

MANAGING PREDATION

Drew Ricketts – Wildlife Specialist

OUTLINE

- Livestock Predation Statistics
- Mortality Investigation/Predator ID
- Preventing Predation
- Lethal Control

THINK H.E.R.

- Habitat modification
 - Remove food, cover and water
- Exclusion
 - Repellents or fences
- Removal
 - Dead or alive



LIVESTOCK PREDATION

Predator Species	% US Attacks Sheep	% KS Attacks Sheep	% US Attacks Lambs	% KS Attacks Lambs	% US Attacks Cattle	% KS Attacks Cattle	% US Attacks Calves	% KS Attacks Calves
All (% loss due to predation)	33	13	40	24	2.4	0.2	11	4.7



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Source: NASS Cattle Death Loss 2016; NASS Sheep Death Loss 2020; NASS Goat Death Loss 2015

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All (% loss due to predation)	33	13	40	24	2.4	0.2	11	4.7
Coyote	47	72	59	46	40.5	68.2	53.1	84.4

- \$126,000 burden to KS goat producers
- \$625,000 burden to KS sheep producers
- \$4 M burden to KS cattle producers

* No confirmed predation on livestock by mountain lion in KS during modern times

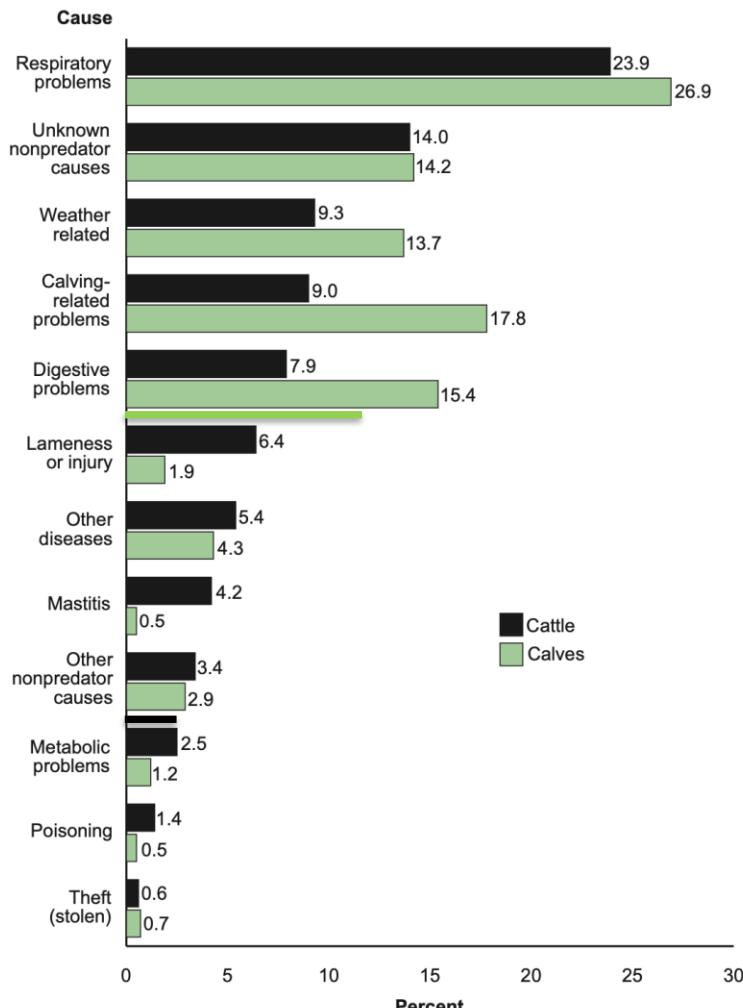


Source: NASS Cattle Death Loss 2016; NASS Sheep Death Loss 2020; NASS Goat Death Loss 2015

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CAUSES OF MORTALITY

Percentage of cattle and calves death loss due to nonpredator causes, by cause

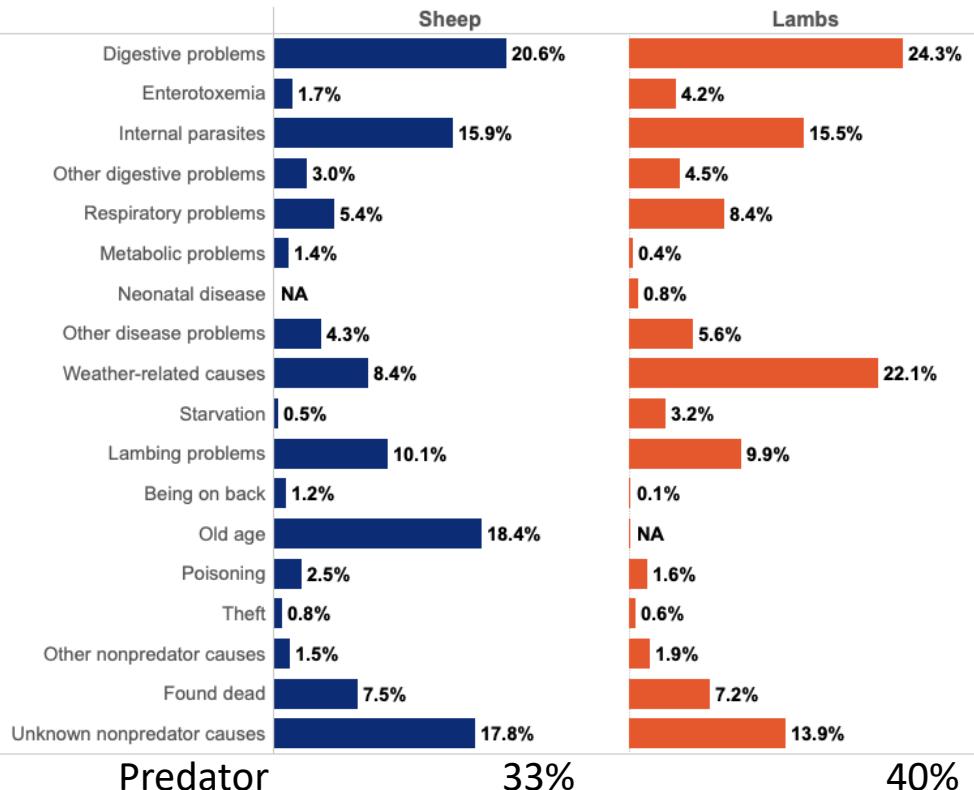


Predator Cattle: 2.4%

Percent

Calves: 11%

Percentage of nonpredator death loss in sheep and lambs in 2019, by nonpredator cause



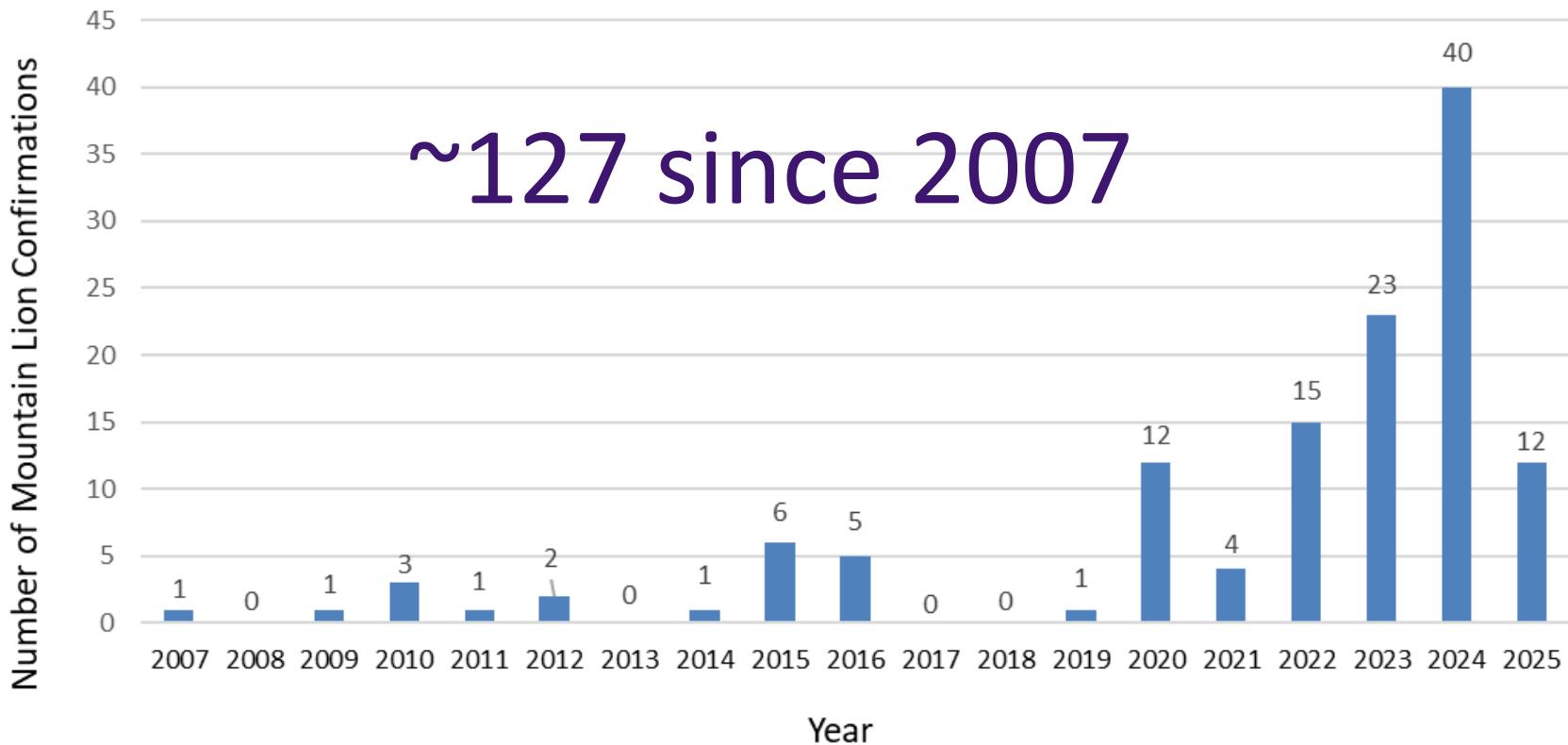
Predator

33%

40%

MOUNTAIN LIONS IN KS

Mountain Lion Confirmation in Kansas since 2007



PREDATION OR SCAVENGING???

- First step is to determine cause of death



CAUSES OF MORTALITY

- Starvation
- Exposure
- Parasites
- Disease
- Bloat
- Poisonous plants
- Lightning



H.E.R.

LIVESTOCK LOSSES



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EVIDENCE OF PREDATION

- Facts from carcass remains
- Blood on soil and vegetation
- Tracks, scat and territorial markings near dead animal
- Carnivores observed in area
- Disappearance of young or small livestock
- Unusual livestock behavior

FACTS ON CARCASSES



FACTS ON CARCASSES



FACTS ON CARCASSES



FACTS ON CARCASSES



BLOOD



COYOTE PREDATION



- Attack focused on neck/throat in small ruminants
- Some attacks are unsuccessful – coyotes don't always hunt in groups



COYOTE PREDATION



- Attack focused on hind-quarters
- Tail may be removed
- Sometimes attack rostrum



- Additional sign often needed to rule out dog

DOG PREDATION



- Wounds on legs, concentrated on back end



- Apparently run to exhaustion

DOG PREDATION



- Face mutilated, lack of feeding
- Tracks or scat may be needed to distinguish from coyote damage

DOG PREDATION



- Mutilation without killing relatively small calf
- Limited feeding, if any

DOG PREDATION



- Livestock run to exhaustion
- Struggles evident
- Ears chewed

- Lack of feeding

DOG PREDATION



DOG PREDATION

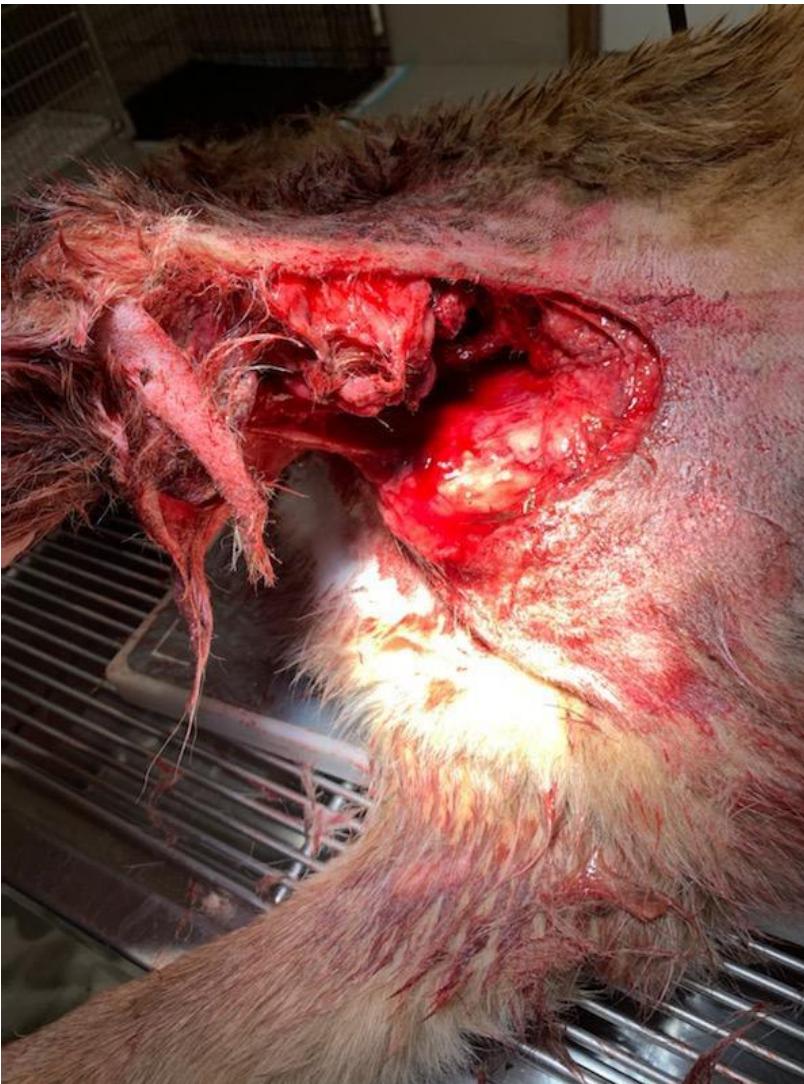
- Abrasions from canine teeth often confused with large claw marks



DOG PREDATION



DOG PREDATION



- Ragged wounds
- Victim survives



- Wounds not focused

MOUNTAIN LION PREDATION

Large
Canine
Punctures
to Throat



Massive
trauma to
throat
including
sub-
cutaneous
bleeding



Hair neatly plucked prior to
consumption

MOUNTAIN LION PREDATION

Prey remains cached, and covered with loose debris



FENCE/HARDWARE



PREDATOR ID:



VULTURES

Black Vulture Turkey Vulture



PREDATOR CONTROL

- Current focus is an integrated approach
 - Non-lethal prevention strategies
 - Lethal control

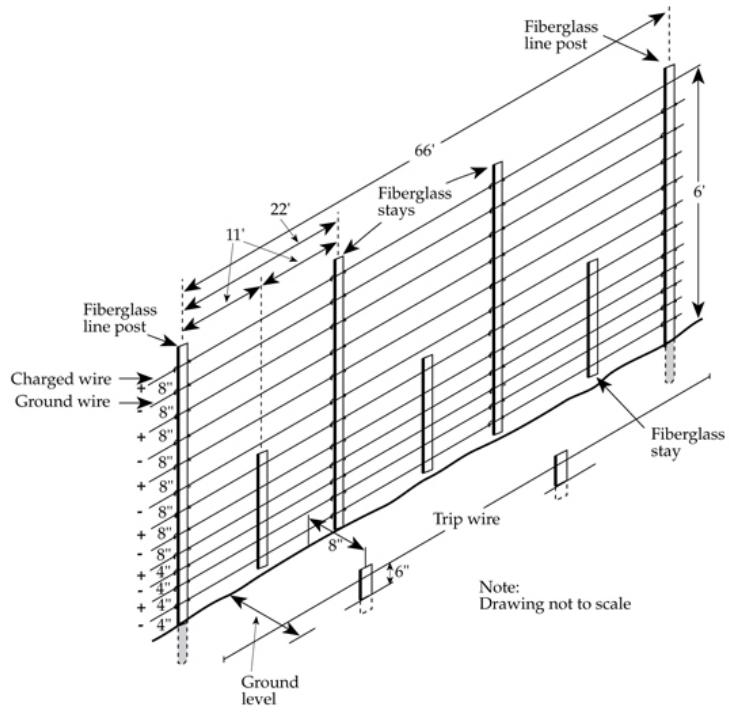


Fig. 4. High-tensile, electric, antipredator fence.



PREVENTION – GUARDIAN ANIMALS

- Used by 26% of cattle producers in 2015



PREVENTION – EXCLUSION

- Fencing (used by 15.5 % of cattle producers in 2015)
 - Woven wire
 - Ideal: 4"x6" (HxW) or less and at least 5.5' high
 - Barbed or electrified wire above can prevent climbing
 - Buried apron prevents digging under

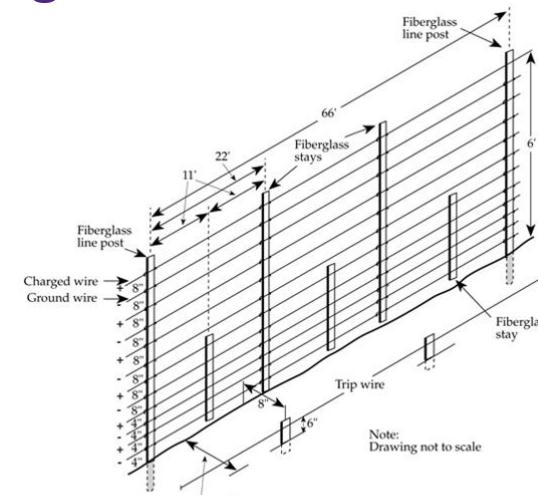
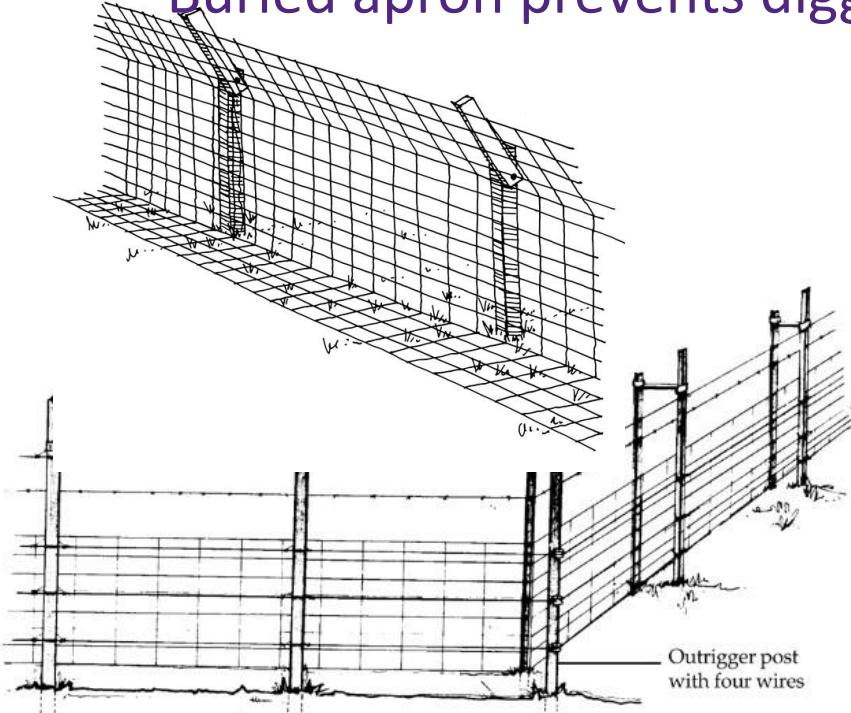


Fig. 4. High-tensile, electric, antipredator fence.

PREVENTION – EXCLUSION



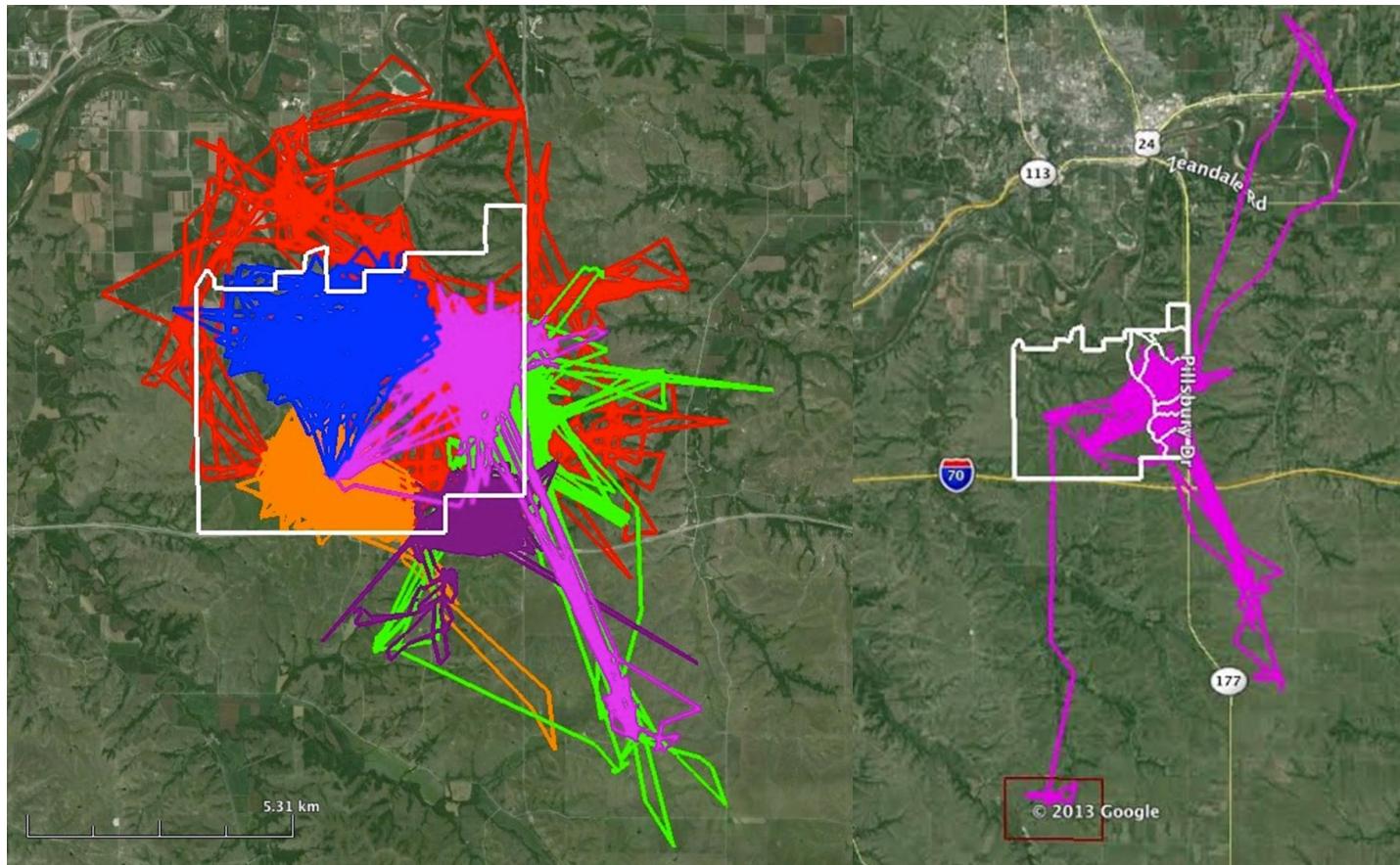
PREVENTION – EXCLUSION

- Fencing
 - Temporary electric



PREVENTION – DEAD LIVESTOCK

- Remove Dead Livestock (~5% operations)
- Vulnerable animals far from carcasses



PREVENTION – DEAD LIVESTOCK



ATN 209yd
05-21-14/06:52 AM

PREVENTION – DEAD LIVESTOCK



PREVENTION – HAZING



LETHAL CONTROL

- KSA 32-1002
- Does not prevent owners or legal occupants of land from killing any animals when found in or near buildings on their premises or when destroying property, subject to the following:
 - The provisions of all federal laws and regulations governing protected species
 - it is unlawful to use, or possess with intent to use, any such animal so killed unless in accordance with regulations of the secretary
 - such owners or legal occupants shall make reasonable efforts to alleviate their problems with any such animals before killing them.

LETHAL CONTROL – BLACK VULTURES

- Must get permit
- Shooting limited number of problem birds
- Use to produce effigies

USDA Animal and Plant Health Inspection Service
U.S. DEPARTMENT OF AGRICULTURE

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⚠ USDA FAQ's and resources about coronavirus (COVID-19). [LEARN MORE](#)

Wildlife Damage / Operational Activities

Wildlife Damage
Contact Us
Program Overview
News and Announcements
Protected Resources
Operational Activities
National Programs
Program Directives
Reports and Publications
APHIS Employees

Migratory Bird Depredation Permit Process

Last Modified: Feb 14, 2022

The U.S. Fish and Wildlife Service issues Federal Migratory Bird Depredation Permits to individuals and entities for lethal take of Migratory Birds when conditions warrant. This take can include any migratory birds except for eagles and threatened and endangered species. These permits designate the species, methods, and the number of birds that may be taken, and are only valid for the individuals named on the permits, permit locations, and dates of the permit. Applicants who apply for a Migratory Bird Depredation Permit must apply to the U.S. Fish and Wildlife Service Regional Office. The application process involves the following steps:

Step 1. Contact USDA Wildlife Services for technical assistance.
Step 2. If a permit is justified, a USDA biologist will issue a WS Form 37 to the requestor.
Step 3. The requestor must submit a permit application to the U.S. Fish and Wildlife Service including the form 37 and a permit application fee.

WS Form 37 and USDA's Role in the Permit Process
Although the USDA Wildlife Services Program is not a regulatory program, we have a role in some regulatory processes. Wildlife Services biologists conduct damage evaluations to provide information to the U.S. Fish and Wildlife Service and the state wildlife agency as part of their permit processes. WS provides technical assistance to callers with migratory bird conflicts. In some cases, lethal take may be required to resolve these issues or resolve the conflicts (i.e., lethal depredation). In such cases, WS biologists complete an evaluation form (Form 37) that describes the incident and documents our recommendations for management options. When lethal take is recommended, those forms are forwarded by the applicant with applications and application fee for Federal Migratory Bird Depredation Permits.

[Click here](#) for the Migratory Bird Depredation Permit Application.

[Click here](#) for more about FWS permits and the Federal laws and Treaties that relate to migratory birds.

[Return to top](#)

[Clear Form](#)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB control number. This information collection is 0579-0335, the time required to complete it is 01 hours, it is being used to collect information from the public, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

OMB Approved
0579-0335
EXP: 09/2022

UNITED STATES DEPARTMENT OF AGRICULTURE ANIMAL AND PLANT HEALTH INSPECTION SERVICE WILDLIFE SERVICES		USFWS MIGRATORY BIRD PERMIT APPLICATION OR REVIEW	
1. REQUESTER INFORMATION		2. LOCATION OF DAMAGE	
A. NAME AND ADDRESS		A. LOCATION	
B. TELEPHONE HOME C. FAX OR EMAIL WORK		B. COUNTY C. STATE	
3. RESOURCE/DAMAGE ESTIMATE (specify if that applies) A. RESOURCES DAMAGED B. NATURAL RESOURCES C. PROPERTY		C. DESCRIPTION OF DAMAGE	
B. LIST SPECIFIC RESOURCES			
4. MIGRATORY BIRD SPECIES		5. PERMIT RECOMMENDATION	
A. DEPREDATING SPECIES B. NUMBER INVOLVED		A. TAKE RECOMMENDATION B. NUMBER RECOMMENDED C. METHODS	
(1)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
(2)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
(3)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
(4)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
(5)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
(6)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
(7)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
(8)		<input type="checkbox"/> YES <input type="checkbox"/> NO	
<input type="checkbox"/> Continued on reverse			
6. ACTIONS			
A. PREVIOUS ACTIONS TO ADDRESS PROBLEM AND RESULTS OF THOSE ACTIONS			
B. COMMENTS			
7. RECOMMENDED ACTIONS			
<input type="checkbox"/> HARASSMENT <input type="checkbox"/> HABITAT ALTERATION <input type="checkbox"/> HUSBANDRY <input type="checkbox"/> EXCLUSION <input type="checkbox"/> LETHAL TRAPPING <input type="checkbox"/> CHEMICAL REPELLENT <input type="checkbox"/> CAPTURE AND RELOCATION <input type="checkbox"/> EGGS/NEST DESTRUCTION <input type="checkbox"/> SHOOTING <input type="checkbox"/> OTHER			
A. WS INVESTIGATOR NAME AND CONTACT INFORMATION		B. WS INVESTIGATOR SIGNATURE	
TELEPHONE NUMBER EMAIL ADDRESS		B. DATE OF INVESTIGATION (use this date as MS entry date)	
WS FORM 37 APR 2018			



LETHAL CONTROL

- Targeted removal
 - Goal is to remove offending coyotes
 - Alpha pairs often responsible
 - Coyotes with pups increase problems
 - Is less expensive
 - Low impact to non-target species
 - More common approach used today



EFFECTIVENESS OF SELECTIVE REMOVAL

- No relationship between number of coyotes removed and subsequent sheep kills
- Dominant breeding coyotes whose territories overlap sheep pastures with lambs responsible for most predation
 - 1 male responsible for 71% of kills
- Selective removal of one or both alpha coyotes effectively stopped predation

LETHAL CONTROL

- Targeted removal
 - Trapping
 - Snaring
 - Calling & shooting



OPEN CARRY



CONCEALED CARRY



QUESTIONS?

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Facebook: KSRE Wildlife Management (@ksrewildlife)



FINS, FUR AND FEATHERS



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