behavior such as biting or chasing the livestock and pulling wool. Immediately remove any dogs that persist in chasing, biting, injuring or killing sheep.

Follow these training guidelines and your dogs will learn important "lessons" during the period of development in which they are most responsive to people and to the livestock they will be guarding.

Guarding dogs raised with livestock bond with their charges.





Great Pyrenees pups are ready for transport to farms in the Great Lakes region where researchers will monitor their effectiveness at protecting livestock from predators.

to defend their young offspring and den sites by seeking out and killing the dogs.

Livestock owners who are working more than two dogs together to defend livestock report a decrease in predator attacks. Wolves, particularly lone wolves, tend to avoid encounters with other packs of wolves and appear to perceive multiple dogs as another pack.

Although the use of multiple dogs is recommended, there is also a limit to the number of dogs that can be adequately cared for and managed effectively. Some producers report that when five or more dogs are used per flock of sheep, the dogs become more interested in socializing with each other than in guarding livestock. As a rule, more dogs are more effective, but the characteristics of the individual dogs play a critical role in their ability to work together as a team.

Different breeds of dogs differ in their level of aggressiveness toward people, and you may need a different type of dog if you ranch in a less rural or remote area versus an isolated area. For example, if you intend to use livestock guarding dogs in or next to federal lands, such as a national forest or recreation area where they may encounter members of the public, you need to consider the dogs' level of aggressiveness toward people (hikers, cyclists, horseback riders, etc.) and their pets. Guarding dogs that are too aggressive may pose a risk to the public. Some producers post signs to alert the public that livestock guarding dogs are in use in the area as a nonlethal method to reduce conflicts with native predators and may bark aggressively if livestock are approached too closely.

If you are going to use livestock guarding dogs in a fenced or pasture operation (as is usually the case in the midwestern and eastern United States), a critical step in training your pups is to introduce them to secure fences and the area where they will be working. This helps the dogs bond to the area so they are less likely to escape or roam outside pastures.

If you are using livestock guarding dogs and not getting good results, you may need to re-examine the number of dogs you are using per flock/herd or setting. Also review how to choose and raise pups—especially during the critical development period between two and 12 weeks of age—and, in general, what best matches your needs in a livestock guarding dog.

For livestock guarding dogs to work successfully, a thorough understanding of guard dog training and management and how this proactive approach applies to your operation is vital. ■

### KEY POINTS: Livestock Guarding Dogs

- ✦ To determine if livestock guarding dogs are an appropriate choice to help protect your livestock from conflicts with wolves, carefully evaluate your particular operation with the help of professionals experienced with the use of these dogs.
- ✦ Livestock guarding dogs defend livestock from wolves most effectively by alerting people to the presence of wolves, not by fighting off the wolves. Do not allow them to chase down or attack wolves. Once they sound the alert, they need human support, such as a herder who can use other methods to deter wolves by scaring them away.
- ✦ Keep livestock guarding dogs away from active wolf den sites to avoid increasing conflicts with wolves protective of their pups.
- ✦ If you are already using livestock guarding dogs but not seeing results, contact a wolf management specialist in your state to help you re-evaluate.

## 4. Erecting Barriers: Fencing, Fladry and Penning

Barriers are used effectively to deter predators such as wolves and bears throughout North America, Europe and Asia. Electric fences or combinations of wire mesh and electric fences have been particularly successful under some conditions, especially when used for protection at night when wolves are more likely to prey on livestock. Some fencing techniques are portable and can be used with good results even in open-range situations. There are also ways to increase the effectiveness of fencing with the addition of fladry, a series of red or orange cloth flags hung at 18-inch intervals along a thin rope. This rope of flagging can be used alone or strung along an existing fence line.

Fladry was first developed and used by hunters in Eastern Europe to funnel wolves into an area. Once caught in the fladry trap, wolves were reluctant to cross the barrier and were shot. In Canada and the United States, researchers adapted the fladry technique as a nonlethal method for keeping wolves out of livestock enclosures. More recently, researchers in Idaho developed an electrified version of fladry called “turbofladry,” which is simply fladry hung on an electrified fenceline powered by solar-charged batteries. Wolves that attempt to cross the turbofladry or try to bite or touch the barrier as wolves often do, experience an electric shock similar to that delivered by other types of electrified fencing.

### Choosing and using barriers

#### *Permanent fencing*

Permanent fencing has proven to be a very effective deterrent under some conditions. It tends to be more suitable for smaller operations where livestock use night corrals or small pastures. The fence must be sturdy, tall enough that predators cannot climb or jump it, and free of any gaps where a predator could slip through. (If the fence

is penetrated, livestock unable to escape attack in the pen are more likely to be hurt or killed.) Since the height needed depends on the fencing material (woven type versus electric, for example) and the type of livestock you want to protect, seeking the guidance of biologists or wolf managers is highly recommended. These experts can help you assess your situation and design an effective permanent fencing structure.

For livestock kept in large enclosures or on open range, permanent fences are typically too costly to build and maintain. In addition, permanent fences are not portable and therefore of little use when livestock are freely roaming. This can make protecting livestock on open-range grazing allotments difficult. Some of these allotments are on national forests in the northern Rockies—also prime wolf and bear territory—and report some of the highest losses of sheep to predators. Livestock in this area are often moved on a seasonal basis or grazed on open ranges during the spring, summer and fall. Permanent fences are impractical for such large-scale operations.

#### *Portable fencing*

Portable fencing or pens can be a very effective tool when permanent fencing is not a good option. You can construct portable fences from several different types of materials including multiple electric fencing strands, wire mesh and portable panels. The cost, utility and effectiveness vary based on the type and number of livestock and the terrain. To reduce stress on your animals, you may have to spend some time getting them accustomed to the portable pens. If you have an allotment, make sure your grazing permit allows the use of portable fencing. You should also regularly move the fencing to keep the native plants from being trampled or overgrazed.

### FLADRY SAVES THE NIGHT

When repeated attacks by wolves had claimed dozens of sheep and government agents had killed two packs of wolves in an attempt to stop the attacks, one sheep producer was ready to try something new. As part of the solution arrived at in consultation with agency wolf experts and Defenders' staff, sheep managers installed a portable electric night pen on the operation near Red Lodge, Montana. As a second line of defense in case the

solar battery failed, they added a strand of fladry to the outside perimeter of the pen. The sheep are now so accustomed to the pen, which is not moved frequently, they usually enter it on their own at day's end.

Since installing the pen in 2005, the producer has lost only one animal to wolves, a ewe accidentally left outside the pen. He has also seen dramatic evidence that fladry works.

One night in spring 2007, the power

source for the pen's electric fencing went out. The next day, sheep managers found a set of wolf tracks in the snow. The tracks led up to the pen, turned away and reapproached it from another side before turning away again and wandering off. The electric night pen has continued to be effective in preventing wolf-caused losses, but the fladry barrier is credited with deterring the wolves from killing sheep while the electric fencing was not working.



Fladry—red flags hung at 18-inch intervals along a thin rope—is an inexpensive, portable and effective method of keeping wolves away even in open range.

### *Fladry and turbofladry*

Fladry fences are much less expensive to produce and install than wire or permanent fencing. Fladry is also easily moved and can be quickly installed over large areas—even by one person. How the fladry is hung and the materials used play a role in its effectiveness, so it is important to seek the advice of wolf managers experienced with this method before trying it. Fladry also requires regular maintenance. Cattle are known to chew and pull on it, and a broken, tangled, pinned down or otherwise compromised fladry barrier is likely to fail. Regular maintenance, including the replacement of aged, torn or faded fladry, is essential.

Fladry alone is most effective as a short-term deterrent. As with all proactive methods, wolves may stop responding after a period of exposure, rendering the method ineffective for preventing losses. The added “bite” of turbofladry—fladry on top of electrified line—uses electric shock to enhance the negative experience of wolves that come into contact with fladry. This reduces the chances of the wolves losing their fear of fladry, likely extending the time that this barrier remains effective. Turbofladry is more expensive, but estimates show it can be three or more times as effective. Like regular fladry, turbobarriers are highly portable and relatively easy to produce, but still require substantial maintenance to remain effective. ■

### **KEY POINTS: Barriers**

- ★ Type of livestock and grazing conditions are important factors in considering what type of barrier to use.
- ★ Permanent fencing can be a good option for smaller operations where night corrals or small pastures can be fenced affordably.
- ★ For open-range conditions, portable fencing and pens are more easily used and affordable, but stress to livestock and native plants and the conditions and restrictions of grazing permits must be considered.
- ★ Fladry can be used alone or as an addition to permanent or portable fencing. It is relatively inexpensive, but must be properly installed and maintained.
- ★ Turbofladry, fladry hung on electrified fencing, can increase the length of time that fladry is an effective barrier against wolves.
- ★ Consult a wolf manager experienced with the different types of barriers to help determine which one is best for your operation.

## 5. Increasing Human Presence: Range Riders and Herders

Livestock losses from wolves often occur when the producer is unaware that there is a wolf pack nearby. Knowing what wolf activity is occurring in your area is essential to protecting your livestock. Increasing the human presence on the range with riders or herders allows you to keep an eye on your livestock and wolf activity and may be one of the best ways to deter wolves.

A range rider, for example, can patrol your ranch or allotment at dawn and dusk when wolves are most active. The rider checks for signs of unusual agitation in the cattle that can indicate wolves or other predators are in the area. The rider also listens for howling and looks for other signs that wolves are present such as tracks, scat and hair snagged in fences.

Rider protocols vary from place to place, but the underlying concept is similar: wolves tend to stay away from areas where there is a regular or frequent human presence. When riders respond quickly to inappropriate wolf behavior, such as approaching or chasing livestock, the wolves are likely to feel threatened and to avoid contact with riders.

The primary goal of increased human presence is to reduce livestock-predator interactions and livestock losses. Secondary goals

include quickly finding sick, injured or dead livestock; preserving the evidence of a livestock loss to help investigators determine the cause of death or injury; monitoring livestock movement and range conditions; and learning more about livestock-predator interactions.

### Range rider and herder basics

Cattle on public grazing allotments—and in some circumstances on private lands—are often spread across a wide area, which may include rugged, partially forested land. That means range riders have to cover as much ground as possible while checking on livestock and may not be in exactly the right location at exactly the right time to respond to wolves. Even so, the chances of preventing a loss are better than in places where human presence is more limited or infrequent.

From 2005 to 2008, range rider projects sponsored by Defenders and others reported low-to-zero losses in comparison to the higher losses recorded before the riders were deployed. With so many variables from place to place, there is no absolute proof that range riders actually prevented livestock losses from predators such as wolves.

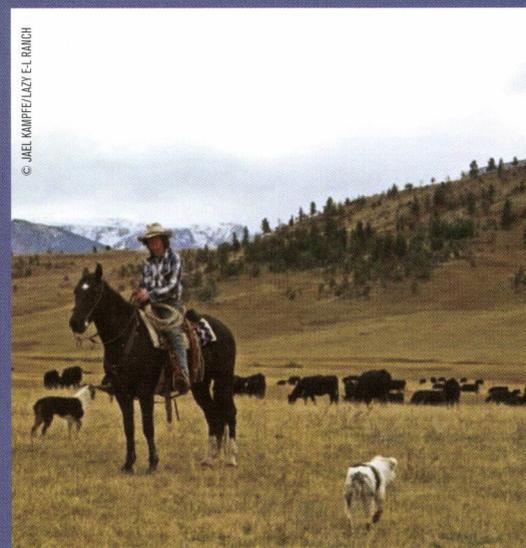
### PROTECTING HERD AND PACK

The Beaverhead-Deerlodge National Forest in Montana's west-central mountains is home to the 14-member Sapphire wolf pack and to a grazing allotment held by a family of ranchers in the region. When these ranchers documented a high number of missing cattle during the summer of 2006, they turned to Defenders of Wildlife and state wolf managers for help.

Given the large size and heavy forestation of this allotment, a range-rider program was determined to be the best tool to monitor wolf activity and reduce livestock losses during the summer grazing season. Defenders helped share the cost of the rider and wolf monitoring equipment, which provided a safety net for the livestock and the pack on this ranch. As conditions permitted, and with appropriate training, riders also

used a variety of nonlethal methods to harass wolves including rubber bullets, cracker shells (only when the risk of unintentionally starting a wildfire was low) and alarm systems. As a result, the rancher reported a dramatic drop in losses during the summer of 2007: only two calves lost—a “drastic improvement from last year’s cattle situation,” according to range rider Doug Hesse.

“It appears the range rider program is working at the ranch,” said Hesse. “I believe that all things considered, some major and very realistic successes have been achieved—several hundred head, on several thousand mountainous, wooded acres in prime habitat for a very stout wolf pack, and both the cattle and wolves are still firmly intact.”



A range rider monitors a herd in Montana.

However, when surveyed, all participating producers said they believed the range rider program was helpful in preventing losses and that they were interested in continuing the practice.

Like cattle operations, sheep operations can benefit from adding more herders to increase protection for their animals. This is especially true at night when the sheep are on bedding grounds and most vulnerable to predators. The additional herder(s) can cover the night shift and focus solely on preventing losses from predators. Herders can also boost their effectiveness by working with livestock guarding dogs that can alert them to the presence of wolves and other predators.

Riders and herders can monitor livestock closely, providing other advantages such as preventing livestock from overgrazing sensitive meadows and streambeds, reducing the chances of livestock theft and detecting early signs of livestock diseases and the presence of plants toxic to livestock. Adding this kind of personnel increases production costs for the livestock operation. Finding experienced riders and herders can also be difficult because wages are usually low and the work is hard, especially when it involves nighttime surveillance and camping with livestock. Agencies, conservation groups and other ranchers may be able to help by pooling resources for range riders and other preventative measures. ■

## KEY FACTORS: Increasing Human Presence on the Range

- ✦ Using range riders for cattle operations and more herders for sheep operations can provide additional protection against predators.
- ✦ Range riders can monitor the cattle while looking for signs of wolves and scaring away any that get too close to livestock operations.
- ✦ Sheep herders can work in shifts, with the herder on night duty focusing on spotting and scaring away predators while sheep are on bedding grounds.
- ✦ Increased human presence has other benefits such as the protection of sensitive grazing areas, prevention of livestock theft and early detection of disease and plants toxic to livestock.
- ✦ Agencies, conservation organizations and other ranchers may be able to help pool resources to establish range-rider or herder programs.

Range riders increase the human presence on grazing lands; the more people on the range, the less likely wolves are to come around.



## 6. Using Scare Tools and Tactics: Alarms, Shock Collars and Nonlethal Ammunition

Researchers are constantly developing and testing tools and methods for keeping wolves away from livestock. A wide range of alarm systems, shock collars and nonlethal types of ammunition are already proving effective, and programs that include agency-issued permits and training are available to help you use these tools. Some require agency experts to install and maintain; others require training before you can use them effectively and safely yourself.

### Alarms

In the early 1990s, a Montana rancher had an idea for an alarm system triggered by the radio collars that biologists use to track and monitor wolves. Acting on this idea, researchers from the U.S. Department of Agriculture's (U.S.D.A.) Wildlife Services developed what is now known as a radio-activated guard system—RAG box for short.

RAG boxes consist of a receiver, a bright strobe light, two loudspeakers and an internal computer that collects and stores information received from transmitters on wolves' radio collars. You attach the RAG box to a fence line or place nearby and set it to go off with sound and light whenever it picks up a signal from a radio



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The radio-activated guard system—RAG box for short—affixed to this fence consists of loudspeakers and a battery-powered computer housed in a metal box.

collar. The flashing lights and loud sounds usually scare off wolves and reduce their interest in entering or remaining in the area. The RAG box's computer also collects information such as radio collar frequency (each wolf's collar has its own), date and time the wolf was present, and the number of times the wolf approached the area.

### TEST CASE: RAG BOXES AND THE WHITE HAWK WOLF PACK

In winter 2001, wolves from the eight-member White Hawk pack, half of them wearing radio collars, moved into the East Fork drainage of the Salmon River in Idaho's Salmon-Challis National Forest. Researchers placed five RAG boxes in range to protect approximately 70 percent of the 1,000 cow-calf pairs that grazed in small pastures on private land near the forest from late February through May.

Through mid-March, the RAG boxes activated approximately 10 times, presumably in response to the approach of radio-collared wolves. During this period, no calves were killed as compared to repeated wolf-caused losses the previous year. On the night of March 18, wolves killed a calf in a pasture with a RAG box that apparently failed to activate. One wolf was shot that night and the rest of the pack left the pasture. Information from the RAG box computer

indicated that the box had failed to activate, even though radio-collared wolves passed within range. The cause of the malfunction was determined and corrected.

The White Hawk pack was present in or near the fields almost every night for another 25 days. The RAG box computers indicated the scare devices were firing while wolves were present. The computers also recorded wolves leaving the pastures after the RAG boxes had fired. In mid-April the White Hawk pack moved out of the valley, rarely to return for the rest of the year. Except for the calf killed due to the malfunction on March 18, the pack claimed no more cattle in the area in 2001.

In January 2002, the White Hawk pack returned to the East Fork of the Salmon River. The wolves avoided cattle pastures with RAG boxes until late March, when RAG box computers indicated wolves were getting

used to the devices and staying near them longer after activation. Wolves then killed one sheep and two more calves despite adjustments to the boxes by agency staff trying new sounds to scare wolves away. With no other nonlethal options, agency managers killed the rest of the pack once they determined that the wolves had lost their wariness of the RAG boxes.

The White Hawk pack did not kill livestock for three months in winter-spring 2001, one month in summer 2001 and two months in winter-spring 2002, times when the RAG boxes were operating properly and the wolves had not yet become used to them. RAG boxes also appear to offer a significant advantage over scare devices that fire randomly or at fixed intervals, especially when used in short-term situations in which wolves are less likely to get used to the boxes and be undeterred by the sounds they emit.

## Shock collars

Shock collars are widely used as a corrective training tool with domestic dogs, but the use of these collars as a nonlethal management tool for wild wolves has been very limited. In 1998, the Wisconsin Department of Natural Resources put a shock collar on a wolf near a cattle farm that had been suffering wolf-caused losses. Whenever this wolf approached the farm, researchers gave it a corrective shock, and it quickly moved away from the area. No wolf-caused losses occurred on the farm during the time this wolf was shock-collared.

## Nonlethal ammunition

Certain types of ammunition that make a loud sound when fired or that can hit an animal without injuring it can be used to scare away wolves. These include cracker shells, beanbag shells, paintballs and rubber bullets.

Cracker shells are small, firecracker-type devices contained in a shotgun shell. These shells make two blasts—an initial blast when the shell is shot out of the gun and ignites and a second loud blast when the firecracker fuse burns down and explodes about 50 yards to 75 yards away.

Beanbag shells, paintballs and rubber bullets are used in place of conventional ammunition. Beanbag shells are square bags filled with beans and rolled up. Paintballs are gelatin capsules filled with nontoxic, water-soluble dye and shot from a special compressed-gas-powered marker or gun. At normal velocities (up to 300 feet per second), paintballs break on impact. They can strike a wolf with enough force to frighten it and possibly bruise it. Rubber bullets are bullets made of, or coated with, rubber. Fired at short range rubber bullets can be lethal and are often heavy enough to pierce skin even at proper ranges.

Nonlethal ammunition can inflict serious injuries if it is used improperly, so it is important to learn how to use it and to understand the specific conditions under which the various types can be safely and legally used. You may also need a permit to use it. The necessary training, equipment and permits are available from federal and state agents who specialize in wolf management.

In the northern Rockies wolf reintroduction areas in Idaho, Montana and Wyoming, the U.S. Fish and Wildlife Service has issued more than 200 nonlethal ammunition permits to livestock managers. There have been few reports of wolves hit and no reports of permanent injuries. (A grizzly bear in Yellowstone National Park did die from injuries received while being hazed with cracker shells, so it is critical to get proper training to learn to use nonlethal ammunition safely.)

## Important factors to consider

### *RAG boxes*

RAG boxes can be very effective. These scare devices “fire” strobe lights and alarm sounds when triggered by the radio signals from an approaching radio-collared wolf. To keep wolves from getting used to any one sound, RAG boxes produce a variety of alternating sounds, which can range from sirens to gunshots to beating helicopter blades to cowboys yelling on horseback. However, wolves may lose their fear of these devices if exposed to them repeatedly. The RAG box is most effective as a temporary deterrent.

Studies by the U.S.D.A. Wildlife Services and the University of Nebraska found that RAG boxes are most effective for small pastures (60 acres or less), especially when lambing or calving is taking place in smaller enclosures. With a range of up to 300 meters, the boxes are not designed to protect cattle in large, open-range ranching operations, except in certain situations where cattle are bunched during calving time or corralled at night.

## CASE STUDY: SHOCK COLLARS AND WISCONSIN WOLF PACKS

In 2005 and 2006, Central Michigan University researchers placed a shock-radio combination collar with a battery life of 80 days on each of 10 “treatment wolves” and four “control wolves,” all from separate wolf packs in northern Wisconsin.

The researchers lured these wolves to sites within their territories with road-killed deer delivered every three days. Once the wolves were accustomed to visiting these bait sites, a remote-delivery shock transmitter was set up at the sites used by the treatment wolves. Each time a

treatment wolf approached the site, it would receive a shock through its collar.

After 40 days, the researchers turned off the system and monitored the wolves for another 40 days. They found that shock-collared wolves visited bait sites much less frequently than the control wolves that did not receive any shocks.

Significantly fewer wolves within the treatment packs, even those not wearing shock collars, visited the sites as well, which suggests that the other wolves may have learned to avoid the sites. The treatment wolves also showed signs of

aversive conditioning. From the time of the last shock, treatment wolves and pack members avoided returning to the site for an average of 42 days, whereas control wolves returned an average of five days after the previous visit.

Two farms within the territories of shock-collared wolf packs were also fitted with this technology in 2005. No radio-collared wolves from the study packs visited these farms.

The use of shock collars continues to look promising in some situations, but requires further study.

The RAG box can be effective both as a device to interfere with wolf behavior and as an alarm system that can alert nearby range riders or herders, who can then look for wolves, check livestock and employ additional scare tactics, such as firing cracker shells in the air, if necessary. Since the RAG box's internal computer can record the number of times the box has been activated and which radio-collared wolf has triggered the device, this can give you valuable information on wolf activity in the immediate area.

One limitation of the RAG box is that it will work only with radio-collared wolves. Another is that RAG boxes require care when installing, including protecting the unit from curious cows or other animals that may want to pull it apart. The receiver is often positioned on a fence post and tied down. The two loudspeakers are also fixed onto nearby fence posts. Power is supplied to the RAG box either through a 12-volt car battery, which needs to be charged every couple of weeks, or through a solar panel that recharges itself. Training is necessary to learn how to operate the receiver, and the RAG box system is also initially expensive due to the cost of assembly. However, some agencies and Defenders of Wildlife may have RAG box units available for loan.

RAG boxes have helped resolve conflicts with wolves on many livestock operations, but sometimes the method fails to provide the desired protection. This is usually because the wolves have gotten used to the devices and are no longer intimidated, a situation that can be addressed by changing the design of the device or the way it is used.

A radio collar like the one this Yellowstone wolf wears is required to set off a RAG box. Signals from the collar trigger the device to emit sound and light to scare wolves away.



© WILLIAM CAMPBELL/US FISH AND WILDLIFE SERVICE

### Shock collars

The use of shock collars is limited by the time and expense involved. Agency experts have to trap and collar a wolf to fit it with the collar and assist with installing and maintaining the remote shock transmitter devices at the farm site.

### Nonlethal ammunition

Training by agency staff knowledgeable about nonlethal ammunition—cracker shells, rubber bullets, bean bag shells and paint balls—is a must because of the safety and legal issues associated with their use. Cracker shells, for example, can start wildfires, and, although low, there is the risk of seriously injuring or killing wildlife if nonlethal ammunition is used improperly. Moreover, depending on what part of the country you are in and what protections are in place for wolves in your region, using nonlethal ammunition on wolves may or may not be legal. (See the Resource Directory to find an agency expert in your state.) ■

Nonlethal ammunition, such as rubber bullets (left) and beanbag shells (right), is designed to strike an animal and scare rather than harm it.



PHOTO: NOAA

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## KEY POINTS: Scare Tools and Tactics

- ★ Alarm systems, shock collars and nonlethal ammunition can be effective tools for scaring wolves away from livestock and alerting livestock managers to the presence of wolves.
- ★ Alarm systems known as RAG (radio-activated guard) boxes emit loud sounds and flashing lights to discourage wolves from approaching livestock.
- ★ Shock collars have had limited experimental use but have demonstrated effectiveness in causing wolves to avoid specific sites in the few studies conducted so far.
- ★ Nonlethal ammunition either makes an explosive sound to scare wolves away (cracker shells) or strikes the animal with just enough force to frighten it (beanbag shells, rubber bullets and paintballs).
- ★ The use of alarm systems, shock collars or nonlethal ammunition may require a permit.

## 7. Switching Grazing Sites

Proactive measures cannot always be implemented quickly or effectively enough to prevent livestock losses. In such cases—and usually as a last resort—moving livestock to an alternative grazing site can be the best solution for livestock owners and wildlife managers alike.

These relocations can be temporary (especially on private land) or, if the grazing permittee is willing, involve permanent retirement of a grazing allotment. Some wildlife conservation groups or land trusts have purchased grazing permits from livestock owners on a voluntary basis to stop chronic conflict and lethal wolf control. This approach has enabled ranchers to continue raising livestock in other areas where opportunities for conflict are minimal.

If you do not have access to an alternative site where your livestock can graze, you may be frustrated by what seems to be a lack of options. More and more, however, a potential solution and a cooperative agreement may be just a phone call and a brainstorming session away.

### Important factors to consider

Cooperative agreements to temporarily switch or permanently retire grazing allotments can help reduce livestock-predator conflicts and provide benefits to other wildlife species such as elk and deer. Critics may dismiss these approaches as promoting wolves over livestock on public lands and changing the mission of land-management agencies. Consequently, you may be concerned about your neighbors' reactions

should you adopt these methods. However, there are many examples of ranchers, conservationists and agency officials successfully working together to adjust the timing and location of allotments to minimize conflicts with wildlife and allow livestock grazing activities to continue. In some cases, conservation organizations have paid the ranchers for additional costs associated with relocating livestock to safer pastures. In the case of permanent grazing allotment retirement, it may be beneficial to consider examples where willing ranchers received payment for the value of their public grazing permits in high-conflict areas and then used the funds to lease or purchase new pastures in other areas where losses from predators were less likely.

Another potential issue is that retiring a single allotment in an area where livestock grazing is widespread may not solve the problem, in part because wolves have large home ranges. Also, in situations where most of the losses are occurring on private land, retiring a public grazing site may not be an effective solution.

Livestock relocations may not have to be permanent. Predator-caused livestock losses most often occur during times when livestock are most vulnerable—during calving or lambing, for example, or when grazing near a wolf den site in spring when the wolves have pups to feed. In such instances, a temporary move such as shifting calving and lambing activities closer to the barnyard to allow for additional monitoring is the answer. Wolf-livestock experts in your region (see Resource Directory) can evaluate your specific situation and help you find the best solution. ■

Sheep move through a grazing allotment in Idaho's Sawtooth National Forest.



© SUZANNE ASH, STONE DEFENDERS OF WILDLIFE

### KEY POINTS: Switching Grazing Sites

- ★ When there are no other options, moving livestock to an alternative grazing location to avoid conflicts with wolves can be a win-win solution.
- ★ Switching grazing sites may only have to be done temporarily, for instance, to avoid conflicts with wolves that have young pups to feed or to avoid having vulnerable young livestock near wolves.
- ★ Switching to alternative grazing sites can be challenging because of the logistics of the move, the expense and the viewpoints of all involved. However, it can also be an opportunity to bring people together to jointly find a solution that helps the producer, the livestock and the wolves.

## 8. Other Methods Worth Considering

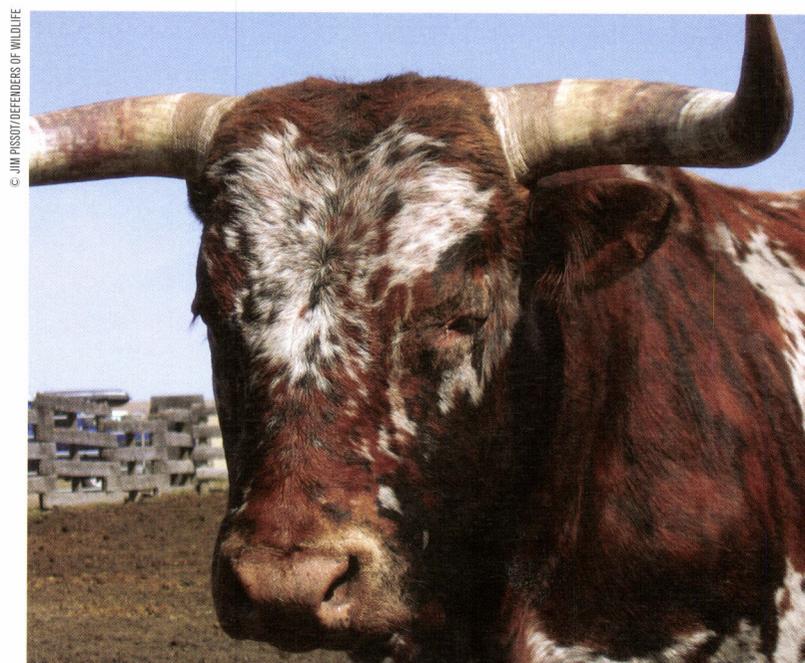
You may have heard of other methods used by operators to prevent wolf-livestock conflicts. Most accounts of these efforts are anecdotal and involve approaches not yet scientifically analyzed or compared. Conditions vary for each operation, which can impact the effectiveness of these approaches. Other methods may come to light as operators, government agencies and others work to reduce conflicts between livestock and predators. Defenders of Wildlife looks forward to collecting data on these methods and helping to evaluate them as they are developed in the field. A few examples of promising approaches used by some livestock operations are highlighted below.

### Aggressive livestock breeds

Some operators include longhorn steers in their herds, particularly among yearlings, as they are known to discourage predators by aggressively charging at them. Other breeds of cattle such as Corrientes and Brahman show similar behavior and may be a good choice in predator-occupied areas. Brahman also have superior maternal instincts, which can help protect calves during periods of vulnerability. Brahmans have been crossed with Angus and Herefords to produce Brangus and Brafordts, breeds that exhibit a desirable blend of aggression toward predators, mothering skills, heartiness, beef value and reproductive success.

Aggressive livestock may pose an increased risk to recreationists on public land, however, a concern that must be addressed when choosing breeds. Specialty markets, such as providing roping steers and other rodeo stock, may provide opportunities for producers to reduce financial losses when switching from a “meat-producing” breed to a less profitable (meat-market wise) but harder breed.

Brahman cattle are known for their aggressive nature and maternal instincts, desirable traits in livestock that graze where predators roam.



A longhorn steer will charge at wolves and other predators when they approach.

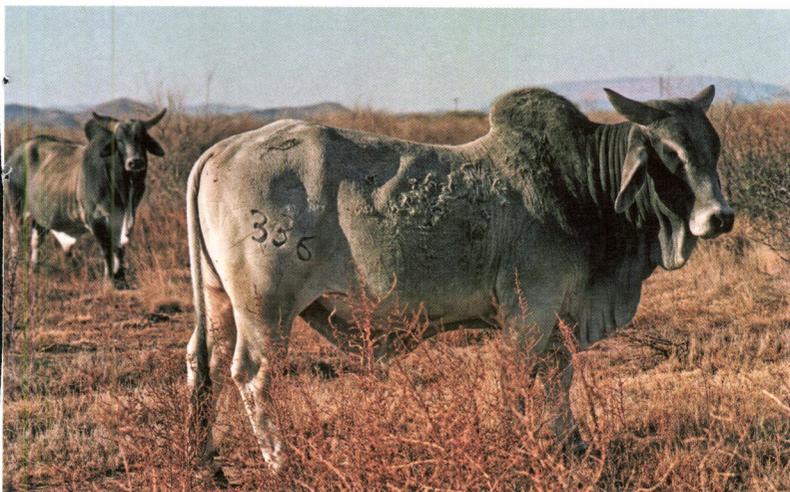
### “Mountain-savvy” versus “naïve” cows

Ranch managers in southwestern Alberta have noticed that cows familiar with mountain and foothill grazing conditions are less vulnerable to wolves than cows raised on prairie pastures and moved seasonally to mountain pastures in wolf territories. Similarly, ranchers who regularly transported naïve, pregnant cows from prairie pastures to the rugged mountains of New Mexico’s Gila National Forest reported high rates of livestock losses.

In these instances, the cow’s unfamiliarity with the new landscape and lack of maternal experience likely contributed to high calf mortality as opportunistic wolves moved in quickly to take advantage of the situation.

### Herding for deterrence

Various herding and stewardship methods may play a role in discouraging wolf attacks on livestock. For example, the bunching-up encouraged by the methods of the Bud Williams Stockmanship School and other programs could make cows less vulnerable to wolves. This is based on the idea that herding is the natural defense of ungulates (hoofed animals) threatened by pack-hunting predators such as wolves. It is much more difficult and risky for wolves to isolate an animal from a herd than to pursue individual animals dispersed across the landscape. Put another way, there is strength in numbers. Other claimed advantages of stewardship methods, including easier herding and roundup, provide additional benefits to ranchers.



## Calving strategies

In areas where year-round livestock grazing is possible, calving can occur throughout the year, often in locations that are difficult to monitor. In predator-occupied areas it may be helpful to schedule and manage for a condensed calving season to better monitor calving activities. Not only can this reduce predator conflicts when livestock are most vulnerable, but, according to some ranchers, can also help address other problems such as calving complications and accounting of herd numbers.

In other regions of the world, ranching neighbors often plan and set up “calving camps” to help one another by sharing labor and resources during this critical time. In addition to deterring predator losses, calving camps can help 1) increase calf delivery success by assisting cows and heifers having problems; 2) detect and treat sickness; 3) oversee 36-hour weaning for re-breeding of females; 4) supplement the feeding of calves during drought; and 5) tame calves. Another benefit of planned calving is that it allows ranchers to conduct calving activities in easily monitored locations with minimal predator conflicts. Some ranchers report increasing their success during calving season by keeping bulls as part of the calving herd and allowing other aggressive animals, such as donkeys, to mingle with the herd. ■

## KEY POINTS: Other Methods Worth Considering

- ★ Livestock breeds demonstrate different levels of aggression toward predators and varying mothering skill levels, both of which can affect the ability of the breed to ward off wolves.
- ★ Whether cow-calf pairs or yearlings are less vulnerable to wolf attacks is an open question. Results have varied in different regions and multiple factors may be involved.
- ★ Cattle experienced with rugged mountain terrain seem to be less vulnerable to wolf attacks than naive cattle transported to such terrain from prairie pastures.
- ★ Herding and stewardship methods that cause cattle to bunch up may make them less vulnerable to wolf attacks.
- ★ Planning and managing calving for condensed seasons, sharing labor and resources with neighbors, or scheduling calving for a time when wolf pups have other young wild prey to test are some strategies that may help reduce predator conflicts.

## COW-CALF PAIRS VS. YEARLINGS

Ranchers in the United States and Canada have noted differences in the relative vulnerability to wolf attacks of yearlings versus cow-calf pairs. Based on the livestock compensation data collected over the last 20 years in the northern U.S. Rockies, for example, wolves have killed calves far more frequently than any other age group of cattle. In Canada, however, yearlings appear to be more prone to wolf attacks under certain circumstances.

Many ranchers graze yearlings because these younger animals will actively seek grass in less accessible portions of the range. As they range more widely across pastures, yearlings become vulnerable to wolves. They also tend to investigate novel sights and sounds, even to their own peril.

In Alberta, cow-calf pairs tend to bunch up in response to an approaching predator, and mother cows have been known to stand and protect their calves. In the northern U.S. Rockies, however, converting from yearlings to cow-calf pairs has resulted in increased losses. Some of the ranchers who converted experienced wolf attacks on their livestock for the first time.

More monitoring and research are needed to better understand the reasons for these regional differences. Factors such as the type of landscape, size of allotment pasture, breed, instinct and experience with predators may all play a role in determining whether yearlings or cow-calf pairs fare better against wolves in any given situation.

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Cow-calf pairs may fare better against predators in some regions; in others, grazing yearlings keeps losses down.

# Resource Directory

## State, tribal and federal agencies and other sources of information and assistance in the United States, Canada and Mexico

### ARIZONA

Mexican Wolf Interagency Wolf Field Team: 928.339.4329  
 Arizona Game and Fish Department  
 (Pinetop office): 928.367.4281  
 U.S. Fish and Wildlife Service: 505.761.4783  
 White Mountain Apache Tribe, Wildlife and  
 Outdoor Recreation: 928.338.4385  
 U.S.D.A. Wildlife Services: 602.870.2081  
 U.S. Forest Service: 928.333.6265

To report a dead wolf or possible illegal activities involving wolves:  
 U.S. Fish and Wildlife Service, Office of Law Enforcement:  
 505.346.7828 or 928.339.4232 (Alpine office)

For information about proactive, nonlethal methods  
 and livestock compensation resources:  
 Defenders of Wildlife (Tucson office): 520.623.9653

### COLORADO

Colorado Division of Wildlife: 303.297.1192  
 U.S. Fish and Wildlife Service: 303.236.7905

For information about proactive, nonlethal methods  
 and livestock compensation resources:  
 Defenders of Wildlife (Boise office): 208.424.9385

To report a dead wolf or possible illegal activities involving wolves:  
 U.S. Fish and Wildlife Service, Office of  
 Law Enforcement: 720.981-2777

### IDAHO

Idaho Fish and Game (Ask for the wolf management specialist.)  
 Boise: 208.334.2920  
 Salmon: 208.756.2271  
 Nampa: 208.465.8465  
 Nez Perce Tribal Wolf Program: 208.634.1061  
 U.S. Fish and Wildlife Service: 208.378.5243

To report livestock depredations or for federal  
 assistance with nonlethal deterrents:  
 U.S.D.A. Wildlife Services: 208.378.5077

For information about proactive, nonlethal methods  
 and livestock compensation resources:  
 Defenders of Wildlife (Boise office): 208.424.9385

To file for livestock compensation from the state:  
 Idaho Supplemental Wolf Compensation Program: 208.334.2189,  
 ext.11, or e-mail [jallen@osc.idaho.gov](mailto:jallen@osc.idaho.gov) (report form online at [http://species.idaho.gov/pdf/Claim\\_for\\_wolf\\_Depredation\\_Losses.pdf](http://species.idaho.gov/pdf/Claim_for_wolf_Depredation_Losses.pdf))

To report a dead wolf or possible illegal activities involving wolves:  
 U.S. Fish and Wildlife Service, Office of  
 Law Enforcement: 208.378.5333

### MICHIGAN

For information on reducing predator-livestock conflicts, the state  
 wolf compensation program and wolf management in general:  
 Michigan Department of Natural Resources  
 wolf coordinator: 906.228.6561.

For information about proactive, nonlethal methods:  
 Defenders of Wildlife (national office): 202.682.9400

For information about husbandry practices to prevent conflicts:  
 Michigan State University Extension: 906.228.4830  
 (regional office); 906.439.5880 (Upper Peninsula office)  
 Michigan Department of Agriculture: 906.786.5462  
 (Escanaba); 800.292.3939 (Lansing).

To report livestock losses, a dead wolf on your property  
 or possible illegal activities involving wolves:  
 Michigan Department of Natural Resources: 800.292.7800

### MINNESOTA

Minnesota Department of Natural Resources: 651.295.5175.

To report suspected livestock depredation, a dead wolf on  
 your property or possible illegal activities involving wolves:  
 Local state conservation officer: See directory at <http://files.dnr.state.mn.us/enforcement/phonedirectory.pdf>  
 or call Minnesota Department of Natural Resources  
 Information Center: 651.296.6157 (in-state);  
 888.646.6367 (out-of state), your county sheriff's office  
 or U.S.D.A. Wildlife Services: 218.327.3350.

For information on state compensation for  
 verified livestock depredation:  
 Minnesota Department of Agriculture: 651.201.6578

## Livestock and Wolves: A Guide to Nonlethal Tools and Methods to Reduce Conflicts

For information about proactive, nonlethal methods:  
Defenders of Wildlife (national office): 202.682.9400

### MONTANA

Montana Fish, Wildlife and Parks (Ask for the wolf management specialist.):

Helena: 406.444.3242

Bozeman: 406.994.6371

Dillon: 406.683.2287

Kalispell: 406.751.4586

Red Lodge: 406.446.0106

Turner Endangered Species Fund Volunteer: 406.556.8514

U.S. Fish and Wildlife Service: 406.449.5225

To report livestock depredations or for federal assistance with nonlethal deterrents:

U.S.D.A. Wildlife Services: 406.657.6464

For information about proactive, nonlethal methods and livestock compensation resources:

Defenders of Wildlife (Boise office): 208.424.9385

To report a dead wolf or possible illegal activities involving wolves:

U.S. Fish and Wildlife Service, Office of

Law Enforcement: 307.261.6365

### NEW MEXICO

Mexican Wolf Interagency Wolf Field Team: 928.339.4329

New Mexico Department of Game and Fish: 505.476.8118

U.S. Fish and Wildlife Service: 505.761.4748

U.S.D.A. Wildlife Services: 505.527.6980

U.S. Forest Service: 505.842.3194

To report a dead wolf or possible illegal activities involving wolves:

U.S. Fish and Wildlife Service, Office of

Law Enforcement: 505.346.7828

For information about proactive, nonlethal methods and livestock compensation resources:

Defenders of Wildlife (Tucson office): 520.623.9653

### OREGON

To report a dead wolf or possible illegal activities involving wolves:

U.S. Fish and Wildlife Service, Office of

Law Enforcement: 503.682.6131

To report wolf sightings or wolf sign:

U.S. Fish and Wildlife Service: 541.786.3282

(toll-free: 1.888.584.9038)

Oregon Department of Fish and Wildlife: 541.963.2138

For information about proactive, nonlethal methods and livestock compensation resources:

Defenders of Wildlife (Boise office): 208.424.9385

### UTAH

Utah Division of Wildlife Resources: 801.538.4700

U.S. Fish and Wildlife Service: 801.975.3330

For information about proactive, nonlethal methods and livestock compensation resources:

Defenders of Wildlife (Boise office): 208.424.9385

To report a dead wolf or possible illegal activities involving wolves:

U.S. Fish and Wildlife Service, Office of

Law Enforcement: 720.981.2777

### WASHINGTON

To report a dead wolf or possible illegal activities involving wolves:

U.S. Fish and Wildlife Service, Office of

Law Enforcement: 425.883.8122

To report wolf sightings or wolf sign:

U.S. Fish and Wildlife Service

Eastern Washington: 509.891.6839

Western Washington: 360.753.9440

Wolf Reporting Hotline: 1.888.584.9038

For information about proactive, nonlethal methods and livestock compensation resources:

Defenders of Wildlife (Boise office): 208.424.9385

### WISCONSIN

For information about wolf management:

Wisconsin Department of Natural Resources: 715.762.1363.

To report livestock depredations or for federal assistance with nonlethal deterrents:

U.S.D.A. Wildlife Services:

Northern Wisconsin: 800.228.1368

(715.369.5221 out of state)

Southern and Central Wisconsin:

800.433.0663 (920.324.4514 out of state)

For information about the state wolf compensation program:

Wisconsin Department of Natural Resources:

715.762.1363 or 608.267.7507.

To report a dead wolf that appears to have been killed illegally or to have died from an unknown cause:  
Call a Wisconsin conservation warden, your local sheriff or Wisconsin Department of Natural Resources tip line: 1.800.TIP.WDNR (1.800.847.9367). If no illegal activity appears to be involved, contact a Department of Natural Resources biologist.

For information about proactive, nonlethal methods:  
Defenders of Wildlife (national office): 202.682.9400

## WYOMING

U.S. Fish and Wildlife Service: 307.330.5631  
Wyoming Game and Fish: 307.777.4600

To report livestock depredations or for federal assistance with nonlethal deterrents:  
U.S.D.A. Wildlife Services: 307.261.5336  
(Toll free: 1.866.487.3297)

To report a dead wolf or possible illegal activities involving wolves:  
U.S. Fish and Wildlife Service, Office of Law Enforcement: 307.261.6365

For information about proactive, nonlethal methods and livestock compensation resources:  
Defenders of Wildlife (Boise office): 208.424.9385  
Wyoming Game and Fish: 307.777.4600

## CANADA

Wildlife Management Branch, Alberta Ministry of Sustainable Resource Development: <http://www.srd.gov.ab.ca/>; <http://www.srd.gov.ab.ca/fishwildlife/wildlifeinalberta/wolvesalberta/>

Fish and Wildlife Branch, British Columbia Ministry of Environment: 250.387.9711; <http://www.env.gov.bc.ca/fw/>

To report a dead wolf or possible illegal activities involving wolves:  
Wildlife Management Branch, Alberta Ministry of Sustainable Resource Development: 780.427.9503 or 780.944.0313  
Defenders of Wildlife (Alberta office): 403.678.0016  
[http://www.defenders.org/programs\\_and\\_policy/wildlife\\_conservation/imperiled\\_species/wolves/wolf\\_recovery\\_efforts/canada\\_wolves/in\\_the\\_field.php](http://www.defenders.org/programs_and_policy/wildlife_conservation/imperiled_species/wolves/wolf_recovery_efforts/canada_wolves/in_the_field.php)  
Alberta Report A Poacher (RAP) Program: 800.642.3800

For information on compensation and predation management:  
British Columbia Cattlemen's Association (administers provincial compensation and predation management program): 250.573.3611; <http://www.cattlemen.bc.ca/wplccp.htm>  
Defenders of Wildlife (Alberta Office): 403.678.0016

## MEXICO

Mexican Wolf Interagency Wolf Field Team: 928.339.4329  
Defenders of Wildlife  
Tucson office: 520.623.9653  
Mexico office: 52.55.55.96.21.08  
Sonora and Chihuahua Naturalia, Hermosillo: 52.662.262.11.70

To report a dead wolf or possible illegal activities involving wolves:  
U.S. Fish and Wildlife Service, Office of Law Enforcement (New Mexico): 505.346.7828  
Defenders of Wildlife: 520.623.9653

## Useful Web Sites

### PROACTIVE PROGRAMS

Defenders of Wildlife:  
<http://www.coexistingwithcarnivores.org>  
<http://www.idahowolves.org>  
<http://www.wyomingwolves.org>  
<http://www.montanawolves.org>  
Keystone Conservation Trust: <http://www.keystoneconservation.org/>  
Greater Yellowstone Coalition: <http://www.greateryellowstone.org/>

### GENERAL INFORMATION

U.S. Fish and Wildlife Service  
Endangered Species Program: <http://endangered.fws.gov/>  
Wolf Recovery Program: <http://westerngraywolf.fws.gov/>  
Western Great Lakes Wolf Recovery Program:  
<http://www.fws.gov/midwest/wolf/>  
Mexican Gray Wolf Recovery Program:  
<http://www.fws.gov/southwest/es/mexicanwolf/>  
U.S.D.A. Wildlife Services: <http://www.aphis.usda.gov/ws/>  
National agricultural statistics (and links to state data):  
<http://usda.mannlib.cornell.edu/reports/nasr/livestock/>  
National Wildlife Research Center:  
<http://www.aphis.usda.gov/ws/nwrc/>  
Nez Perce Tribe Wildlife Program:  
[http://www.nezperce.org/Programs/wildlife\\_program.htm](http://www.nezperce.org/Programs/wildlife_program.htm)  
State wildlife agencies: <http://www.fws.gov/offices/statelinks.html>  
Yellowstone National Park wolf restoration and pack data:  
<http://www.nps.gov/yell/nature/animals/wolf/wolfrest.html>  
<http://www.nps.gov/yell/nature/animals/wolf/wolfup.html>

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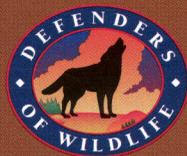
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