

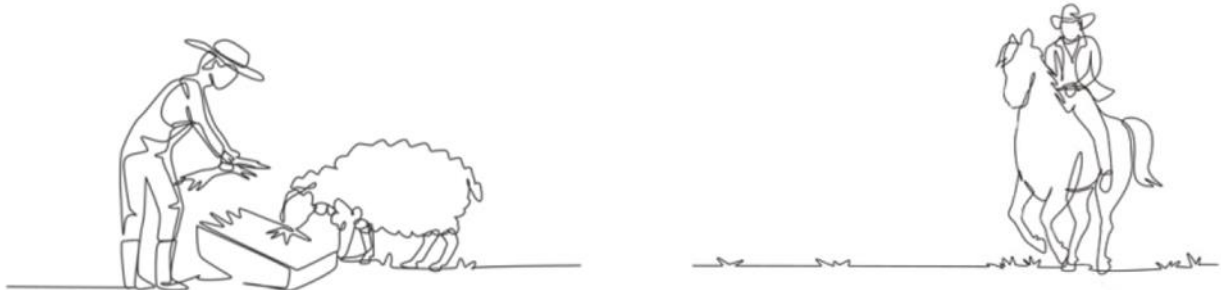


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OMB
Approved
0579-XXXX
EXP: XX/202X

**Livestock producer perceptions of predators
and predator damage management methods**



You are being asked to participate in a research study. The purpose of the study is to evaluate the methods, strategies, and outcomes associated with large predator damage management you or Wildlife Services have conducted on or around your livestock operation. The large predators of focus in this study are wolves, black bears, grizzly bears, and mountain lions (*not* coyotes). To participate in the study, simply fill out this questionnaire; we expect the questionnaire will take you approximately 45 minutes to complete. Your participation is voluntary, and you may skip any question you do not wish to answer or withdraw at any time.

We are not collecting directly identifying information, and when we report and share the data with others, we will combine demographic data from everyone who takes the survey. You must be 18 years or older to participate. If you have any questions about the research, you may reach out to the following researcher:

Hailey Ellis, Social Scientist, USDA/APHIS/Wildlife Services
Phone: (970) 266-6148; Email: hailey.e.ellis@usda.gov

You indicate that you voluntarily agree to participate in this research study by submitting the survey.



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Your help on this study is greatly appreciated!

To access this survey, please enter the code below that was provided in the invitation letter you received.

Instructions: To complete this survey, please follow the specific directions provided throughout this survey to answer each question. In most sections of this survey, back arrow buttons located on the bottom of the page will allow you to return to previous questions. You can also leave the survey at any time and re-enter where you left off by clicking on the survey link again.

We ask that you please complete the survey no later than X.

Did you maintain any of the following types of livestock on your property in the last 12 months?

Please select "yes" or "no" for each livestock type.

	Yes	No
Adult cattle	<input type="radio"/>	<input type="radio"/>
Calves	<input type="radio"/>	<input type="radio"/>
Sheep	<input type="radio"/>	<input type="radio"/>
Horses	<input type="radio"/>	<input type="radio"/>
Beehives	<input type="radio"/>	<input type="radio"/>
Other livestock type not listed above	<input type="radio"/>	<input type="radio"/>

Display This Question:

If Did you maintain any of the following types of livestock on your property in the last 12 months?... = Other livestock type not listed above [Yes]

Besides adult cattle, calves, sheep, horses, and beehives, what other livestock type did you maintain in the last 12 months?

Please specify the other livestock type below.



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Display This Question:

If Did you maintain any of the following types of livestock on your property in the last 12 months?... = Other livestock type not listed above [Yes]

What is the maximum number of [\\${Q2.3/ChoiceTextEntryValue}](#)¹ you maintain in the last 12 months?

Please enter a number below.

Display This Question:

If Did you maintain any of the following types of livestock on your property in the last 12 months?... = Other livestock type not listed above [Yes]

Do you believe you lost any [\\${Q2.3/ChoiceTextEntryValue}](#)² to wolves, grizzly bears, black bears, or mountain lions in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No

¹ This code automatically populates the respondent's response from the question "Besides adult cattle, calves, sheep, horses, and beehives, what other livestock type did you maintain in the last 12 months?"

² This code automatically populates the respondent's response from the question "Besides adult cattle, calves, sheep, horses, and beehives, what other livestock type did you maintain in the last 12 months?"



Display This Question:

If Do you believe you lost any $\{QID228/ChoiceTextEntryValue\}$ to wolves, grizzly bears, black bears... = Yes

Under each of the following scenarios, how many $\{Q2.3/ChoiceTextEntryValue\}$ ³ do you believe you lost to each of the large predators in the last 12 months?

For example, if 5 of your $\{Q2.3/ChoiceTextEntryValue\}$ ⁴ were confirmed by an official depredation investigator to have been killed by wolves (the first scenario described below), enter "5" in the space provided under the column titled "Wolves." If no livestock were lost to a large predator under a given scenario, please enter "0."

	Wolves	Grizzly bears	Black bears	Mountain lions
An animal was found deceased or lethally injured and was confirmed by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____
An animal was found deceased or lethally injured and was classified "probable" by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____

³ This code automatically populates the respondent's response from the question "Besides adult cattle, calves, sheep, horses, and beehives, what other livestock type did you maintain in the last 12 months?"

⁴ This code automatically populates the respondent's response from the question "Besides adult cattle, calves, sheep, horses, and beehives, what other livestock type did you maintain in the last 12 months?"



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	Wolves	Grizzly bears	Black bears	Mountain lions
--	--------	---------------	-------------	----------------

An animal was found deceased or lethally injured and was **confirmed by an official depredation investigator to have not died because of a large predator**. However, you still believed the death was because of one.

_____	_____	_____	_____
-------	-------	-------	-------

An animal was found deceased or lethally injured but **no investigation took place**. However, you believed the death was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------

An animal went missing, no carcass was found, and you believe the disappearance was because of a large predator.

_____	_____	_____	_____
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Display This Question:

*If Did you maintain any of the following types of livestock on your property in the last 12 months?... =
Adult cattle [Yes]*

What is the maximum number of adult cattle you maintained in the last 12 months?

Please enter a number below.

Display This Question:

*If Did you maintain any of the following types of livestock on your property in the last 12 months?... =
Adult cattle [Yes]*

Do you believe you lost any adult cattle to wolves, black bears, grizzly bears, or mountain lions in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No



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Display This Question:

If Do you believe you lost any adult cattle to wolves, black bears, grizzly bears, or mountain lions... =
Yes

Under each of the following scenarios, how many adult cattle do you believe you lost to each of the large predators in the last 12 months?

For example, if 5 of your calves were confirmed by an official depredation investigator to have been killed by wolves (the first scenario described below), enter "5" in the space provided under the column titled "Wolves." If no livestock were lost to a large predator under a given scenario, please enter "0."

	Wolves	Grizzly bears	Black bears	Mountain lions
An animal was found deceased or lethally injured and was confirmed by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____
An animal was found deceased or lethally injured and was classified "probable" by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____



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	Wolves	Grizzly bears	Black bears	Mountain lions
--	--------	---------------	-------------	----------------

An animal was found deceased or lethally injured and was **confirmed by an official depredation investigator to have not died because of a large predator**. However, you still believed the death was because of one.

_____	_____	_____	_____
-------	-------	-------	-------

An animal was found deceased or lethally injured but **no investigation took place**. However, you believed the death was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------

An animal went missing, no carcass was found, and you believe the disappearance was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------



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Display This Question:

If Did you maintain any of the following types of livestock on your property in the last 12 months?... = Calves [Yes]

What is the maximum head of calves you maintained in the last 12 months?

Please enter a number below.

Display This Question:

If Did you maintain any of the following types of livestock on your property in the last 12 months?... = Calves [Yes]

Do you believe you lost any calves to wolves, black bears, grizzly bears, or mountain lions in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No



Display This Question:

If Do you believe you lost any calves to wolves, black bears, grizzly bears, or mountain lions in th... =
Yes

Under each of the following scenarios, how many calves do you believe you lost to each of the large predators in the last 12 months?

For example, if 5 of your calves were confirmed by an official depredation investigator to have been killed by wolves (the first scenario described below), enter "5" in the space provided under the column titled "Wolves." If no livestock were lost to a large predator under a given scenario, please enter "0."

	Wolves	Grizzly bears	Black bears	Mountain lions
An animal was found deceased or lethally injured and was confirmed by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____
An animal was found deceased or lethally injured and was classified "probable" by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____



	Wolves	Grizzly bears	Black bears	Mountain lions
--	--------	---------------	-------------	----------------

An animal was found deceased or lethally injured and was **confirmed by an official depredation investigator to have not died because of a large predator**. However, you still believed the death was because of one.

_____	_____	_____	_____
-------	-------	-------	-------

An animal was found deceased or lethally injured but **no investigation took place**. However, you believed the death was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------

An animal went missing, no carcass was found, and you believe the disappearance was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------



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Display This Question:

If Did you maintain any of the following types of livestock on your property in the last 12 months?... = Sheep [Yes]

What is the maximum number of sheep you maintained in in the last 12 months?

Please enter a number below.

Display This Question:

If Did you maintain any of the following types of livestock on your property in the last 12 months?... = Sheep [Yes]

Do you believe you lost any sheep to wolves, black bears, grizzly bears, or mountain lions in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No



Display This Question:

If Do you believe you lost any sheep to wolves, black bears, grizzly bears, or mountain lions in the...
= Yes

Under each of the following scenarios, how many sheep do you believe you lost to each of the large predators in the last 12 months?

For example, if 5 of your sheep were confirmed by an official depredation investigator to have been killed by wolves (the first scenario described below), enter "5" in the space provided under the column titled "Wolves." If no livestock were lost to a large predator under a given scenario, please enter "0."

	Wolves	Grizzly bears	Black bears	Mountain lions
An animal was found deceased or lethally injured and was confirmed by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____
An animal was found deceased or lethally injured and was classified "probable" by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____



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	Wolves	Grizzly bears	Black bears	Mountain lions
--	--------	---------------	-------------	----------------

An animal was found deceased or lethally injured and was **confirmed by an official depredation investigator to have not died because of a large predator**. However, you still believed the death was because of one.

_____	_____	_____	_____
-------	-------	-------	-------

An animal was found deceased or lethally injured but **no investigation took place**. However, you believed the death was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------

An animal went missing, no carcass was found, and you believe the disappearance was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------



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Display This Question:

*If Did you maintain any of the following types of livestock on your property in the last 12 months?... =
Horses [Yes]*

What is the maximum number of horses you maintained in the last 12 months?

Please enter a number below.

Display This Question:

*If Did you maintain any of the following types of livestock on your property in the last 12 months?... =
Horses [Yes]*

Do you believe you lost any horses to wolves, black bears, grizzly bears, or mountain lions in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No



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Display This Question:

If Do you believe you lost any horses to wolves, black bears, grizzly bears, or mountain lions in th... =
Yes

Under each of the following scenarios, how many horses do you believe you lost to each of the large predators in the last 12 months?

For example, if 5 of your horses were confirmed by an official depredation investigator to have been killed by wolves (the first scenario described below), enter "5" in the space provided under the column titled "Wolves." If no livestock were lost to a large predator under a given scenario, please enter "0."

	Wolves	Grizzly bears	Black bears	Mountain lions
An animal was found deceased or lethally injured and was confirmed by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____
An animal was found deceased or lethally injured and was classified "probable" by an official depredation investigator to have died because of a large predator.	_____	_____	_____	_____



	Wolves	Grizzly bears	Black bears	Mountain lions
--	--------	---------------	-------------	----------------

An animal was found deceased or lethally injured and was **confirmed by an official depredation investigator to have not died because of a large predator**. However, you still believed the death was because of one.

_____	_____	_____	_____
-------	-------	-------	-------

An animal was found deceased or lethally injured but **no investigation took place**. However, you believed the death was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------

An animal went missing, no carcass was found, and you believe the disappearance was because of a large predator.

_____	_____	_____	_____
-------	-------	-------	-------



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Display This Question:

*If Did you maintain any of the following types of livestock on your property in the last 12 months?... =
Beehives [Yes]*

What is the maximum number of beehives you maintained in the last 12 months?

Please enter a number below.

Display This Question:

*If Did you maintain any of the following types of livestock on your property in the last 12 months?... =
Beehives [Yes]*

Do you believe you lost any beehives to black bears or grizzly bears in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No



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Display This Question:

If Do you believe you lost any beehives to black bears or grizzly bears in the last 12 months? Pleas...
= Yes

How many beehives do you believe you lost to grizzly bears or black bears in the last 12 months?

For example, if 5 of your beehives were destroyed by a black bear, enter "5" in the space provided under the column titled "Black Bears." If no livestock were lost to a large predator, please enter "0."

Black bears

Grizzly bears

Number of beehives lost



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Overall, how would you describe your feelings towards each of the following large predators?

On a scale of 1 to 5 (1 = "Very negative" and 5 = "Very positive"), please select one response that corresponds to your answer. If the large predator is not present in your state or area, select "Not applicable."

	Very negative 1	Somewhat negative 2	Neither negative nor positive 3	Somewhat positive 4	Very positive 5	Not applicable (does not exist in my state or area)
Wolves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grizzly bears	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Black bears	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mountain lions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

For each of the following large predators, what change in their population numbers would you like to see in your state?

On a scale of 1 to 6 (1 = "Completely removed" and 6 = "Increased greatly"), please select the response that corresponds to your answer. If the large predator is not present in your state, select "Not applicable."

	Completely removed 1	Decreased greatly 2	Decreased somewhat 3	Remain the same 4	Increased somewhat 5	Increased greatly 6	Not applicable (does not exist in my state)
Wolves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grizzly bears	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Black bears	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mountain lions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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Which of the following large predators do you believe represents the greatest threat to your livestock?

Please select one.

- ☐ Wolves
- ☐ Black bears
- ☐ Grizzly bears
- ☐ Mountain lions

Please rate your agreement with the following statements concerning [Q2.24/ChoiceGroup/SelectedChoices](#)⁵.

On a scale of 1 to 5 (1 = "Strong disagree" and 5 = "Strongly agree"), please select the response option that corresponds to your answer.

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
They are an important part of the environment.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can reduce risks associated with them by making changes around the areas where I keep livestock.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The way they kill livestock is brutal and cruel.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
They are a serious threat to the livelihoods of livestock producers in my state.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too much government funding gets spent trying to manage them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I wouldn't mind them being around if I was able to lethally remove the ones	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

⁵ This code automatically populates the respondent's response from the question "Which of the following large predators do you believe represents the greatest threat to your livestock?"



	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
causing problems.					
They are a safety risk to people.	O	O	O	O	O
There are some years I don't worry about them causing problems.	O	O	O	O	O

When thinking about [\\${Q2.24/ChoiceGroup/SelectedChoices}](#)⁶, which of the following have you experienced in the last 12 months because of their presence?

Please select all that apply.

- ☐ An increase in monetary costs associated with protecting my livestock.
 - ☐ An increase in overgrazing of some areas due to large predator pressure.
 - ☐ An increase in time spent on managerial activities (for example, hiring staff or financial planning).
 - ☐ An increase in negative ecological effects on your property due to the decline in other wildlife species.⁷
 - ☐ A decline in human health due to worry or psychological demands.
 - ☐ A decline in other wildlife-related damage on your property (for example, less hay eaten by elk).
 - ☐ A decline in wildlife carrion or carcasses on your property.
 - ☐ Other (*please specify below*):
-

⁶ This code automatically populates the respondent's response from the question "Which of the following large predators do you believe represents the greatest threat to your livestock?"

⁷ This survey item was highlighted as being an important consideration in previous research. Without prompting respondents, this survey item will help us to understand if respondents believe the presence of large predators on their operation is causing a trophic cascade (indirect interaction in an ecosystem where a change at one trophic level causes a ripple effect that impacts multiple levels below it) including negative impacts on desired wildlife (e.g., depredation of deer or turkey) and the local ecosystem landscape.



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Did you or Wildlife Services use any of the following predator damage management methods or tools on your livestock operation **in the last 12 months to manage wolves, black bears, grizzly bears, or mountain lions** (*not coyotes*)?

Please select "Yes" or "No" for each method or tool.

	Yes	No
Fladry (flags strung along a line of rope that may be electrified)	<input type="radio"/>	<input type="radio"/>
Predator exclusion fencing (tall, firmly fixed fencing with ground skirting or aprons)	<input type="radio"/>	<input type="radio"/>
Electric fencing (portable, high voltage fencing that may be set up for semi-permanent use)	<input type="radio"/>	<input type="radio"/>
Range riders (persons on horseback or ATVs who ride along with livestock herds, often in rough terrain or off-road environments, to reduce livestock-predator interactions)	<input type="radio"/>	<input type="radio"/>
Livestock guardian dogs	<input type="radio"/>	<input type="radio"/>
Lethal removal (for example, ground shooting or trapping/killing)	<input type="radio"/>	<input type="radio"/>



Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Fladry (flags strung along a line of rope that may be electrified) [Yes]

Did Wildlife Services provide supplies, funding, or physical support toward implementing **fladry** on your livestock operation in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No
- ☐ Unsure

Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Fladry (flags strung along a line of rope that may be electrified) [Yes]

How effective do you believe the **fladry** was in the last 12 months?

Effectiveness refers to how well fladry helped protect your livestock from large predators.

On a scale of 1 to 5 (1 = "Not at all effective" and 5 = "Extremely effective"), please select the response that corresponds to your answer.

- ☐ Not at all effective 1
- ☐ Slightly effective 2
- ☐ Moderately effective 3
- ☐ Very effective 4
- ☐ Extremely effective 5



Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Fladry (flags strung along a line of rope that may be electrified) [Yes]

How *feasible* do you believe **fladry** was to implement on your livestock operation in the last 12 months?

Feasibility refers to how practical it was for you and your staff to use and maintain fladry on your livestock operation.

On a scale of 1 to 5 (1 = "Not at all feasible" and 5 = "Extremely feasible"), please select the response that corresponds to your answer.

- ☐ Not at all feasible 1
- ☐ Slightly feasible 2
- ☐ Moderately feasible 3
- ☐ Very feasible 4
- ☐ Extremely feasible 5

How interested are you in using **fladry** on your livestock operation in the *next* 12 months?

On a scale of 1 to 5 (1 = "Not at all interested" and 5 = "Extremely interested"), please select the response that corresponds to your answer.

- ☐ Not at all interested 1
- ☐ Slightly interested 2
- ☐ Moderately interested 3
- ☐ Very interested 4
- ☐ Extremely interested 5

What were your reasons for using *or* not using **fladry** on your operation in the last 12 months?
Please explain below:



Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Predator exclusion fencing** (tall, firmly fixed fencing with ground skirting or aprons) [Yes]*

Did Wildlife Services provide supplies, funding, or physical support toward implementing **predator exclusion fencing** on your livestock operation in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No
- ☐ Unsure

Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Predator exclusion fencing** (tall, firmly fixed fencing with ground skirting or aprons) [Yes]*

How *effective* do you believe **predator exclusion fencing** was in the last 12 months?

Effectiveness refers how well predator exclusion fencing helped protect your livestock from large predators.

On a scale of 1 to 5 (1 = "Not at all effective" and 5 = "Extremely effective"), please select the response that corresponds to your answer.

- ☐ Not at all effective 1
- ☐ Slightly effective 2
- ☐ Moderately effective 3
- ☐ Very effective 4
- ☐ Extremely effective 5



Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Predator exclusion fencing** (tall, firmly fixed fencing with ground skirting or aprons) [Yes]*

How *feasible* do you believe **predator exclusion fencing** was to implement on your livestock operation in the last 12 months?

Feasibility refers to how practical it was for you and your staff to use and maintain predator exclusion fencing on your livestock operation.

On a scale of 1 to 5 (1 = "Not at all feasible" and 5 = "Extremely feasible"), please select the response that corresponds to your answer.

- ☐ Not at all feasible 1
- ☐ Slightly feasible 2
- ☐ Moderately feasible 3
- ☐ Very feasible 4
- ☐ Extremely feasible 5

How interested are you in using **predator exclusion fencing** on your livestock operation in the *next* 12 months?

On a scale of 1 to 5 (1 = "Not at all interested" and 5 = "Extremely interested"), please select the response that corresponds to your answer.

- ☐ Not at all interested 1
- ☐ Slightly interested 2
- ☐ Moderately interested 3
- ☐ Very interested 4
- ☐ Extremely interested 5

What were your reasons for using *or* not using **predator exclusion fencing** on your operations in the last 12 months? *Please explain below:*



Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Electric fencing** (portable, high voltage fencing that may be set up for semi-permanent use) [Yes]*

Did Wildlife Services provide supplies, funding, or physical support toward implementing **electric fencing** on your livestock operation in the last 12 months?

Please select one.

- ☐ Yes
- ☐ No
- ☐ Unsure

Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Electric fencing** (portable, high voltage fencing that may be set up for semi-permanent use) [Yes]*

How *effective* do you believe **electric fencing** was in the last 12 months?

Effectiveness refers to how well electric fencing helped protect your livestock from large predators.

On a scale of 1 to 5 (1 = "Not at all effective" and 5 = "Extremely effective"), please select the response that corresponds to your answer.

- ☐ Not at all effective 1
- ☐ Slightly effective 2
- ☐ Moderately effective 3
- ☐ Very effective 4
- ☐ Extremely effective 5



Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Electric fencing** (portable, high voltage fencing that may be set up for semi-permanent use) [Yes]*

How *feasible* do you believe **electric fencing** was to implement on your livestock operation in the last 12 months?

Feasibility refers to how practical it was for you and your staff to use and maintain electric fencing on your livestock operation.

On a scale of 1 to 5 (1 = "Not at all feasible" and 5 = "Extremely feasible"), please select the response that corresponds to your answer.

- ☐ Not at all feasible 1
- ☐ Slightly feasible 2
- ☐ Moderately feasible 3
- ☐ Very feasible 4
- ☐ Extremely feasible 5

How interested are you in using **electric fencing** on your livestock operation in the *next* 12 months?

On a scale of 1 to 5 (1 = "Not at all interested" and 5 = "Extremely interested"), please select the response that corresponds to your answer.

- ☐ Not at all interested 1
- ☐ Slightly interested 2
- ☐ Moderately interested 3
- ☐ Very interested 4
- ☐ Extremely interested 5

What were your reasons for using or not using **electric fencing** on your operations in the last 12 months? *Please explain below:*



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Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Range riders** (persons on horseback or ATVs who ride along with livestock herds, often in rough terrain or off-road environments, to reduce livestock-predator interactions) [Yes]*

Was the **range rider(s)** who worked on your operation in the last 12 months provided by or paid for (partially or entirely) by Wildlife Services?

Please select one.

- ☐ Yes
- ☐ No
- ☐ Unsure

Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Range riders** (persons on horseback or ATVs who ride along with livestock herds, often in rough terrain or off-road environments, to reduce livestock-predator interactions) [Yes]*

How *effective* do you believe **range riders** were in the last 12 months?

Effectiveness refers to how well range riders helped protect your livestock from large predators.

On a scale of 1 to 5 (1 = "Not at all effective" and 5 = "Extremely effective"), please select the response that corresponds to your answer.

- ☐ Not at all effective 1
- ☐ Slightly effective 2
- ☐ Moderately effective 3
- ☐ Very effective 4
- ☐ Extremely effective 5



Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Range riders (persons on horseback or ATVs who ride along with livestock herds, often in rough terrain or off-road environments, to reduce livestock-predator interactions) [Yes]

How *feasible* do you believe it was to use **range riders** on your livestock operation in the last 12 months?

Feasibility refers to how practical it was for you and your staff to use range riding on your livestock operation.

On a scale of 1 to 5 (1 = "Not at all feasible" and 5 = "Extremely feasible"), please select the response that corresponds to your answer.

- ☐ Not at all feasible 1
- ☐ Slightly feasible 2
- ☐ Moderately feasible 3
- ☐ Very feasible 4
- ☐ Extremely feasible 5

How interested are you in using **range riders** on your livestock operation in the *next* 12 months?

On a scale of 1 to 5 (1 = "Not at all interested" and 5 = "Extremely interested"), please select the response that corresponds to your answer.

- ☐ Not at all interested 1
- ☐ Slightly interested 2
- ☐ Moderately interested 3
- ☐ Very interested 4
- ☐ Extremely interested 5

What were your reasons for using or not using **range riders** on your operations in the last 12 months? *Please explain below:*



Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Livestock guardian dogs** [Yes]*

Was the **livestock guardian dog(s)** used on your operation in the last 12 months provided by Wildlife Services?

Please select one.

- ☐ Yes
- ☐ No
- ☐ Unsure

Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Livestock guardian dogs** [Yes]*

How *effective* do you believe **livestock guardian dogs** were in the last 12 months?

Effectiveness refers to how well livestock guardian dogs helped protect your livestock from large predators.

On a scale of 1 to 5 (1 = "Not at all effective" and 5 = "Extremely effective"), please select the response that corresponds to your answer.

- ☐ Not at all effective 1
- ☐ Slightly effective 2
- ☐ Moderately effective 3
- ☐ Very effective 4
- ☐ Extremely effective 5



Display This Question:

*If Did you or Wildlife Services use any of the following predator damage management methods or tools... = **Livestock guardian dogs** [Yes]*

How *feasible* do you believe it was to use **livestock guardian dogs** on your livestock operation in the last 12 months?

Feasibility refers to how practical it was for you and your staff to use and maintain livestock guardian dogs on your livestock operation.

On a scale of 1 to 5 (1 = "Not at all feasible" and 5 = "Extremely feasible"), please select the response that corresponds to your answer.

- ☐ Not at all feasible 1
- ☐ Slightly feasible 2
- ☐ Moderately feasible 3
- ☐ Very feasible 4
- ☐ Extremely feasible 5

How interested are you in using **livestock guardian dogs** on your livestock operation in the *next* 12 months?

On a scale of 1 to 5 (1 = "Not at all interested" and 5 = "Extremely interested"), please select the response that corresponds to your answer.

- ☐ Not at all interested 1
- ☐ Slightly interested 2
- ☐ Moderately interested 3
- ☐ Very interested 4
- ☐ Extremely interested 5

What were your reasons for using *or* not using **livestock guardian dogs** on your operations in the last 12 months? *Please explain below:*



Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Lethal removal (for example, ground shooting or trapping/killing) [Yes]

For which of the following large predators did you use **lethal removal** in the last 12 months? Please select all that apply.

- ☐ Wolves
- ☐ Black bears
- ☐ Grizzly bears
- ☐ Mountain lions
- ☐ I did not use lethal removal for any large predator listed above

Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Lethal removal (for example, ground shooting or trapping/killing) [Yes]

Did Wildlife Services provide supplies, funding, or physical support toward the **lethal removal** of large predators on your livestock operation in the last 12 months? Please check one.

- ☐ Yes
- ☐ No
- ☐ Unsure

Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Lethal removal (for example, ground shooting or trapping/killing) [Yes]

How *effective* do you believe **lethal removal** was in the last 12 months?

Effectiveness refers to how well lethal removal helped protect your livestock from large predators.

On a scale of 1 to 5 (1 = "Not at all effective" and 5 = "Extremely effective"), please select the response that corresponds to your answer.

- ☐ Not at all effective 1
- ☐ Slightly effective 2
- ☐ Moderately effective 3
- ☐ Very effective 4
- ☐ Extremely effective 5



Display This Question:

If Did you or Wildlife Services use any of the following predator damage management methods or tools... = Lethal removal (for example, ground shooting or trapping/killing) [Yes]

How *feasible* do you believe it was to use **lethal removal** on your livestock operation in the last 12 months?

Feasibility refers to how practical it was for you and your staff to lethally remove large predator(s) from your livestock operation.

On a scale of 1 to 5 (1 = "Not at all feasible" and 5 = "Extremely feasible"), please select the response that corresponds to your answer.

- ☐ Not at all feasible 1
- ☐ Slightly feasible 2
- ☐ Moderately feasible 3
- ☐ Very feasible 4
- ☐ Extremely feasible 5

How interested are you in using **lethal removal** on your livestock operation in the *next* 12 months?

On a scale of 1 to 5 (1 = "Not at all interested" and 5 = "Extremely interested"), please select the response that corresponds to your answer.

- ☐ Not at all interested 1
- ☐ Slightly interested 2
- ☐ Moderately interested 3
- ☐ Very interested 4
- ☐ Extremely interested 5

What were your reasons for using or not using **lethal removal** on your operations in the last 12 months? *Please explain below:*



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Before Wildlife Services provided you with nonlethal predator damage management assistance, how interested were you in using nonlethal predator damage management methods on your livestock operation?

On a scale of 1 to 5 (1 = "Not at all interested before" and 5 = "Extremely interested before"), please select the response that corresponds to your answer.

- ☐ Not at all interested before 1
- ☐ Slightly interested before 2
- ☐ Moderately interested before 3
- ☐ Very interested before 4
- ☐ Extremely interested before 5

After receiving nonlethal predator damage management assistance from Wildlife Services, how interested were you in continuing to use nonlethal predator damage management methods on your livestock operation?

On a scale of 1 to 5 (1 = "Not at all interested after" and 5 = "Extremely interested after"), please circle the number that corresponds to your answer.

- ☐ Not at all interested after 1
- ☐ Slightly interested after 2
- ☐ Moderately interested after 3
- ☐ Very more interested after 4
- ☐ Extremely interested after 5



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If you were choosing between a lethal predator damage management method and a nonlethal predator damage management method that were **equally effective** at protecting your livestock, how much more would you be willing to pay to use the **nonlethal** method?

Please select one.

- ☐ I wouldn't pay more because I prefer lethal predator damage management.
- ☐ I wouldn't pay more because I don't have any preference between lethal and nonlethal predator damage management.
- ☐ I prefer nonlethal to lethal predator damage management, but I wouldn't be willing to pay more for it.
- ☐ I would pay up to \$_____ more per year for the nonlethal predator damage management method. (*please specify the dollar amount below*):

If Wildlife Services were no longer able to provide you with any **nonlethal** predator damage management assistance, which of the following methods (if any) would you choose to use at your own expense?

Please select the appropriate response for each nonlethal method.

	Already using at own expense	Would use at own expense	Would <u>not</u> use at own expense
Fladry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Predator exclusion fencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electric fencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Range riders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Livestock guardian dogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other method not listed (<i>please specify below</i>):	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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Please rate your agreement with the following statements concerning your perceptions of Wildlife Services.

On a scale of 1 to 5 (1 = "Strong disagree" to 5 = "Strongly agree"), please select the response that corresponds to your answer.

	Strongly disagree 1	Somewhat disagree 2	Neither agree nor disagree 3	Somewhat agree 4	Strongly agree 5
WS staff treat me fairly.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WS staff are honest with me about predator damage management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WS staff listen to me when discussing predator damage management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I trust WS staff to act in my best interest when it comes to predator damage management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I expect that WS will make the right decisions regarding predator damage management.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am confident that WS will do a good job helping me protect my livestock from predators.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WS is operated by employees who possess the technical expertise necessary to manage predators.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
WS staff are more experienced at managing predators than other natural resources professionals.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



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Are there other nonlethal predator damage management methods you think Wildlife Services should use?

Please select one.

- ☐ Yes (*please specify the method(s) below and describe why you think they should be used*): _____
- ☐ No

The following demographic information will be used to help us make general conclusions about producers who received nonlethal predator damage management assistance from Wildlife Services. As a reminder, your responses remain strictly confidential.

What is the ZIP code of your primary residence?

Please enter your 5-digit ZIP code below, such as "85763"

Approximately what percent of the land where you keep livestock is owned by you or your family?

Please enter a number below.

In what year were you born?

Please enter your 4-digit birth year below, such as "1991"



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What is your race and/or ethnicity?⁸

Please select all that apply.

- ☐ American Indian or Alaska Native
- ☐ Asian
- ☐ Black or African American
- ☐ Hispanic or Latino
- ☐ Middle Eastern or North African
- ☐ Native Hawaiian or Pacific Islander
- ☐ White

What is the highest level of education you have obtained?

Please select one.

- ☐ Did not graduate high school or receive GED
- ☐ High school diploma or GED
- ☐ Some college, no degree
- ☐ Associate degree
- ☐ Trade/technical/vocational training
- ☐ Bachelor's degree
- ☐ Graduate or professional degree

If you have any comments you would like to leave about this survey, please write them below:

THANK YOU FOR YOUR PARTICIPATION!

⁸ Figure 3 of the SPD15 Gold Standard was selected for this study for 3 reasons: (1) to reduce burden time on the respondents; (2) respondents are more likely to respond to a simpler demographic questions such as Figure 3 than a complex question such as Figure 1 and 2; and (3) questions such as Figure 1 and Figure 2 are logistically difficult to build in cloud-based experience management platforms, such as Qualtrics which will be used by this study to develop an electronic multi-item questionnaire.