

Preliminary recommendations for reducing grizzly bear mortalities in the Northern Continental Divide Ecosystem: a Report to the Northern Continental Divide Ecosystem Subcommittee

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Introduction

At their winter 2018 meeting, the Interagency Grizzly Bear Committee reviewed and discussed grizzly bear mortality trends in the Northern Continental Divide Ecosystem (NCDE) and the Greater Yellowstone Ecosystem (GYE). Grizzly bear mortalities in both ecosystems have increased as a result of expanding population size and distribution. While these trends were expected, and mortalities have not exceeded sustainable levels, the IGBC recognized that this is an area of high interest by stakeholders and merits further attention. The IGBC directed each ecosystem to conduct a critical review of grizzly bear mortalities and current mortality reduction methods to include focal areas, resource needs, methods, and implementation strategies to reduce grizzly bear conflicts and mortalities. The review should include a preliminary list of priority issues presented at the 2019 summer IGBC meeting, a list of recommendations addressing each of these issues presented at the winter 2019 IGBC meetings, and a final implementation strategy presented at the summer 2020 meeting.

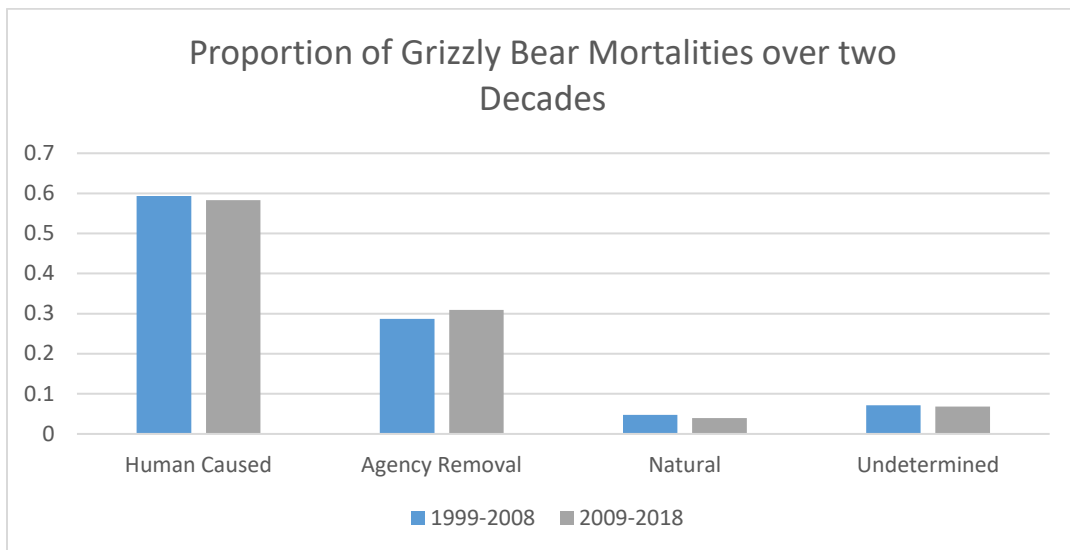
The NCDE subcommittee tasked a working group to conduct this review. The group reviewed mortality data from 2012 through 2018 and identified 4 primary focal areas: 1) Shooting-related, 2) Railroad-related, 3) Automobile strikes, 4) Site-related Conflicts. A preliminary list of priority issues was presented to the subcommittee at the summer 2019 meeting.

Summary of current grizzly bear mortality data

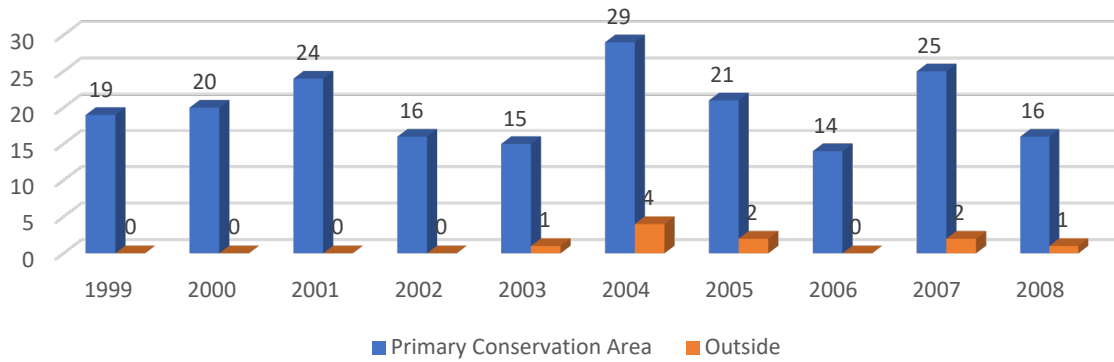
The group compared the last two decades from 1999-2008 and 2009-2018 to detect any trends in grizzly bear mortality causes. For this effort, we used all known or probable deaths, all age classes, and bears that originated from the NCDE and did not die in another ecosystem or Canada. Over the last twenty years, 209 grizzly bears died between 1999-2008 and 278 grizzly bears died between 2009-2018. While we saw an increase of 69 bear mortalities, the proportions of general cause (human caused, agency removal, natural, and undetermined) remained the same between the two decades. As the NCDE grizzly bear population grows and expands we see an increase in mortalities outside the primary conservation area in the last 10 years.

We decided to focus on three categories under human caused: shooting-related deaths, railroad related deaths, and automobile strikes. There are four different causes for shooting-related deaths: mistaken identification by a black bear hunter, bear shot and the individual claimed defense of life, bears found or reported dead with a bullet, and bears illegally shot for causing property damage. For the last 20 years hunters have been the leading cause under the defense of life category and a majority of the poached and maliciously killed bears are during a hunting season. In the last 10 years we averaged one bear per year due to train mortalities, but in 2019 we saw a record eight train deaths. Automobile collisions have also increased in the last 10 years.

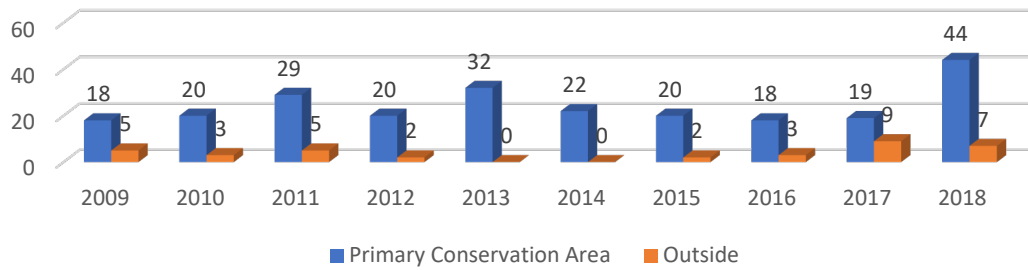
For bears that are removed at conflict sites, there has been decline in anthropogenic food and property damage conflicts, but bears removed from livestock depredation sites has increased. In the last 10 years chickens and small hobby farms have become more popular and bears have been keying into this food source.



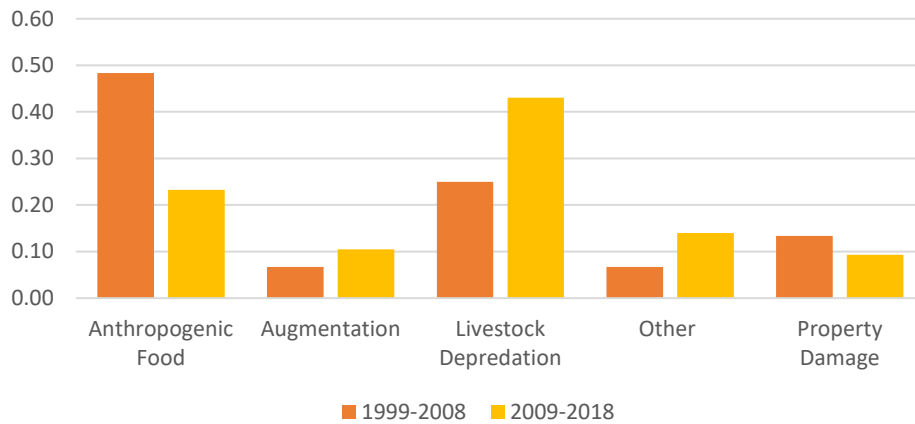
Grizzly Bear Mortality by Location 1999-2008



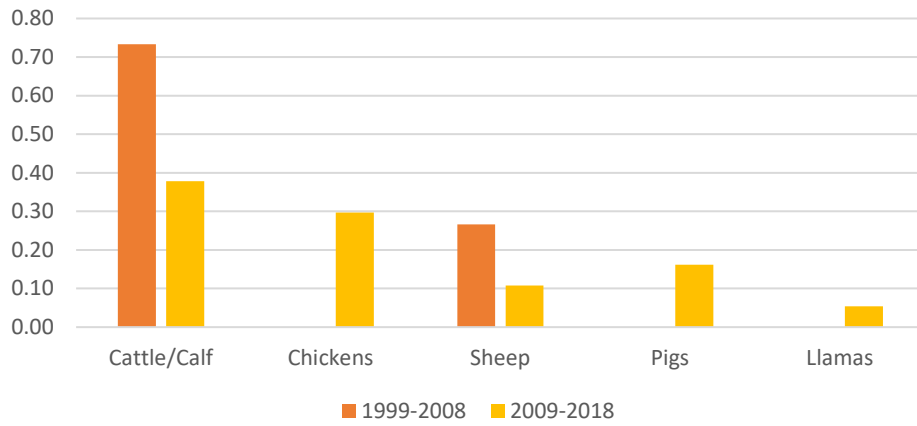
Grizzly Bear Mortality by Location 2009-2018



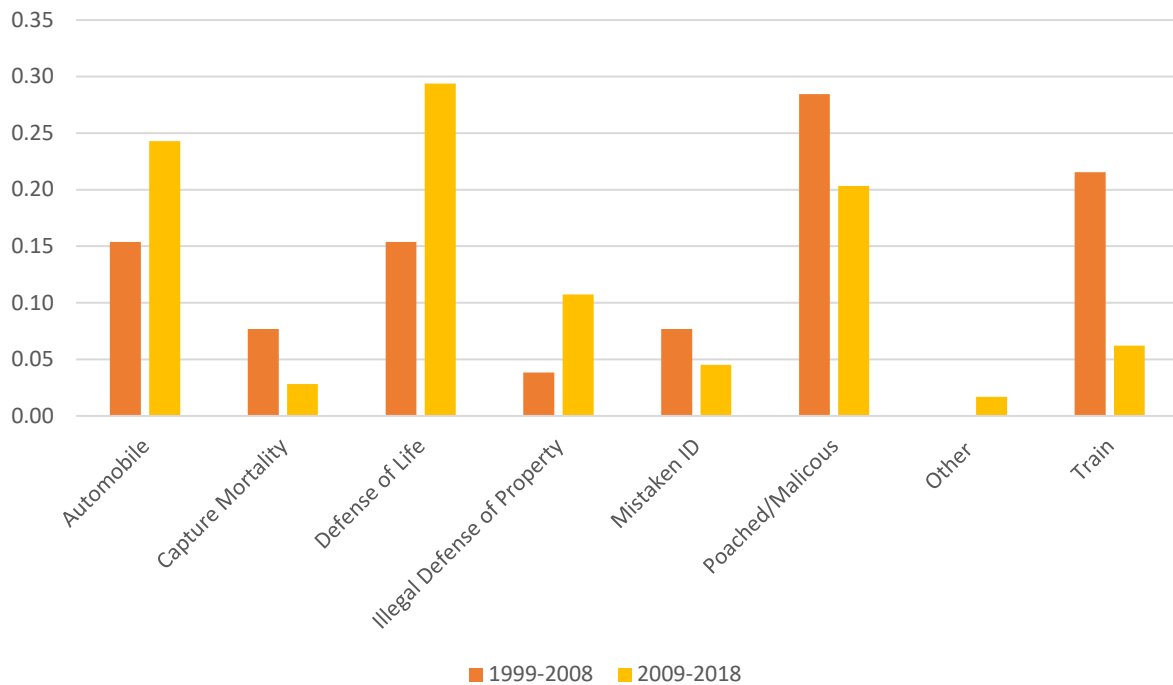
Proportion of Agency Removal Mortalities over two Decades

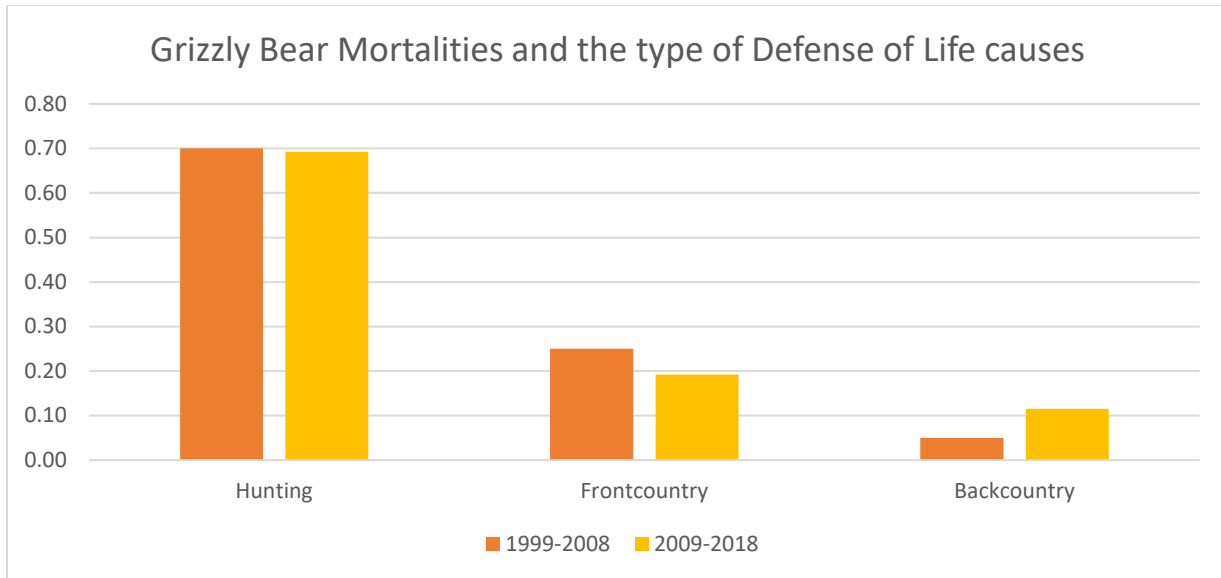


Grizzly Bear Mortalities and the type of Livestock Depredations over two Decades



Proportion of Human-Caused Mortalities over two Decades





Preliminary recommendations to reduce future grizzly bear mortalities and human-bear conflicts

Overarching recommendations:

- Establish long-term working groups around each of these focal areas to fully develop effective and practical solutions. Working groups should include representatives from the most pertinent agencies and should consider representatives from pertinent external groups/industries. External representatives should be formally invited by the subcommittee via letter of recommendation.
- Coordinate implementation strategies among ecosystems where mortality trends overlap. Focal areas will be presented at the winter IGBC meeting. A full discussion with subcommittees is needed prior to working groups moving forward so that efforts are not duplicated and to ensure consistency across ecosystems.

Shooting-Related Mortalities:

Mortalities due to mistaken identity or defense of life may be reduced with information and education programs targeted at bird and rifle hunters and recreationists. Programs should attempt to increase the awareness of where grizzly bear country is and where there is potential for an encounter, increase the knowledge of bear behavior, and increase bear spray usage in these groups. This category has the most potential for cross-over between ecosystems.

- Consider inviting a member of the hunting community to this working group to help craft effective messaging.

- Target information and education programs at bird and rifle hunters.
 - o Videos:
 - Develop PSA videos targeting hunters. There are a number of videos out there. IGBC should compile and review videos, determine their effectiveness and whether developing additional videos is needed. Video ideas: effectiveness of bear spray vs guns; interviews with people who have successfully used bear spray. Add video(s) to IGBC website and grizzly bear pages of other agency websites.
 - Bear safety video playing at Regional Office so that hunters can watch while waiting in line.
 - o Hunter education:
 - Offer a bear safety workshop for hunters (include bear behavior, how to carry bear spray).
 - Consider adding bear safety to the Master Hunter class.
 - o Develop brochures targeted at bird hunters and rifle hunters.
 - o Initiate a broad campaign from hunting groups on the importance of carrying bear spray

- Bear Spray
 - o Continue and expand bear spray subsidies. Airports and lodges often have unused cans of bear spray from travelers. The USFS (Amy Jacobs) has been using these cans for USFS training purposes. A broader effort could yield additional cans for agencies to hand out.
 - o Develop billboard on bear spray targeting bikers, hikers, or hunters.
 - o Bear spray rentals. Review current programs, determine effectiveness and whether IGBC should be encouraging this type of entrepreneurship.

Railroad-Related:

2019 was a particularly high mortality year for railroad-related mortalities and the issue received significant attention from the public. Historically, train-related mortalities have comprised a much smaller portion of mortalities. As the population continues to recover, we anticipate an increasing trend in railroad mortalities, and therefore this issue merits attention by the subcommittee.

- Working group should conduct a review of early warning systems and other mitigation tools used in other areas (e.g., Banff) and keep the subcommittee apprised of new and promising methods.
- Notify railroads that we are developing a working group on this issue.
- Consider adding railroads to working group in the future if it does not slow progress on HCP and is deemed beneficial.
- Develop system for evaluating and maintaining fencing to exclude livestock from railway.

Automobile Strikes:

As the grizzly bear distribution expands, the potential for vehicle strikes will also expand. There is much work to be done on this issue, and significant room for improvement.

- Subcommittee consider increasing engagement and support for scheduled MDT projects (Highway 93 north).
- Subcommittee consider supporting a NGO coalition to advocate for effective wildlife connectivity measures (see I-90 Wildlife Bridges Coalition).
- Research. There are a number of small and large research projects related to bears and highways – both ongoing and completed. The Working Group should coordinate with MDT and any other ongoing projects/agencies that have potential.
 - o Potential research topics: Lighting (could lighting be used to discourage bears from crossing the highway in certain areas?); cattle guards/electrified pavement, fencing (wing fencing, field fencing and pros/cons); study crossing data.
- Develop highway signs to increase driver awareness of potential for grizzly bear crossings.
- Add compost sites where needed (Flathead Reservation, Swan Valley).
- Continue road kill pickup.

Site-Related Conflict:

Grizzly bears are involved in many types of site conflicts. Waste management issues and chickens have a high potential for prevention of these types of conflict, and merits consideration by the subcommittee.

- Waste Management.
 - o Provide bear-proof containers to all residences in grizzly bear habitat
 - Gain buy-in from all waste management companies by inviting participation in Working Group. Suggest Chad Bauer, Republic Waste.
 - Prioritize focal areas to start campaign, and move to other areas later.
 - Explore funding options.
 - Explore use of county/state regulations and enforcement.
 - o Continue funding Bear Rangers to educate recreationists about waste management issues on public land
- Chickens.
 - o Develop billboards to increase awareness of chickens as an attractant and tools to prevent conflict.
 - o Consider how to work with local stores to effectively increase awareness and prevention.
 - o Explore use of county regulations and enforcement.
- Improve messaging on the importance of reporting bear conflicts in reducing future mortalities.