



**HUMAN WILDLIFE CONFLICT WORKING GROUP**  
**MEETING MINUTES**

**Chair: Brian Wakeling (Montana)**  
**Vice-Chair: Doug Brimeyer (Wyoming)**

**Thursday, March 17th, 2022\***  
**10:00 AM – 12:00 PM (PST)**  
**87<sup>th</sup> North American Wildlife and Natural Resources Conference**

**Agenda**

- Call to Order/Review Agenda/Introductions (B. Wakeling/D. Brimeyer)
- Approval of HWC WG Minutes from the AFWA Annual Meeting (B. Wakeling)
- Potential to develop, conduct and fund a national survey on how agencies manage and fund wildlife conflicts (B. Wakeling)
- Report on progress toward the development of peer reviewed publications on human-wildlife conflicts (B. White)
- USDA-APHIS-Wildlife Services (Janet Bucknall)
- Berryman Institute: Update on “Managing Cougars in North America” (Terry Messmer)
- Development of an AFWA document on “humane dispatch of wildlife by agency personnel” (Colin Gillin, Tom DeLiberto)
- Grizzly bear population growth and distribution (Dan Thompson)
- Development of an AFWA document on “humane dispatch of wildlife by agency personnel” (Colin Gillin, Tom DeLiberto)
- Update on USGS National Climate Adaptation Science Center: Impacts of Climate Change to Wildlife Conflicts (Kate Malpeli)
- Other topics of interest
- Roundtable: State/Federal/Tribal/Provincial/Regional Associations/AFWA Members  
*One representative per agency highlights a couple of human wildlife conflict issues*
- Wrap-up Discussion and Assignments for Next Meeting (B. Wakeling/D. Brimeyer)

## **Minutes**

- **Call to Order/Review Agenda/Introductions (B. Wakeling/D. Brimeyer)**
  - Chairman Wakeling called the meeting to order
  - No agenda adjustments were requested
  - 85 individual's attendee the meeting in-person and virtually combined
  
- **Approval of HWC WG Minutes from the AFWA Annual Meeting (B. Wakeling)**
  - A motion was made to approve the Minutes of the previous meeting. The motion was seconded and passed.
  
- **Potential to develop, conduct and fund a national survey on how agencies manage and fund wildlife conflicts (B. Wakeling)**
  - The HWCWG intends to develop a survey of AFWA states to determine what the challenges may be and the priority of those challenges more broadly. The group will submit an application to receive a grant through the Multistate Conservation Grant Program.
  
- **Report on progress toward the development of peer reviewed publications on human-wildlife conflicts (B. White) [https://digitalcommons.usu.edu/hwi\\_monographs/](https://digitalcommons.usu.edu/hwi_monographs/)**
  - Urban Coyotes
  - First draft work is still ongoing, but a thoroughly reviewed and edited version should be available before September. This draft will be circulated among HWCWG and WRP membership review. The HWCWG intends to request approval from WRP and to move ahead with publication, probably in the Human Wildlife Interactions/Berryman Institute Monograph Series as with the previous urban black bear and urban deer conflict papers.
  
- **USDA-APHIS-Wildlife Services (Janet Bucknall)**
  - Janet Bucknall (USDA-AHPIS-WS, Deputy Administrator) and Jason Suckow (National Wildlife Research Center, Director) provided a detailed briefing.
  - Surveillance for SARS-COV2 in wildlife continues
  - The National Wildlife Services Advisory Committee provides recommendations about how to conduct efforts and what projects to prioritize. A solicitation for members will appear in the Federal Register
  - Dr. Dana Cole now leads the Feral Swine Damage Management Program, which is active in 37 states and territories
  - The new budget will increase funding for CWD research, feral swine damage management, new funds for the development of BMPs for trapping, black bird damage on sunflowers, non-lethal methods for predation control and disease control
  - There was a change in the status of the gray wolf on February 10, 2022 (some populations relisted), but this did not affect populations in Idaho, Wyoming and Montana; but the Great Lakes DPS was listed. In Wisconsin non-lethal methods will be required, however, lethal methods can still be used for human safety. In Minnesota management will operate under the 4D rule (for threatened species).
  - American Rescue Plan will provide \$300 million for surveillance of SARS-COV2 in wildlife populations and zoonotic diseases in wildlife that can affect humans. So far samples for SARS-COV2 in deer populations have been collected from 27 states to determine broadscale exposure.

- HPAVI- high pathogenic avian influenza has been found in all 4 flyways which potentially impact wild birds (waterfowl, raptors, shorebirds, etc.) Some domestic flocks have been depopulated. Early detection occurred in wild birds in January, domestics in February.
  - Chronic Wasting Disease: Wildlife Services conducts surveillance for CWD in partnership with other agencies. Have developed a CWD task force. Will produce a state of the problem report and literature review.
  - The Cooperative Agreement program will deliver \$10 million for cervid projects for CWD work. Will collaborate with various universities on vectors for CWD (scavengers) to determine spread and early detection.
  - Currently working to fill the Project Leader position (Julie Young) at the Predator Research Center in Melville, Utah.
- **Berryman Institute: Update on “Managing Cougars in North America” (Terry Messmer)**
    - Highlights of the report included news on several workshops and symposiums, including the 6<sup>th</sup> International Human Bear Conflict Conference (October 16-20, 2022 in Lake Tahoe, Nevada), Cougar Workshop (April 4-7), Wild Pig Conference (June 6-10), Free Roaming Equid Summit (October 12-14).
    - The Berryman Institute is also publishing the second edition of Managing Cougars in North America for WAFWA. All chapters have been submitted and reviewed. Expect final acceptance in March. Book should be available by mid-June 2022.
- **Grizzly bear population growth and distribution (Dan Thompson)**
    - Wyoming spends between \$300,000 - \$500,000 on GB damage compensation and prevention per annum. 1.5 million on GB conservation. Cattle are the biggest depredation issue. Relocations are difficult because suitable habitat is already saturated. Approximately 70 GBs are radio marked currently. A 34 year old male was captured and is the oldest known GB in the wild. The damage program is working on non-lethal methods. Have developed a video on hunting safety in GB country.
    - Due to expansion of the GB population, there is decreasing support from the public for GB presence on the landscape due to conflicts in human dominated areas.
    - Wyoming, Montana and Idaho have pushed to delist the species so states can manage GB populations more effectively.
- **Development of an AFWA document on “humane dispatch of wildlife by agency personnel” (Colin Gillin, Tom DeLiberto)**
    - Colin Gillin and Tom DeLiberto provided an update on the efforts to draft a document on Humane Dispatch for wildlife management and conservation industries. This is an effort supported by the AFWA Fish and Wildlife Health Committee as well as HWCWG. When complete, this manuscript is likely to be more prescriptive than most HWCWG documents. Approval for publication will require higher level approval for AFWA endorsement.
- **Update on USGS National Climate Adaptation Science Center: Impacts of Climate Change to Wildlife Conflicts (Kate Malpeli)**
    - Kate Malpeli with USGS had presented to HWCWG earlier, and this was a follow up presentation. See appendix for the report.
- **Other topics of interest**
    - See other reports that were provided in the Appendix

- **Roundtable: State/Federal/Tribal/Provincial/Regional Associations/AFWA Members**  
*One representative per agency highlights a couple of human wildlife conflict issues*
- **Wrap-up Discussion and Assignments for Next Meeting (B. Wakeling/D. Brimeyer)**
  - Among other topics at the next meeting, the HWCWG intends to address
    - a. approval of the urban coyote manuscript
    - b. survey about funding and related challenges for conducting wildlife conflict work nationally and international.
    - d. climate change and wildlife conflict briefs in partnership with USGS
    - c. update on grizzly bear population growth and distribution

**Appendix:**

- **Report from Kate Malpeli (USGS)**
- **Report from North Carolina**
- **Report from Montana**
- **Report from Wyoming**

# Understanding the Effects of Climate Variability and Change on Patterns of Human-Wildlife Conflict

## Goals & Objectives

The goal of this project is to identify the state-of-the-science on the effects of climate variability and change on human-wildlife conflict, to support state wildlife managers in their conflict planning efforts and to identify knowledge gaps and management needs. This goal will be achieved through three core objectives, each resulting in one or more deliverables summarizing information at a variety of scales, from single species to multi-species to broad-scale examinations of human-wildlife conflict at the landscape scale.

### Objective 1

**Summarize the state-of-the-science on the documented and projected mechanisms by which climate variability and change can affect the frequency, intensity, and spatial and temporal patterns of negative interactions between humans and wildlife.**

This objective will be achieved through (1) an in-depth synthesis paper examining the effects of climate variability and change on human-wildlife conflict for a priority species, and (2) multiple species-specific fact sheets synthesizing available information on how climate affects conflict for a set of focal species. Due to the extensive number of species that are involved in human-wildlife conflicts, the research team has initiated conversations with the AFWA Human-Wildlife Conflict Working Group to prioritize focal species for these synthesis activities. During initial discussions with the group, black bears were identified as a primary species of interest for a synthesis on the topic of climate change and conflict, and as such will be the focal species for the in-depth synthesis product. We will continue to engage an AFWA sub-working group to identify additional focal species for our species-specific mini synthesis products.

#### *Deliverables:*

- *Human-Bear Conflict Synthesis Paper:* Summary of the state-of-the-science on how climate variability and change have already and could potentially affect human-bear conflict in North America.
- *Species-Specific Fact Sheet Series:* A fact sheet series synthesizing the documented and potential future effects of climate variability and change on human-wildlife conflict for select focal species.

### Objective 2

**Identify knowledge gaps and management needs on the topic of human-wildlife conflict and climate change and suggest potential future CASC contributions that can strategically address those gaps and needs.**

To achieve this objective, we will review the literature on human-wildlife conflict to identify the extent to which climate variability and change are considered as stressors and/or drivers of conflict; summarize the state-of-the-science on the effects of climate on conflict; and, through conversations with wildlife managers and scientists working at the intersection of human-wildlife conflict and climate change, summarize management needs and potential future research directions.

#### *Deliverables:*

- *Systematic Map*: A review of the abundance and distribution of the evidence on human-wildlife conflict across geographies, taxa, conflict types, and conflict stressors, with a focus on the extent to which climate is considered as a stressor and/or driver of conflicts.
- *Internal Report*: A report for the CASC Network that summarizes the state-of-the-science on human-wildlife conflict and climate, the climate information needs of wildlife managers charged with planning for and mitigating conflicts, future research directions, and a potential role for the CASC Network.

### **Objective 3**

#### **Elevate attention on the emerging topic of climate impacts within the human-wildlife conflict landscape, among both the research and management communities.**

To date, relatively little research has been dedicated to understanding the role of climate in human-wildlife conflicts. This outcome seeks to increase awareness of the documented and potential effects of climate variability and change on the drivers of conflict, and therefore the frequency and intensity of human-wildlife conflicts, among the research and management communities.

#### ***Deliverables:***

- *Perspectives Paper*: A summary of what we know about how climate affects conflict, the relative number and types of studies that have focused on climate-related stressors as compared to non-climate related stressors, data gaps and management needs, and suggestions for how these needs can be addressed by the scientific community.
- *AFWA Presentation*: Presentation to the AFWA Human-Wildlife Conflict Working Group summarizing the information and arguments outlined in the perspectives paper.

## Report to AFWA Human Wildlife Conflict Working Group

**AGENCY:** North Carolina Wildlife Resources Commission

**DATE:** March 16, 2022

**STATE:** North Carolina

**Submitted by:** Falyn Owens, Extension Wildlife Biologist

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**E-mail:** [falyn.owens@ncwildlife.org](mailto:falyn.owens@ncwildlife.org)

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### MOST SIGNIFICANT ISSUES

#### On-Going

Sightings of and complaints about common rabies vector species (red and gray foxes, raccoons) continue to be the most commonly reported human-wildlife conflicts in North Carolina, though the majority of these reports involve animals observed in urban/suburban neighborhoods and are not associated with reported damage. Black bear complaints, especially in and around the City of Asheville, continue to be common, though efforts to educate the public on conflict prevention is ongoing and gaining traction (see special projects).

#### Emerging

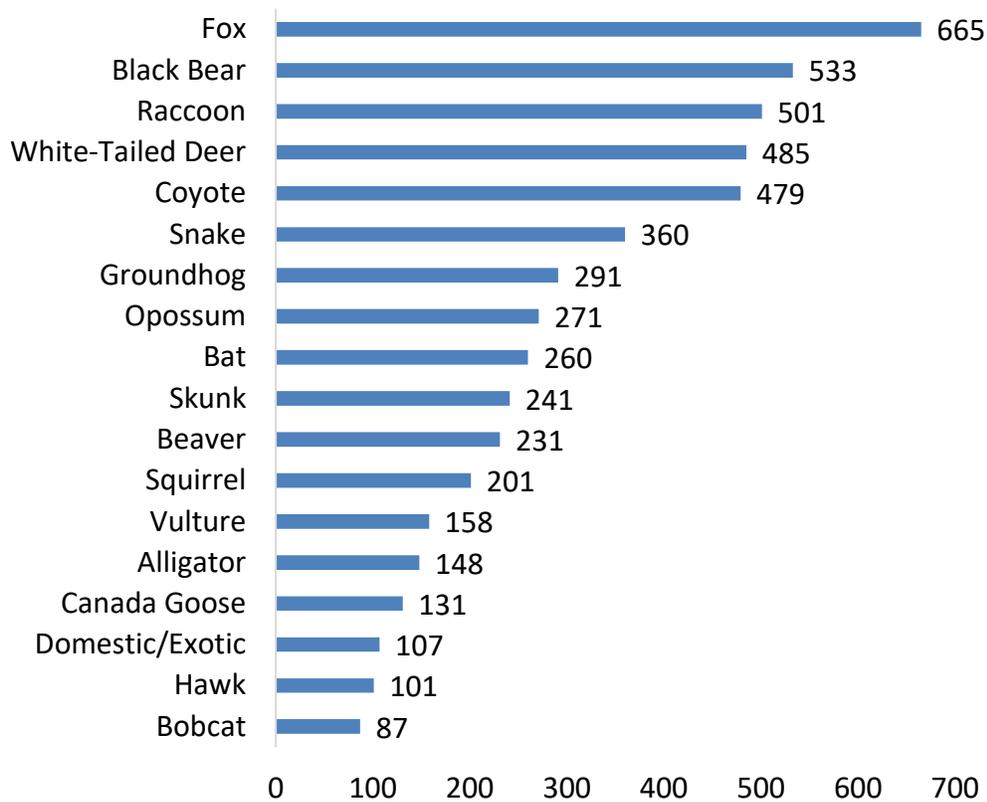
Ongoing outreach regarding the harm caused by feral swine has the potential to increase reports of sightings and damage across the state.

### CONFLICT INCIDENT REPORT BY SPECIES

#### General

The following figure shows human-wildlife conflicts reported to the state-wide NC Wildlife Helpline and provides an overview of species generating the most complaints across the state; these numbers do not include reports received directly by field staff.

### Number of Complaints by Species in 2021



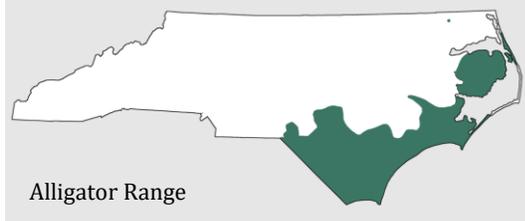
#### Black Bears

Statewide, the number of reported human-bear interactions (sightings, health concerns, complaints) increased 3% in 2021. This was the smallest increase in several years. The majority (62%) of our human-bear interactions occur in the mountain region of western NC, versus 23% in coastal NC, despite a higher bear population on the coast. Coastal NC is much more rural and has a lower housing density than the mountain region in the state. The central Piedmont region has a much lower bear population than both the mountain and coastal regions in the state.

In 2021 we had 3 bear incidences involving human contact; all victims were treated and released from the hospital. All three occurred in the mountains. Two of these incidences involved a dog and were determined to be defensive behaviors by the bear; because they were defensive, no attempts were made to capture the bear. One incident occurred on the Blue Ridge Parkway and was determined an aggressive attack. Due to this, both NCWRC and parkway staff attempted to capture the bear. Unfortunately, the bear was not captured, so we are unable to determine if health or disease (e.g., rabies) was a factor in the aggressive attack.

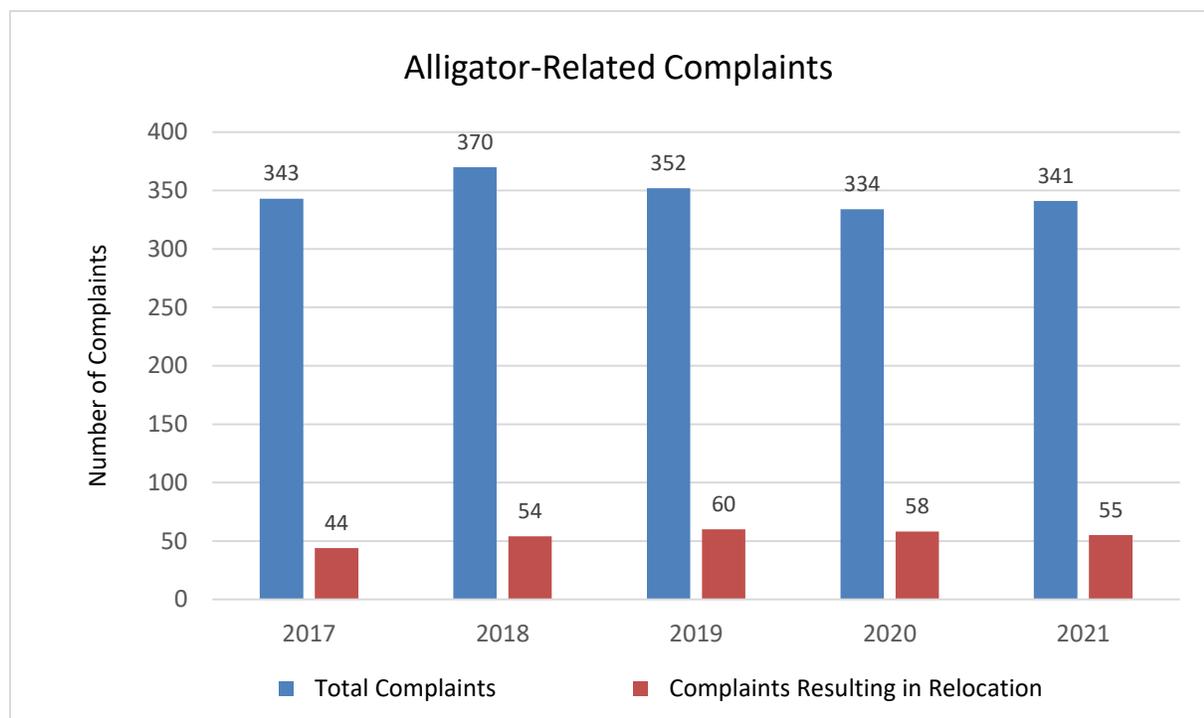
## Alligators

Though alligators occupy only the southern coastal region of the state, complaints related to their presence require considerable education and management effort, in part due to lack of



awareness on the part of new coastal residents and visitors that alligators are present in the state. Because North Carolina is the northernmost part of American Alligator range, and their growth rate is slow compared to more southern states in their range, NCWRC relies on outreach and education to

prevent conflicts with alligators and promote coexistence. When it is deemed necessary to remove an alligator (usually due to its location, such as in a roadway or garage), NCWRC relocates the animal to an area that minimizes the potential for future conflict. The number of alligator-related complaints and subsequent relocations has been relatively stable over the past several years.



## SIGNIFICANT REGULATORY OR POLICY CHANGES OR ISSUES?

A recently approved Alligator Control Agent program is underway, and the first cohort of NC Alligator Control Agents (ACAs) will receive their certifications in Spring 2022. To be eligible for ACA certification, individuals must first be licensed as NC Wildlife Control Agents (WCAs), which

enables them to write depredation permits and directly remove wildlife in nuisance situations but does not allow the handling of some species, including alligators. Also, technicians working licensed WCAs are now required to be certified as Wildlife Control Technicians (WCTs) under North Carolina law. NCWRC is developing a certification program that will involve some, but not all the training required for WCA certification.

## RESEARCH /SPECIAL PROJECTS

### BearWise

During 2021, we successfully recognized the first BearWise Communities in North Carolina. The Town of Highlands is the first town in the United States to achieve BearWise recognition. The other three recognized BearWise communities are two neighborhoods in the Town Mountain area of Asheville and an unincorporated group of homes in downtown Black Mountain. Sierra Nevada Brewing Company has almost completed the requirements to become the first BearWise Business in North Carolina (may be the first BearWise brewery in the United States) and Camp Merrie-Wood, a youth camp, is in the process of becoming a recognized BearWise Campground.

Despite Covid-19 restrictions, we conducted approximately 30 BearWise outreach events with an estimated 3,000 people in attendance in FY20-21. During this time outreach has shifted almost entirely to virtual events.

We tested a popular bear strap, called “Strong Strap,” which is sold by Ace Hardware and Amazon, as it is marketed as rendering poly-can trash cans “bear-resistant.” The strap was tested by Uno the bear at the North Carolina Western Nature Center, which is one of the potential testing facilities for the SEAFWA-funded bear-resistant products testing program (being implemented by WMI). Uno quickly broke the strap and gained access to the inside of the poly-can. Despite this failure, we will continue to identify potential modifications to existing trash cans and test these modifications on Uno the Bear to determine publicly available options that are more cost-effective than a typical bear-resistant trash can.

We continued to support the city of Asheville’s Sanitation department in launching their pilot bear-resistant garbage can program. Because Buncombe County, where Asheville is located, is the source for 30-60% of all complaints the Commission receives on black bears, this is a significant step toward reducing human-bear conflict in North Carolina. The initial deployment was 340 bear-resistant cans (\$82,000), and due to demand the city provided \$94,000 in additional funding for another 300 bear-resistant cans. A private donor provided a \$30,000 donation, which will purchase 112 additional bear-resistant trash cans. Asheville is examining whether they can increase budgeting for these cans in the coming fiscal years to meet the demands of their extensive waiting list.

### Farm-Bill Supported Feral Swine Projects

Partners with the North Carolina Feral Swine Task Force are nearing deployment of a Farm Bill-funded trap loan program that will allow landowners access to cellular-enabled corral traps for feral swine removal. The traps will be available to landowners in spring 2022, with technical guidance to interested landowners expected during the first several months in preparation for major trapping effort to begin in winter 2022-23, when food resources are scarce and feral swine are more responsive to baiting. The related Sampson County project, which involved direct removal of feral swine by USDA Wildlife Services, is ongoing and will conclude in 2023.

### OTHER

## Report to AFWA Human Wildlife Conflict Working Group

AGENCY: Montana Fish, Wildlife & Parks

DATE: March 17, 2022

STATE/PROVINCE/FEDERAL/TRIBAL: Montana

Submitted by Brian Wakeling, Game Management Bureau Chief

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### 1. MOST SIGNIFICANT ISSUES

#### a. On-Going

Montana game wardens precisely record activities that involve urban wildlife, but biologists do not have a method for recording similar activities. Reports of actions tend to underrepresent the frequency of occurrences. Most urban wildlife activities are focused on reducing conflicts with large mammals.

#### b. Emerging

Although not specifically a conflict, emerging issues include White Nose Syndrome in bats, rabbit hemorrhagic disease, and a new conservation order for light geese during the spring. The diseases are not widespread, but they are newly emerging in Montana during the last few years. Light geese are not a predominate issue within the Central Flyway, but the interest among a few individuals was enough to initiate the conservation order within the state.

### 2. CONFLICT INCIDENT REPORT BY SPECIES

Within 2021, 1,156 urban incident responses were reported by game wardens involving deer and elk, 912 involving bears, 210 involving mountain lions, and 158 involving moose. There were another 488 responses involving other wildlife. This required 4,789 human resource hours from enforcement personnel, or the equivalent of 2.3 human resource years, to respond. Game wardens spent an additional 456 hours responding to wildlife human attacks, which included responses that involved human fatalities to grizzly bear attacks.

### 3. SIGNIFICANT REGULATORY OR POLICY CHANGES OR ISSUES?

State legislation has limited state agency response to some grizzly bear conflicts.

### 4. RESEARCH /SPECIAL PROJECTS

No research or special projects specific to wildlife conflict.

## 5. OTHER

Wolf management remains controversial. Regulatory changes allowed the Fish and Wildlife Commission to liberalize seasons, although harvest is not changing much during the 2021–2022 season when compared to prior seasons. There has been a great deal of hyperbole surrounding the season among those that oppose and those that support liberalized seasons, but little in the line of harvest has changed. The distribution of the harvest has changed somewhat in that several wolves that spend time in Yellowstone National Park have been taken when they left the Park, causing substantial public comment. The statewide population is not expected to change measurably. Concerned individuals have petitioned to have wolves relisted for protection under the federal endanger species act. Actions by USDA Wildlife Services in response to livestock depredation remain controversial.

Grizzly bear populations continue to expand. Montana officials are exploring avenues to downlist grizzly bears from the federal endangered species list. State legislation has limited the agency's ability to relocate grizzly bears involved in conflict situations beyond recovery zones. State legislation also required the Fish and Wildlife Commission to approve release locations for grizzly bears, which the Commission adopted in February 2022 for a 5-year period of time.

Flickers do not present much of a challenge in Montana.

## Report to AFWA Human Wildlife Conflict Working Group

**AGENCY:** Wyoming Game and Fish Department  
**STATE/PROVINCE/FEDERAL/TRIBAL:**

**DATE:**3/16/22

Submitted by  
**Doug Brimeyer**

**Telephone:**

**E-mail:** Doug.brimeyer@wyo.gov

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### 1. **MOST SIGNIFICANT ISSUES**

#### a. **On-Going**

Grizzly bear populations continue to expand into residential areas and agricultural settings where bears are likely to cause conflict. “Protections” under the under Endangered Species Act unnecessarily restrict agency management actions in these situations. In addition, litigation and federal oversight of grizzly bears and wolves is leading to diminished public support for these species in communities across Wyoming. Litigation that hampers state wildlife management has required additional personnel time to deal with data requests specific to litigation.

Recreational use of public and private lands inhabited by bears, wolves and mountain lions has increased during the COVID-19 Pandemic and created many challenges for the Department as we manage wildlife and public use. Because of this the Wyoming Game and Fish Department continues to offer educational programs in an effort to raise awareness about large carnivores throughout Wyoming.

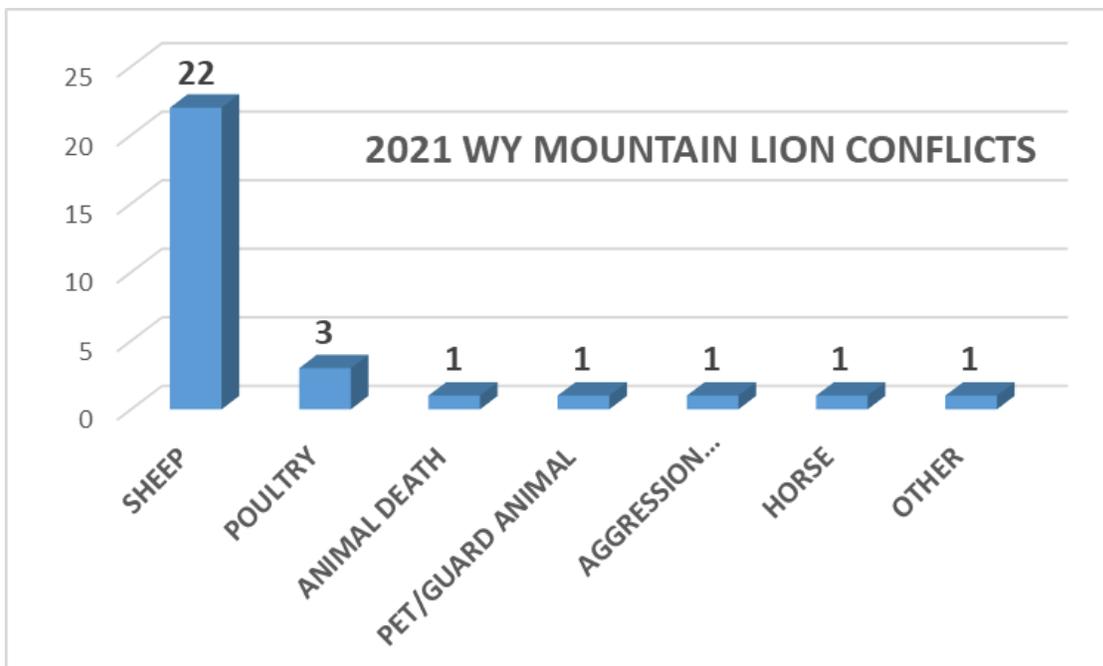
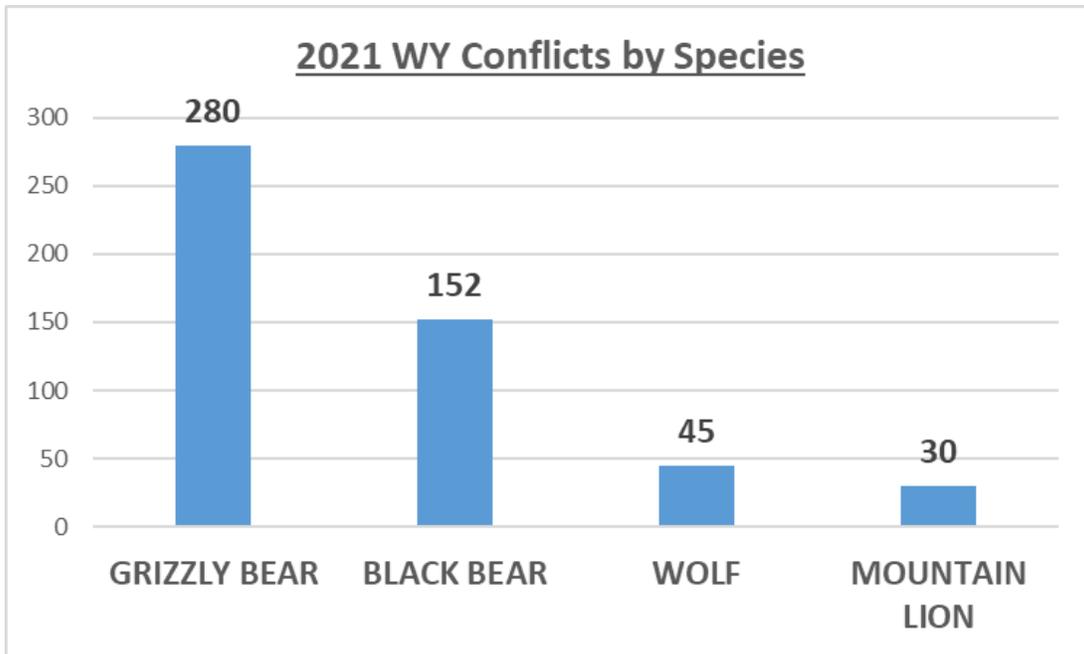
#### b. **Emerging**

As stated above, increased human recreation and expanding populations of large carnivores is a concern in Wyoming. Celebrity wildlife <https://www.team399.com/team-399> continue to gain immense public interest from across the globe and this notoriety has increased demands on agency personnel as they educate area visitors as they attempt to reduce human wildlife conflicts.

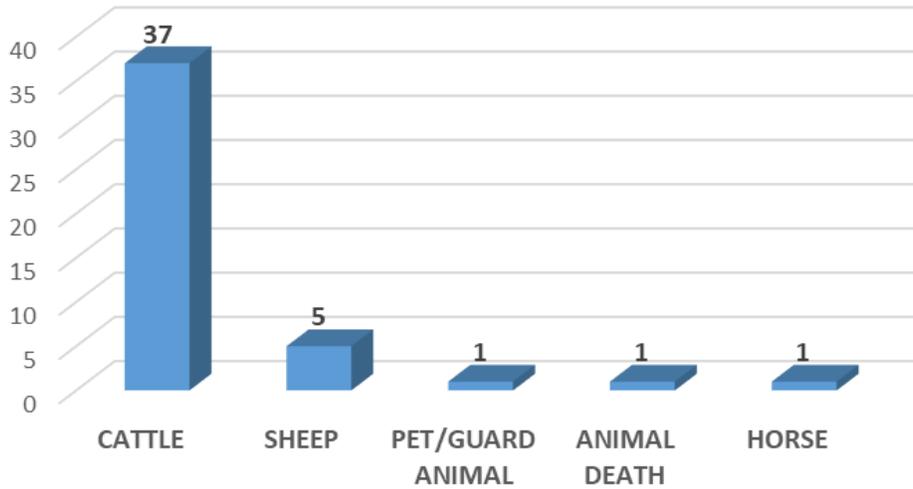
Responding to public requests for agency records and management information is keeping field personnel away from standard work duties. In addition, Department personnel spend a great deal of time addressing misinformation from the general public and media.

### **CONFLICT INCIDENT REPORT BY SPECIES**

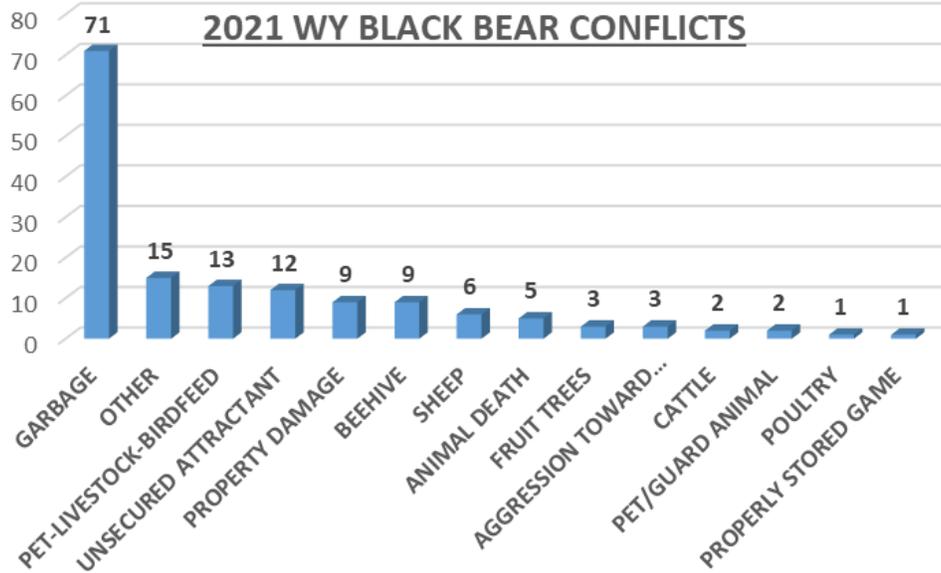
The following figures all represent data obtained by the Wyoming Game and Fish and assorted parties and numbers are from **verified conflicts**.



### 2021 WY WOLF CONFLICTS



### 2021 WY BLACK BEAR CONFLICTS





### **3. SIGNIFICANT REGULATORY OR POLICY CHANGES OR ISSUES?**

In December of 2021 the Wyoming Game and Fish Department updated the “Tri-State Memorandum of Agreement” that directs future management of discretionary grizzly bear mortality by the three states (Montana, Idaho, and Wyoming) in a collaborative fashion. Subsequently, the Governor of Wyoming submitted a petition to establish the Greater Yellowstone Ecosystem (GYE) grizzly bear distinct population segment (DPS) and remove the GYE DPS from the federal list of endangered and threatened wildlife – the MOA and petition address issues brought forth by the 9<sup>th</sup> Circuit District Court ruling that relisted GYE grizzly bears. The GYE population is fully recovered, yet due to previous litigation and court decisions grizzly bears are still classified as threatened. This classification impacts management but also brings into play complex jurisdictional involvement regarding land use practices in areas with grizzly bears (biological opinions on grazing, development etc.).

### **4. RESEARCH /SPECIAL PROJECTS**

We are currently finalizing the research project with University of California/Berkeley evaluating cause specific mortality of bovine calves in an area with an intact large carnivore guild and known depredation by wolves and grizzly bears on domestic cattle. We have engaged with USDA Wildlife Services on multiple permanent fencing structures and nonlethal measures to mitigate conflict between large carnivores and people and continue to evaluate our current data and procedures to increase our efficacy in dealing with conflicts. We have initiated an in-depth research project with the University of Wyoming to evaluate the interactions between and apex predator (mountain lions) and chronic wasting disease (CWD) of mule deer in an area with

high prevalence of the disease. We are evaluating what role predation may play in CWD prevalence and larger population level impact on mule deer populations.

## 5. OTHER