

CYE and NW NCDE 2020 Bear Management Report

Montana Department of Fish, Wildlife & Parks R1



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This annual report is a summary of management efforts. It is not peer-reviewed and data interpretations are subject to change.

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THE **OUTSIDE** IS IN US ALL.

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Many thanks to the US Fish and Wildlife Service, Defenders of Wildlife, Yellowstone to Yukon Conservation Initiative, and the Montana Outdoor Legacy Foundation for their donations of electrified fencing materials, bear-resistant containers to the residents of the CYE, and/or supporting free public bear spray workshops. Thank you to Hecla Mining Company and the National Fish and Wildlife Foundation for the funding that kept effective human-bear conflict solutions available for the people and bears of NW Montana. And lastly, I would like to thank the public, without their support and efforts to reduce attractants, this program would not be possible.

INTRODUCTION

The Cabinet Yaak Ecosystem (CYE) is a recognized recovery area for the federally threatened grizzly bear population in the Cabinet-Purcell Mountain region located in northwest Montana and northeastern Idaho. In 2012, the estimated total abundance of grizzly bears in the CYE was 48-50 bears (Kendall et al, 2015) separated into 2 fragments; the Cabinet Mountains and the Yaak River drainage. With an annual growth rate of approximately 1-2%, the population is estimated at 55-60 bears (Kasworm et al, 2018). The CYE is one of 6 designated grizzly bear population recovery areas in the lower 48 states.

The Northern Continental Divide Ecosystem (NCDE) is a recognized grizzly bear recovery area from the Glacier National Park region, through the Bob Marshal Wilderness, south towards the town of Lincoln along the continental divide in western Montana. The NW portion of the NCDE includes the communities surrounding the town of Eureka, MT; Rexford, Eureka, Fortine, and Trego.

Montana Department of Fish, Wildlife & Parks (FWP) grizzly bear management specialists have proved successful at fostering public awareness, acceptance and support of grizzly bear management and conservation. The most effective conservation solution for reducing conflict and preventing management related mortality of grizzly bears is to work one-on-one with residents and with those that use our public lands. However, just disseminating information on co-existing with bears is only partly effective. Directly helping residents prevent human-bear interactions is the key to reducing conflicts and fostering an acceptance of bears, which in turn may support grizzly bear population recovery efforts. On-the-ground assistance is needed to resolve interactions with bears and find effective long-term solutions on securing attractants that are situation specific.

In response to a growing need for on-the-ground grizzly bear management and public outreach, FWP created a grizzly bear management specialist position for the CYE region in 2007. Because both grizzly and black bears are found in the entire region, we work to prevent, reduce, and resolve *all* human-bear conflicts wherever they occur, which, over time, will prevent future conflicts with grizzly bears.

The primary objective of this program is to emphasize human-bear conflict prevention, and to provide permanent solutions to those conflicts as they occur. The main program goals are to:

- Prevent human-bear conflicts by addressing attractants
- Provide residents with proactive, permanent solutions before conflicts occur
- Quickly, effectively, and permanently address human-bear conflicts as they occur
- Increase public awareness, safety, and understanding of normal bear behavior and life history through information, education and outreach programs
- Maintain support for grizzly bear recovery efforts
- Address conflicts with black bear and grizzly bear similarly
- Encourage the use of electrified fencing and Interagency Grizzly Bear Committee (IGBC) certified bear-resistant containers as an effective method to secure attractants

A US Fish & Wildlife Service (USFWS) research team, headed by Wayne Kasworm, performed the first grizzly bear research in the Cabinet Mountains in the 1980's. They concluded that a very small population (fewer than 15 grizzly bears) remained in the Cabinet Mountains (USFWS, 1990). In 1986, the research team also began a population monitoring program that, today, extends throughout the CYE. The research team is stationed at the FWP Libby Field Station and works closely with the CYE FWP bear management specialist.

This position was initially funded by grants from the National Fish and Wildlife Foundation (NFWF) with a 1:1 match provided by Hecla Mining Company (formally Revett Mining Company). The bear conflict specialist position is currently funded through FWP, although Hecla continues to support the CYE bear management program by providing funding for a seasonal technician and program operations. Hecla Mining Company is a silver and copper company that owns the 3 largest mining claims in the Cabinet Mountains; Troy Mine, Montanore Mine and Rock Creek Mine. NFWF is an independent nonprofit organization that supports wildlife conservation efforts throughout the United States and its territories.

MANAGEMENT AREA

Located in northwest Montana, the CYE encompasses approximately 6,800 km² of northwest Montana and northern Idaho. Approximately 90% of the CYE recovery area is on public land administered by the Kootenai, Lolo, and Panhandle National Forests. Several private timber companies hold a significant amount of private timber land in the area. Residential land ownerships are primarily along the major creeks and rivers. The Cabinet Mountains Wilderness encompasses 381 km² of higher elevations within the recovery area.

The primary area of responsibility for the FWP CYE grizzly bear management program includes the CYE recovery zone, the NW portion of the NCDE, and the communities adjacent to the 2 recovery areas in Sanders and Lincoln Counties (Figure 1). This area encompasses approximately 4,600 square miles. Reducing human-bear conflicts in the communities surrounding the CYE and NW NCDE recovery areas decreases the risk of human-caused grizzly bear mortalities and supports grizzly bear population connectivity in between.

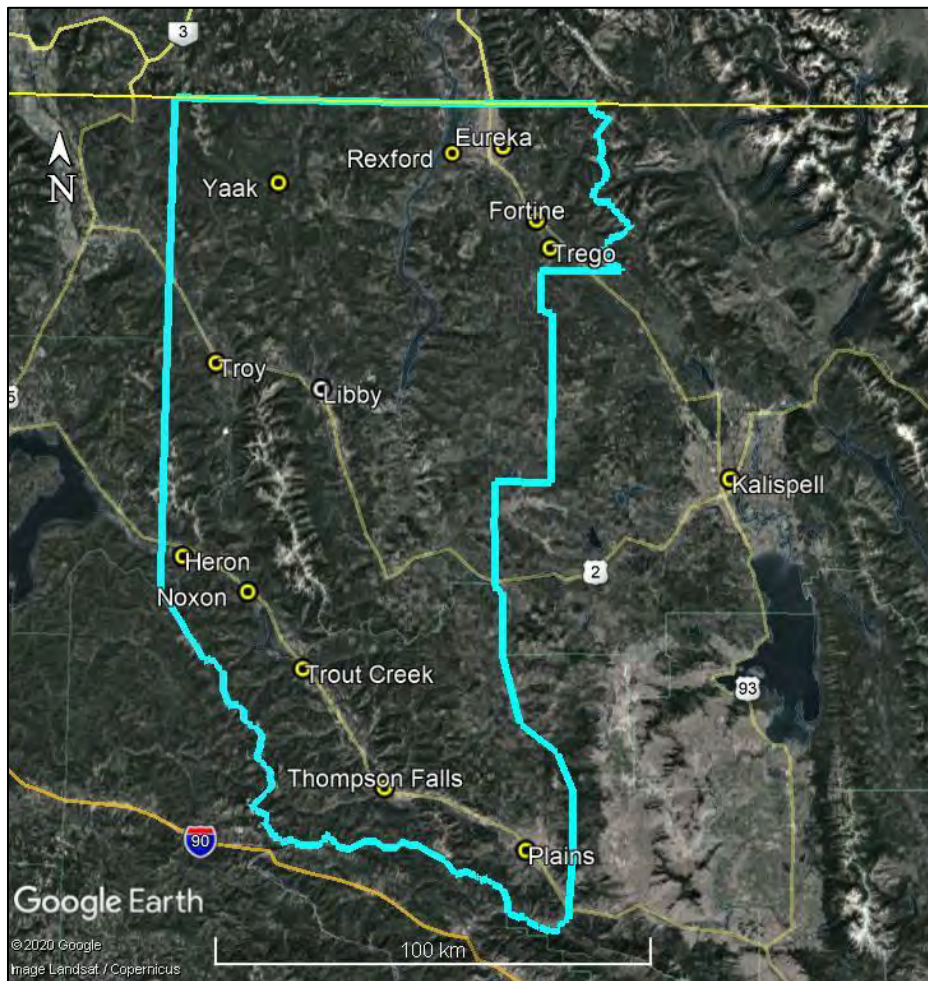


Figure 1. Blue line represents the CYE bear specialist's area of responsibility.

INFORMATION, EDUCATION AND OUTREACH

Education and outreach programs are designed to increase public awareness and understanding of grizzly bear biology, habitat, management, research, and population status. These programs are also designed to help the public live, work, and recreate safely in bear country, and to prevent human-bear conflicts on both private and public lands. With our mobile FWP Bear Education trailer, we attend public festivals, fairs, and events, providing a bear-themed booth packed with outreach and informational materials. We attend classrooms, schools, and school events with presentations and interactive programs for students of all ages. We provide presentations, training, workshops and interactive programs for the public, state and federal agency employees, private business employees, clubs, organizations, and non-profit groups. We also offer free public electrified fencing and bear spray safety training workshops. While difficult to statistically measure, the education, outreach and prevention parts of this program have had a positive effect in preventing human-bear conflicts and increasing public acceptance of grizzly bears over time.

Unfortunately, due to the Covid-19 coronavirus pandemic, we did not attend any fairs or festivals in 2020, and opportunities for school or public programs were limited to non-existent. Just prior to the pandemic, we gave an outdoor bear program for all 6th graders in the Sanders County public school system (Figure 2). During the pandemic, using state and federal Covid-19 safety guidelines, we gave 2 bear safety/bear spray training classes for new and seasonal Kootenai National Forest employees, and 1 outdoor bear program for the Eureka Elementary School. From 2018-2020 Kim Annis was the IGBC Information, Education & Outreach (IEO) subcommittee chair and then co-chair, as well as the IGBC Selkirk/Cabinet-Yaak Ecosystems IEO subcommittee chair. In 2020, all IGBC IEO meetings were held virtually.



Figure 2. Sanders County 6th graders outdoor bear education program

HUMAN-BEAR CONFLICT PREVENTION AND RESOLUTION

Eliminating anthropogenic food resources (i.e. attractants) is key towards minimizing and preventing most conflicts between bears and people. Interactions between bears and people are individualistic in nature therefore the tools used to resolve conflicts are dependent upon the situation. Successful resolutions are both permanently effective, and feasible, for the individual situation. Time spent visiting one-on-one with residents can go a long way towards fostering understanding and/or support for sharing the land with bears. Solutions to a conflict may include, but are not limited to, 1) placing the attractant inside a secure building or structure, a bear-resistant container, or behind an electrified fence, 2) loaning of a bear-resistant container, 3) loaning of/helping build an electrified fence, and/or 4) removing a bear from the location, either temporarily or permanently.

Education, bear-resistant containers and electrified fencing are the primary tools used to resolve a human-bear conflict. While the relocation or removal of a bear may also be used as a tool, removing a bear without also securing the attractant(s) typically does not permanently resolve the conflict or future conflict with different bears. Relocation or removal of a bear is

often a temporary solution that does not address the source of the most common conflict (i.e. attractants).

Early in the program, we discovered that many residents were unfamiliar with electrified fencing. To help residents understand how to effectively design and use electrified fencing to deter bears, we developed an electrified fencing guide in 2010. The guide can be used as a tool for residents to use alone or with FWP assistance. We provide in-person support to residents that need help with understanding, designing, and/or constructing a temporary or permanent electrified fence. For those interested in downloading the guide, and determining if they need further FWP assistance, the most updated version of the guide can always be found on the FWP website at fwp.mt.gov.

The definition of "human-bear conflict" is a situation where bears were actively engaged in accessing, or attempting to access, human-related attractants, or situations where bears had defensive or predatory encounters/confrontations with people or livestock. This includes, but is not limited to, livestock depredation, building damage, and home entry. It *does not include* general bear sightings and vehicle/train mortalities. The number of conflicts reported in this summary does not account for all the human-bear conflicts for a given year or given area; not everyone having a conflict with a bear will report it to FWP or request FWP assistance, and human-bear conflicts handled by FWP law enforcement are not reported here. Conflicts are recorded by location only; although it might take several site visits or phone conversations to resolve a conflict at an individual location, only one conflict is recorded. Conflicts at multiple locations, even if caused by the same bear, are recorded individually. The primary attractant is recorded individually, although in some cases it may be difficult to determine the primary attractant when multiple attractants were available.

In 2020, abundant winter snow and adequate spring moisture produced a good wild berry yield at all elevations. Huckleberry production was considered average to above average is many locations, and berries at lower elevations (i.e. chokecherries, serviceberries) were readily abundant.

In all areas of responsibility, we received a total of 212 bear-related calls in 2020. Of these, 122 were confirmed human-bear conflicts (both species). There were 61 conflicts with black bears reported and 44 conflicts with grizzly bears reported, with 17 reports of human-bear conflicts where the species was unknown. Most of the human-*grizzly bear* conflicts occurred in the NW NCDE area (41), while the CYE area had most of the human-*black bear* conflicts (52).

Years in which black bear conflicts are high do not appear to parallel years in which grizzly bear conflicts are high. Why this occurs isn't exactly known but some possibilities could be the differences in the reporting of conflicts for black bears and grizzly bears, differences in lower versus higher elevational food resources in a given year, or possibly the differences in species numbers and associated density. See Appendix F and G for the annual number of conflicts and subsequent management captures for both the CYE and NW NCDE. A list of all bears relocated for management, statewide, is always available on the FWP website at fwp.mt.gov.

Since 2008 (when human-bear conflict data in the CYE started being recorded) garbage has been the primary cause of human-bear conflicts. While poultry, primarily chickens, were this year's primary reason for human-bear conflicts (26), garbage was still a close second (25).

However, there were 20 different attractants documented as the primary cause of a human-bear conflict (Table 1).

Table 1. Primary attractants identified in human-bear conflicts in 2020

Biodiesel	Refrigerator	Livestock Feed
Bird Feeder	Fruit Trees	Porch with multiple attractants
Chickens	Garbage	Pet Food
Compost	Goats	Pigs
Deer carcass	Grazing on grass in yard	Rabbits
Fertilizer	Grill	Root Cellar
Freezer	Beehives	

Defenders of Wildlife, Yellowstone to Yukon Conservation Initiative, Montana Outdoor Legacy Foundation, and the USFWS have all donated electrified fencing materials and IGBC certified bear-resistant containers for residential use in the area. Portable electrified fencing materials are used to temporarily secure attractants during a conflict, or are loaned out to residents to secure attractants prior to a conflict (Figure 3). We also loan out bear-resistant containers to residents that do not have a secure location to contain their garbage containers, cannot afford to purchase their own bear-resistant container, or want to try a container prior to purchase. However, residents of both Lincoln and Sanders Counties can now purchase IGBC certified bear-resistant garbage containers through several local businesses.



Figure 3. Portable temporary electrified net fence

Most residents in Sanders and Lincoln Counties haul their own garbage for disposal since curbside pickup is limited. In Lincoln county the private waste hauling company does not provide bear-resistant containers to their customers, as of yet. The private waste hauling companies in Sanders County either provide IGBC certified bear-resistant garbage containers on an as-needed basis or builds their own, which are somewhat effective against black bears.

Temporary electrified fencing is a primary tool used to resolve human-bear conflicts. In 2020, we erected temporary electrified fencing at 41 locations. Since 2009, when the temporary electrified fencing program began, the number of electric fences set to resolve human-bear conflicts has been increasing, particularly after 2015 when low elevation berry failures caused a high number of conflicts with black bears (Table 2). In 2020, we assisted 2 residents in the Eureka area with permanent electrified fence to secure their multiple small livestock. To the best of our knowledge, all the temporary electrified fences set in 2020 were 100% effective at eliminating human-bear conflicts, if they were properly maintained.

Table 2. Number of electrified fences used from 2009-2020.

Year	# of E-fences	Year	# of E-fences
2009	8	2015	40
2010	6	2016	23
2011	17	2017	25
2012	12	2018	20
2013	12	2019	32
2014	17	2020	41
		Total: 253	

Bear-resistant garbage containers were used at 8 locations as the primary tool to resolve a conflict. In addition, the Yaak Valley Forest Council distributed additional containers to residents and businesses in the Yaak area (Table 3.). There are at least 35 containers on a permanent or long-term loan. Temporary scare devices, called Critter Gitter©, were used at 38 locations to help resolve a conflict or were used cooperatively with another management tool.

Table 3. Number of bear-resistant garbage containers loaned from 2007-2020

Year	# Containers	Year	# Containers
2007	2	2014	18
2008	7	2015	10
2009	3	2016	15
2010	7	2017	11
2011	7	2018	9
2012	18	2019	12
2013	16	2020	8
		Total: 65	

Traps were used at 35 locations, over 141 trap nights, to help resolve a human-bear conflict. Traps were used cooperatively at 19 locations with other management tools (i.e. electrified fencing, Critter Gitter®, etc.). Of the 3 black bears that were captured, 1 was captured in the Fortine area and relocated, 1 was captured in the Noxon area and relocated, and 1 was captured in the Thompson Falls area and humanely euthanized due to being habituated to people and conditioned to human foods. Of the 5 grizzly bears that were captured, 2 were collared and relocated, and 3 were humanely euthanized due being both habituated to people and being conditioned to human-related foods. The euthanized grizzly bears were 3 sub-adult siblings that had been previously captured and relocated in early 2020, but continued to be attracted to residences after their initial relocation. Multiple grizzly bear family groups were documented in the Rexford, Eureka, Fortine and Trego areas in human-bear conflicts, primarily attracted to unsecured chickens, but none were captured (Figure 5).



Figure 5. Female grizzly bear with 3 cubs-of-the-year at a residence in the Eureka area

Of the 212 bear-related calls we received, 90 were *not* human-bear conflicts. These calls were regarding bears observed near homes, front-country or back-country sightings, track sightings, vehicle or train mortalities, injured bears, bears up non-fruit bearing trees, questions or concerns, and reports of possible bear-related activity. Even though these calls were not conflict related, conflict prevention and normal bear behaviors were discussed with each caller, as applicable. The number and type of non-conflict related calls will vary widely from year to year, from a low of 5 in 2008 to 150 in 2015.

We received 29 calls from residents specifically requesting help to prevent conflicts with bears. These residents reached out for assistance on how to prevent conflicts with bears prior to having a conflict in 2020. Assistance ranged from a discussion on their needs, a site visit, and/or helping them design/construct a temporary or permanent electrified fence. Calls specifically requesting prevention assistance vary from year to year, and may reflect whether the caller experienced a conflict with bears at any time in the past (Table 4).

Table 4. Number of requests for human-bear conflict prevention assistance 2007-2020.

Year	# Calls	Year	# Calls
2007	2	2014	15
2008	4	2015	32
2009	4	2016	23
2010	14	2017	22
2011	16	2018	16
2012	31	2019	17
2013	15	2020	29

SANITATION

Coordination continues with Lincoln and Sanders Counties to secure the public waste transfer sites and make them bear-resistant. Our primary role is to help the counties identify funding for materials to secure sites, and to help design effective and affordable bear-resistant fences. Since 2007, a combination of chain link fence and electrified wires have been installed to secure the following county waste transfer sites: Yaak, Fourth-of-July Creek, Yaak Hill, Troy Mine Road, Savage Lake, Highway 2 South, Trego, Pinkham Creek, Glen Lake, and Fortine. In 2020 Lincoln County completed securing the site at West Kootenai, leaving only Rexford, McGinnis Meadows and Happy’s Inn unsecured at this time. The Lincoln County landfill manager designed drive-over electrified mats as an alternative to traditional swing gates (Figure 6). Eliminating gates at these rural sites allows them to be electrified and in operation 24 hours per day, instead of 12 hours per day at the gated sites.



Figure 6. Lincoln County waste transfer site at the Fisher River confluence

The Lincoln County Glen Lake site had a black bear figure out how to get in without being shocked by the electrified fence (Figure 7). We will continue to work cooperatively with Lincoln County in 2021 to ensure that all waste transfer sites fences are in good repair and have functioning electrified fences to prevent future bears from accessing the sites.



Figure 7. A black bear at the Glen Lake waste transfer site (photo credit Madeline Martin)

In 2015, Sanders County completed the construction of an electrified fence around the public waste transfer site at the bottom of Rock Creek off Highway 200. The remaining public waste transfer sites in Thompson Falls, Trout Creek and Heron will be updated and similarly secured over the next few years as planned by Sanders County.

HUMAN-CAUSED GRIZZLY BEAR MORTALITIES: CYE

Grizzly bear mortalities are classified as “known human-caused” if it was determined that humans, or their activities, caused the death of a grizzly bear within the Montana portion of the CYE. See Appendix D for a list of all known human-caused grizzly bear mortalities within the Montana portion of the CYE from 2007-2020 and Appendix E for a list of all known grizzly bear mortalities within the Lincoln County portion of the NCDE.

In 2020 there was 1 known human-caused grizzly bear mortality in the MT portion of the CYE. On November 27th, a resident reported a dead and partly skinned grizzly bear on private land

near the South Fork of the Yaak River. The mortality is currently under investigation by USFWS law enforcement. In the Lincoln County portion of the NCDE, there were 3 known grizzly bear mortalities, all management removals. The 3 siblings, 1 male and 2 females, were captured and relocated to the Whitefish Range from the Big Fork area in early 2020. The male moved independently from his siblings to the Fortine area and visited multiple residences finding unsecured bird feeders, garbage, pet food, and other similar attractants. The 2 females moved to the Trego and Stryker areas and walked openly among homes and roadways, actively searching for human-related attractants around homes. Traps were set for all 3 and they were humanely euthanized once captured for being habituated to people and conditioned to eating human-related foods.

A study evaluating the effectiveness of conflict prevention actions detected a reversal of the mortality trend in the CYE post-hiring of the FWP CYE grizzly bear conflict specialist. Prior to 2009, the mortality trend was increasing, but a significant decrease was detected after 2009. This was accompanied by an increase in the grizzly bear population in 2013, reversing a decades-long trend of high mortality in the CYE (Proctor et al, 2018) (Kasworm et al, 2017). While difficult to statistically measure, effective human-bear conflict response along with education, outreach, and prevention have likely had a positive effect in preventing human-caused bear mortality.

CABINET MOUNTAINS GRIZZLY BEAR AUGMENTATION PROGRAM

In 1987, the USFWS proposed a plan to augment the Cabinet Mountains portion of the population with female bears from outside the area. This approach involved transplanting adult or sub-adult female grizzly bears, captured from remote areas with similar habitat to the Cabinet Mountains, that had no history of conflicts with humans (USFWS 1990, Servheen et al. 1987). Between 1990-1994, the USFWS selectively captured 4 young female bears from the Canadian portion of the Northern Continental Divide Ecosystem (NCDE) grizzly bear population and transplanted them to the Cabinet Mountains. This initial test of the augmentation program was determined successful. In 2005, FWP partnered with USFWS on this program and it was expanded to include sub-adult males. See Appendix C for a list of all grizzly bears augmented into the Cabinet Mountains from 1990-2020. No grizzly bears were augmented to the Cabinet Mountains in 2020.

LITERATURE CITED

- Kasworm, W.F., T.G. Radandt, J.E. Teisberg, A. Welander, M. Proctor, and H. Cooley. 2018. Cabinet-Yaak grizzly bear recovery area. 2017. research and monitoring progress report. U.S. Fish and Wildlife Service, Missoula, Montana. 102 pp.
- Kendall, K.C., A.C. MacLeod, K.L. Boyd, J. Boulanger, J.A. Royle, W.F. Kasworm, D. Paetkau, M.F. Proctor, K. Annis, and T.B. Graves. 2015. Density, Distribution, and Genetic Structure of Grizzly Bears in the Cabinet-Yaak Ecosystem. *Journal of Wildlife Management* 80(2):314–331.
- Proctor, M.F., W.F. Kasworm, K.M. Annis, A.G. MacHutchon, J.E. Teisberg, T.G. Radandt, and C. Servheen. Conservation of threatened Canada-USA trans-border grizzly bears linked to comprehensive conflict reduction. 2018. *Human-Wildlife Interactions* 12(3):348-372.
- Proctor, M.F., C. Servheen, S.D. Miller, W.F. Kasworm, and W.L. Wakkinen. 2004. A comparative analysis of management options for grizzly bear conservation in the U.S. Canada trans-border area. *Ursus* 15:145-160.
- Servheen, C., W. Kasworm, and A. Christensen. 1987. Approaches to augmenting grizzly bear populations in the Cabinet Mountains of Montana. *International Conference on Bear Research and Management* 7:363-367.
- U.S. Fish and Wildlife Service. 1990. Final environmental assessment - grizzly bear population augmentation test, Cabinet-Yaak ecosystem. U.S. Fish and Wildlife Service, Missoula.

APPENDIX A: Grizzly bear captures due to human-bear conflicts in the CYE 2007 – 2020

DATE	ID	SEX	AGE	REASON	CAPTURE	RELOCATE	KNOWN FATE
9/18/2007	772	F	8	Fruit Trees	Pilgrim Creek, Noxon	SF Marten Creek, KNF	Unknown
9/18/2007	791	M	COY	Fruit Trees	Pilgrim Creek, Noxon	SF Marten Creek, KNF	Unknown
9/18/2007	789	F	COY	Fruit Trees	Pilgrim Creek, Noxon	SF Marten Creek, KNF	Unknown
8/30/2010	1374	M	2	On porch, in garbage	Young Creek, West Kootenai	Spread Creek, KNF	Dead
7/11/2011	724	M	4	Killed pigs	Graves Creek, Thompson Falls	Devils Club Creek, KNF	Unknown
10/27/2011	732	M	3	Dug up buried dog	Yaak River, Yaak	Lookout Creek, KNF	Dead
10/05/2015	726	M	6	Beehive damage	Granite Creek, Libby	Bear Creek, KNF	Alive
9/29/2016	722	M	18	Killed piglet	Seventeen Mile Creek, Troy	Pete Creek, KNF	Alive
10/10/2016	922	M	3	Livestock feed	Yaak River, Yaak	Spread Creek, KNF	Dead
06/20/17	1026	F	2	Grazing in yards	Yaak River, Yaak	Hidden Creek, KNF	Dead
06/20/17	1028	F	2	Grazing in yards	Yaak River, Yaak	White Creek, BC Canada	Dead
4/30/18	None	M	3	Digging up voles in yards	McGregor Lake	Big Creek, KNF	Dead
10/11/19	770	M	25	Building damage	Big Cherry Creek, Libby	Bear Creek, KNK	-
11/10/19	770	M	25	Building damage	Libby Creek	Euthanized	Dead

APPENDIX B: Grizzly bear captures due to human-bear conflicts in NW NCDE 2020

DATE	ID	SEX	AGE	REASON	CAPTURE	RELOCATE	KNOWN FATE
5/26/20	Cliff	M	3	Habituated	Barnaby Lake, Fortine	Euthanized	Dead
5/28/20	1600	M	2	Chickens	Tobacco River, Eureka	Big Creek, KNF	Unknown
6/13/20	Bay	F	3	Habituated	Dickey Lake, Trego	Euthanized	Dead
6/13/20	Cedar	F	3	Habituated	Dickey Lake, Trego	Euthanized	Dead
09/03/20	1603	F	5	Chickens	Tobacco River, Eureka	Blessed Creek, KNF	Alive

APPENDIX C: Grizzly bears augmented to the Cabinet Mountains 1990 – 2020

YEAR	ID	SEX	AGE	CAPTURE	RELOCATION	KNOWN FATE by end of 2019
1990	218	F	5	NF Flathead River, BC, Canada	EF Bull River, KNF; CYE	Dropped collar 1991, observed July 1992
1992	258	F	6	NF Flathead River, BC, Canada	EF Bull River, KNF; CYE	<i>Died in 1993</i>
1993	286	F	2	NF Flathead River, BC, Canada	EF Bull River, KNF; CYE	<i>Died November 2009</i>
1994	311	F	3	NF Flathead River, BC, Canada	EF Bull River, KNF; CYE	Unknown
2005	A1	F	8	NF Flathead River, FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar 2007
2006	782	F	2	SF Flathead River, FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar 2008; DNA detected in 2012 by USGS study
2008	635	F	4	Fitzsimmons Crk, Stillwater SF	EF Bull River, KNF; CYE	<i>Died October 2008</i>
2008	790	F	3	Swan River	EF Bull River, KNF; CYE	<i>Died October 2008</i>
2009	715	F	10	Big Creek, FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar May 2010
2010	713	M	3	Dead Horse Crk; FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar in 2011
2010	714	F	3	Spruce Crk, FNF	Silver Butte Pass, KNF; CYE	Dropped collar July 2010
2011	723	M	2	Stryker Ridge, FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar June 2012
2011	725	F	2	Puzzle Crk, FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar October 2013
2012	918	M	2	Upper Whitefish Lake, Stillwater SF	EF Bull River, KNF; CYE	Dropped collar in 2014
2013	919	M	2	Cola Crk, FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar in 2014
2014	920	F	2	Dead Horse Creek, FNF	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar in 2016
2014	921	F	2	Dead Horse Creek, FNF	Whoopee/Hiatt Creek, KNF; CYE	<i>Died June 2015</i>
2015	924	M	2	Stryker Basin, FNF	Whoopee/Hiatt Creek, KNF; CYE	<i>Died September 2015</i>
2016	926	M	3	South Fork of Flathead, Sullivan Creek	Whoopee/Hiatt Creek, KNF; CYE	Dropped collar in 2017
2018	927	M	2	Stryker Basin, FNF	Whoopee/Hiatt Creek, KNF; CYE	Collared; walked to Whitefish range and dropped collar 2020
2019	923	F	2	Whitefish Range, FNF	Whoopee/Hiatt Creek, KNF; CYE	Collared; denned in West Cabinet Mountains November 2020
2019	892	M	2	Whitefish range, FNF	Whoopee/Hiatt Creek, KNF; CYE	Collared; <i>killed</i> in human-bear incident in Whitefish 2020.

APPENDIX D: Known human-caused grizzly bear mortalities within the Montana portion of the CYE 2007 – 2020

DATE	ID	SEX	AGE	REASON	LOCATION
9/22/07	354	F	11	Self-defense	Canuk Creek
9/24/08	None	Unk	3	Unknown	Fishtrap Creek
10/20/08	635	F	4	Train	Noxon, Lower Clark Fork River
10/20/08	790	F	3	Illegal	Noxon, Lower Clark Fork River
11/1/09	286	F	18	Self-defense	East Fork Bull River
10/11/10	None	M	Adult	Unknown	Pine Creek
9/16/11	None	M	Adult	Mistaken ID	Faro Creek
11/13/11	799	M	4	Mistaken ID	Cherry Creek
11/24/11	732	M	3	Self-defense	Pipe Creek
2012	342	M	19	Unknown	Little Creek
10/26/14	79575279	M	6	Self-defense	Little Thompson River
5/24/15	None	M	Unk	Illegal	Yaak River
4/1/18	821	M	4	Unknown	Pine Creek
5/21/18	McGregor	M	3	Unknown	Bristow Creek
8/4/19	Unknown	F	Adult	Self-defense	Devils Club Creek
11/10/19	770	M	25	Management removal	Libby Creek
11/27/20	Unknown	F	Adult	Under Investigation	South Fork Yaak River

APPENDIX E: Known human-caused grizzly bear mortalities in the NW portion of the NCDE 2020

DATE	ID	SEX	AGE	REASON	LOCATION
5/26/20	Cliff	M	3	Management	Fortine
6/13/20	Bay	F	3	Management	Trego
6/13/20	Cedar	F	3	Management	Trego

APPENDIX F: Conflicts and captures of bears in the CYE 2007 – 2020

Year	Reported Black Bear Conflicts	Captured Black Bears for Conflict Resolution	Reported Grizzly Bear Conflicts	Captured Grizzly Bears for Conflict Resolution
2007	60	4	2	3 ^a
2008	31	4	1	0
2009	36	9 ^b	2	0
2010	99	11	4	1
2011	81	5	18*	2
2012	93	16 ^c	10*	0
2013	45	4	4	0
2014	63	4	1	0
2015	293	39 ^d	4	1
2016	103	3	8	2
2017	75	4	19	2
2018	39	0	11	0
2019	32	1	7	1
2020	52	2	3	0

* Majority of calls due to 1 bear

^a Adult female with 2 COY

^b Includes 1 family group with 2 COY

^c Seven bears captured at 1 location

^d Multiple family groups; 12 COY total

APPENDIX G: Conflicts and captures of bears in NW NCDE 2020

Year	Reported Black Bear Conflicts	Captured Black Bears for Conflict Resolution	Reported Grizzly Bear Conflicts	Captured Grizzly Bears for Conflict Resolution
2020	9	1	44	5