NORTHERN CONTINENTAL DIVIDE ECOSYSTEM

GRIZZLY BEAR POPULATION MONITORING TEAM

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This annual report summarizes data collection efforts to date. It is not a peer-reviewed document, and data summaries and interpretations are subject to change.

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Cover Photo: Grizzly bear wearing an Argos GPS collar, 2006.
FWP photo.

ABSTRACT

An interagency effort to monitor the population trend of grizzly bears in the Northern Continental Divide Ecosystem (NCDE) of Montana was initiated in 2004. The goal of this long-term program is to estimate population trend by monitoring the survival and reproductive rates of radio-instrumented female grizzly bears. Since 2004, the team has captured 45 individual females in the United States and an additional 5 females in Canada. Fifty-two male grizzly bears were captured inadvertently during trend monitoring efforts. An additional 10 males and 2 females were captured during efforts to capture candidate females for augmentation to the Cabinet-Yaak Ecosystem. Thus far, 2 subadult females were moved from the NCDE to this Ecosystem. Over these 3 years, the capture success averaged 1 grizzly bear capture per 24 trap-nights. Fifteen, 31, and 34 individual females were monitored in the United States and Canada during 2004, 2005, and 2006, respectively. Three trend monitoring females died in 2004, 1 in 2005, and 3 in 2006. An additional possible mortality was observed in 2005. Ten, 16, and 19 attendant young were monitored for survival each year. We also monitored the fate of female grizzly bears that had been captured and released for management purposes. Thirty-five, 17, and 12 management bears were monitored for survival during 2004, 2005, and 2006. The team also recorded grizzly bear mortalities in the NCDE during each year. In 2004, 34 known or probable man-caused mortalities were recorded in the Ecosystem. We recorded 24 known/probable and man-caused mortalities of grizzly bears in the NCDE during 2005. Fourteen grizzly bears were known to have died in the NCDE during 2006.

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TABLE OF CONTENTS

Page

I. Introduction/Statement of Need....9

II. Program Objectives....10

III. Geographic Scope....11

IV. Methods....13

V. Results: Population Monitoring in the NCDE....16

Research Captures....16

Home Range and Telemetry....20

Annual Fate of Trend Monitoring Females....26

Reproductive Data....27

Monitoring of Management Bears....27

Grizzly Bear Mortalities in the NCDE, 2004-2006....27

Cabinet-Yaak Augmentation Efforts....29

Grizzly Use of the Salish Mountain Range....29

VI. Literature Cited....36

APPENDICES

Page

Appendix A. Summary of grizzly bear captures in the NCDE and Canada, 2004-2006 37

Appendix B. Reproductive histories of trend monitoring females in the NCDE and Canada, 2004-2006..... 44

Appendix C. Information on female grizzly bears and their young (not all young were captured) involved in management actions, 2004-2006 48

Appendix D. Summary of grizzly bear mortalities in the NCDE, 2004-2006..... 51

LIST OF TABLES

Page

Table 1. Terms and definitions used to classify the cause, certainty, and discovery of grizzly bear mortalities (from Cherry et al. 2002) 19

Table 2. The number of female and male grizzly bear captures and recaptures in the NCDE, 2004-2006. The table does not include 5 Canadian captures..... 21

Table 3. Capture effort and success by capture zone, 2004 and 2006 22

Table 4. Types of radio collars fitted on female grizzly bears during 2004-2006, and percent premature casting. Data include Canadian bears..... 22

Table 5. Fate of trend monitoring female grizzly bears, 2004-2006. Data include United States and Canada 26

Table 6. Reproductive status of adult female grizzly bears in the NCDE, 2004-2006 28

Table 7. Fate of grizzly bears that had been captured during conflict management actions in the NCDE, 2004-2006..... 28

Table 8. Cause-specific, man-caused mortalities in the NCDE, 2004-2006. Table includes only known and probable mortalities 31

Table 9. Sex and age class distribution of 24 man-caused mortalities in the NCDE, 2004-2006. Table includes only known and probable mortalities 31

LIST OF FIGURES

Page

Fig. 1. Western Montana habitats where population and habitat monitoring for grizzly bears is envisioned (from Dood et al. 2006) 12

Fig. 2. Results of USGS grid sampling of grizzly bear hair in the NCDE for the first (June) of 4 capture-recapture sessions, 2004. DNA results are superimposed on capture zones for the ecosystem. Preliminary data supplied by K. Kendall (USGS)..... 17

Fig. 3. Desired distribution of 29 radio-instrumented female grizzly bears in the NCDE by capture zone. Distribution of collared bears was based on results of NCDE-wide DNA surveys during the June session of 2004 18

Fig. 4. The distribution of capture sites within the NCDE during 2004-2006. Red dots depict sites where either a male or a female grizzly bear was captured Grizzly bears were not captured at sites represented by white triangles. Data do not include Canadian captures 23

Fig. 5. Geographic distribution of radio-instrumented female grizzly bears. Females monitored in 2006 are shown in pink. Black dots represent bears monitored prior to 2006. Bear locations are generalized..... 24

Fig. 6. Locations of 3 male grizzly bears captured in the NCDE during 2006 that originally were captured in Canada 25

Fig 7. Minimum convex polygon home ranges for 31 female grizzly bears monitored in the NCDE, Alberta, and British Columbia, 2004-2006 32

Fig. 8. The locations of grizzly bear mortalities in the NCDE, 2004-2006..... 33

Fig. 9. Long-term, man-caused mortality trends (1967-2006) in the NCDE..... 34

Fig. 10. Convex home range polygons for 4 grizzly bears known to utilize the Salish Mountain Range, between the NCDE and the CYE recovery zones. Sample sizes for telemetry locations are small for some bears. Recovery zones are shown as red lines 35

I. INTRODUCTION/STATEMENT OF NEED

Since 1973, there has been an interagency study team for the Greater Yellowstone Ecosystem (GYE). This team coordinates research on grizzly bears in the GYE and collects, manages, analyzes, and distributes ecological information on the grizzly bear and its habitat in this recovery zone (Final Conservation Strategy for the grizzly bear in the Yellowstone Ecosystem, March 2003. The study team coordinates among agencies and members of the public to prevent duplication of effort and synthesizes and reports findings regarding the status of recovery efforts in the GYE. This long-standing interagency effort has led to significant advancements in our knowledge of grizzly bears and their habitats, and has provided managers with necessary tools and information to judge the progress of recovery under the Endangered Species Act.

Conversely, no such interagency team historically existed for the Northern Continental Divide Ecosystem (NCDE). This has led to compartmentalization of research and management effort with unclear lines of responsibility or authority for recovery issues. The result is that our understanding of the status of the grizzly bear population and habitats in this ecosystem are poorly documented relative to the GYE. Further, there has been no centralized reporting system for population and habitat monitoring programs in the NCDE. This lack of structure and information flow has led to a high level of management uncertainty relative to the grizzly bear population and its habitat. For this reason, state and federal agencies have recently sought to improve the current model by developing and institutionalizing an interagency population and habitat monitoring team for the NCDE and adjacent lands outside of the designated recovery zone. This report summarizes our third year of effort toward that end.

II. PROGRAM OBJECTIVES

Over time, the monitoring team plans to conduct the following activities, in which the lead responsibility for implementation and reporting will be assigned to appropriate agencies. The ultimate responsibility of the monitoring team is to collect life history and habitat data on grizzly bears in western Montana and summarize findings in a comprehensive annual report. Major monitoring categories will initially include:

Population Monitoring

1. Population size reporting and updates
2. Population trend monitoring
3. Grizzly bear distribution (females/young)
4. Mortality
5. Genetic diversity

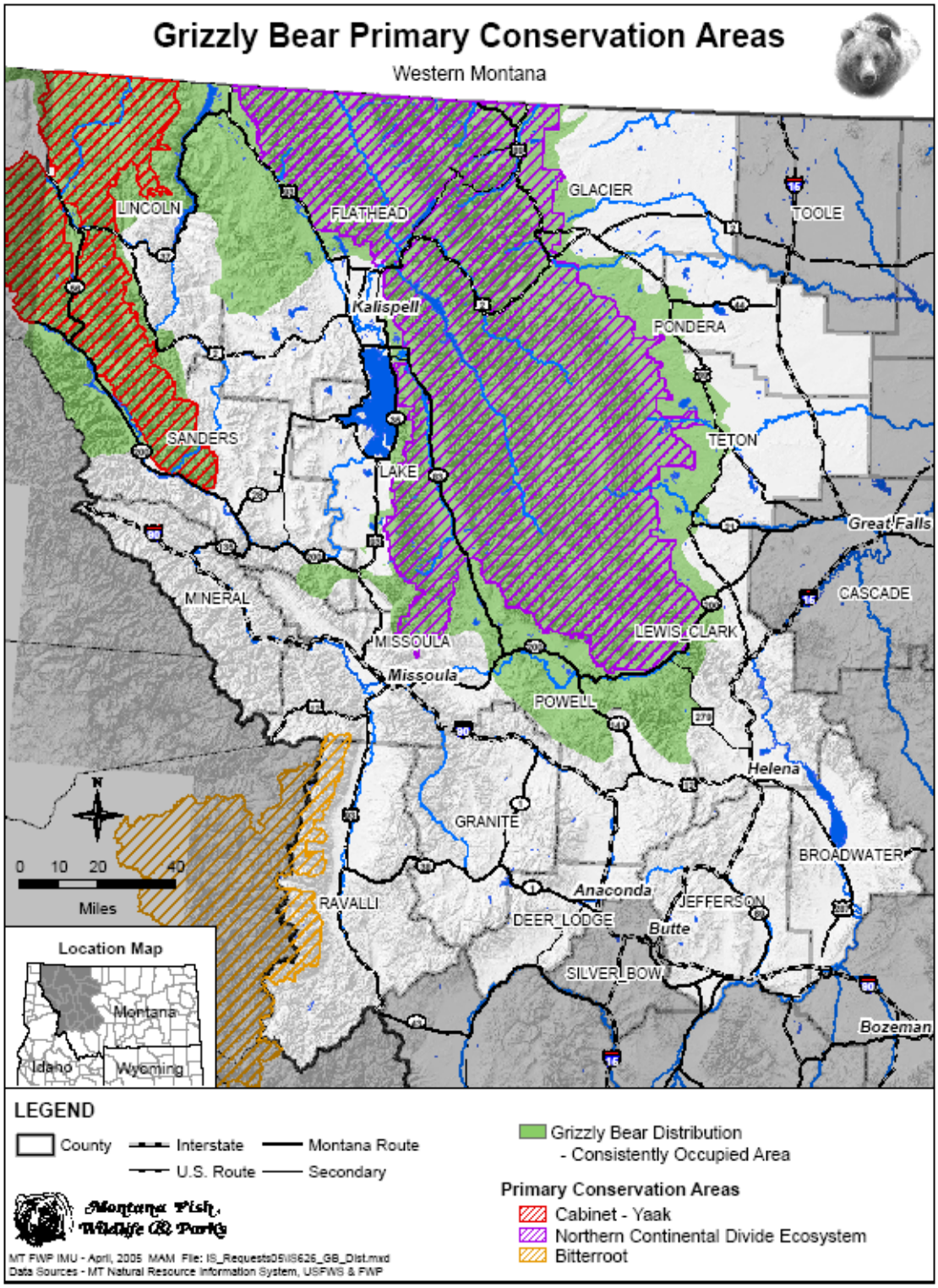
Habitat Monitoring

1. Secure habitat and motorized access route density
2. Developed sites (nonprivate)
3. Livestock allotments
4. Habitat effectiveness and habitat value (CEM)
5. Private land development
6. Habitat connectivity
7. Conflict management

III. GEOGRAPHIC SCOPE OF MONITORING PROGRAM

Primary monitoring emphasis for grizzly bear populations and their habitat will be placed within the designated NCDE recovery zone (U. S. Fish and Wildlife Service, 1993) and surrounding portions of Montana, British Columbia, and Alberta. As resources permit, monitoring will be expanded to include the Cabinet-Yaak Ecosystem recovery zone (U. S. Fish and Wildlife Service, 1993) and remaining portions of northwest Montana (Fig.1) where grizzly bear occupancy is expected (Dood et al. 2006).

Fig. 1. Western Montana habitats where population and habitat monitoring for grizzly bears is envisioned (from Dood et al. 2006).



IV. METHODS

Delineation of Study Bears and Capture Methods

Female grizzly bears were captured, radio-instrumented, and monitored throughout the NCDE and into southern British Columbia and Alberta, Canada. Capture effort was density-distributed; more collars were placed in areas with higher grizzly bear density. The relative density of bears across the NCDE was determined using data from the recent USGS ecosystemwide DNA study conducted during June of 2004 (Fig. 2). From these data, capture zones for the NCDE were established in a Delphi fashion using broad-scale geographic/administrative boundaries (Fig. 3). The population of grizzly bears in the NCDE intermixes with grizzly bears in Canada.

We used the methods of Schwartz et al. (2006) to delineate study bears. Adult or subadult females first captured and radioed at a research site were termed "study animals." Females first captured and radioed at a conflict site by bear managers were members of a "conflict" subsample. A conflict bear could become a study bear if later captured at a research site. Conversely, study animals captured at a conflict site retained their place as a study bear if wearing a functional radio collar at time of conflict capture. Study bears whose collars failed or fell off and were later captured at a conflict site were reclassified as members of the conflict subsample. Nontarget females captured at conflict sites were considered members of the conflict subsample.

Grizzly bears were captured using leg-hold snares, culvert traps, and in some instances were free-ranged over bait. Road-killed deer, livestock carcasses, or other lures were used to attract bears to sites. Bears were immobilized using either Ketamine/ Rompun® (ketamine HCL/xylazine HCL) or Telazol® (tiletamine HCL/zolazepam

HCL). All bears were microchipped. Morphological measurements were taken on each bear. Cotton spacers and mortality sensors were used on all radio collars. Tooth (Stoneberg and Jonkel 1966) and hair samples were taken for age estimation and DNA genotyping. Adult bears were considered to be those $\geq$ 5 years of age.

Grizzly bears were fitted with 1 of 3 types of radio collars, depending on body size and geographic location. Traditional, very high frequency (VHF) collars (Telonics Inc. Mod 500) having a battery life of approximately 5 years were placed on subadult females (<100 lbs) and adult bears living in front-country areas. Female grizzly bears in Glacier National Park and wilderness areas were fitted with Argos GPS (Telonics Inc. TGW-3580) collars to minimize over-flights. Some females were fitted with Telonics store-on-board Generation III GPS collars (TGW-3500) to gather specific information on habitat selection.

Capture success measured how successful field crews were at capturing bears in an area, and was based on the number of sites where snares/culverts were set and the number of nights that capture sites were operational. Each operational capture site, regardless of how many snares/culverts were deployed, constituted a "capture night." The sum of capture nights (effort), divided by the number of grizzly bears captured was termed "capture success."

FWP's management plan for grizzly bears in northwestern Montana calls for population augmentation to the Cabinet-Yaak Ecosystem (CYE) to help bolster that population. This is to be achieved by moving several suitable females from the NCDE to the CYE each year, as possible. The long-term goal is to move approximately 15 individuals. Augmentation may occur from May to early October. Candidate bears are

subadult females, but males will be considered in the future. Bears must have no known history of conflicts with humans. Field teams working on trend monitoring will assist in the capture of these augmentation bears.

Telemetry

The location of each collared bear was determined at least once per month, as possible, using fixed-wing aerial telemetry. In addition, whenever possible, ground locations were determined by triangulation. Locations from bears fitted with Argos GPS collars were downloaded each week from the Argos website. During the bears' active season, we also monitored the status of each bear's mortality sensor to determine if the bear was alive. Home range polygons (100%) were constructed for each bear using the minimum convex polygon method (Mohr 1947).

Mortality

Mortality censors on radio-collars indicated when a collar had either been prematurely cast by a study bear or when a study bear had died. Bears whose collars were on mortality were promptly investigated by field crews to ascertain whether the bear had died and document cause of death if possible. Necropsies were conducted in the field, and relevant tissue and hair samples were collected for laboratory analyses. We used a metal detector or x-ray technology to ascertain whether dead bears had been shot. Except for arduous backcountry situations, whole carcasses were retrieved from the field and sent to the FWP laboratory for analyses.

Researchers and managers completed a mortality form describing the specifics of each mortality in the NCDE. These reports were entered into an interagency database for

coordination among agencies. Terminology for mortalities followed those in Cherry et al. (2002, Table 1).

V. RESULTS
POPULATION MONITORING IN THE NCDE

Population Trend

Research Captures

Forty-five individual female grizzly bears have been captured during the first 3 years of monitoring in the U.S. An additional 5 bears in Canada were also monitored.

In the U.S. portion of the NCDE, 20 grizzly bears were captured in 2004, 11 (55%) of which were females (Table 2). In 2005, 39 grizzly bears were captured 43 times in the NCDE. Twenty-one (54%) of 39 individuals were female. Most female captures in 2005 were of adults ($\geq$ 5 years old). Thirty-eight individual grizzly bears were captured 48 times in 2006, 13 (34%) of which were females. An additional 10 males and 1 female were captured during efforts to capture an augmentation female in 2006. The geographic distribution of grizzly bear capture effort is given in Fig. 4. The generalized geographic distribution of female grizzly bears is shown in Fig. 5. A list of bears captured for population monitoring to date is given in Appendix A.

Capture success for each capture zone was determined. To date, 2546 capture nights have been achieved with an average capture success of 1 grizzly bear/24 nights (Table 3). Capture success has been highest for the East Front zone (1 grizzly/6 nights) and lowest for the South Fork area (1 grizzly/40 nights). Bears that were free-ranged are not included in estimates of effort.

Fig. 2. Results of USGS grid sampling of grizzly bear hair in the NCDE for the first (June) of 4 capture-recapture sessions, 2004. DNA results are superimposed on capture zones for the ecosystem. Preliminary data supplied by K. Kendall (USGS).

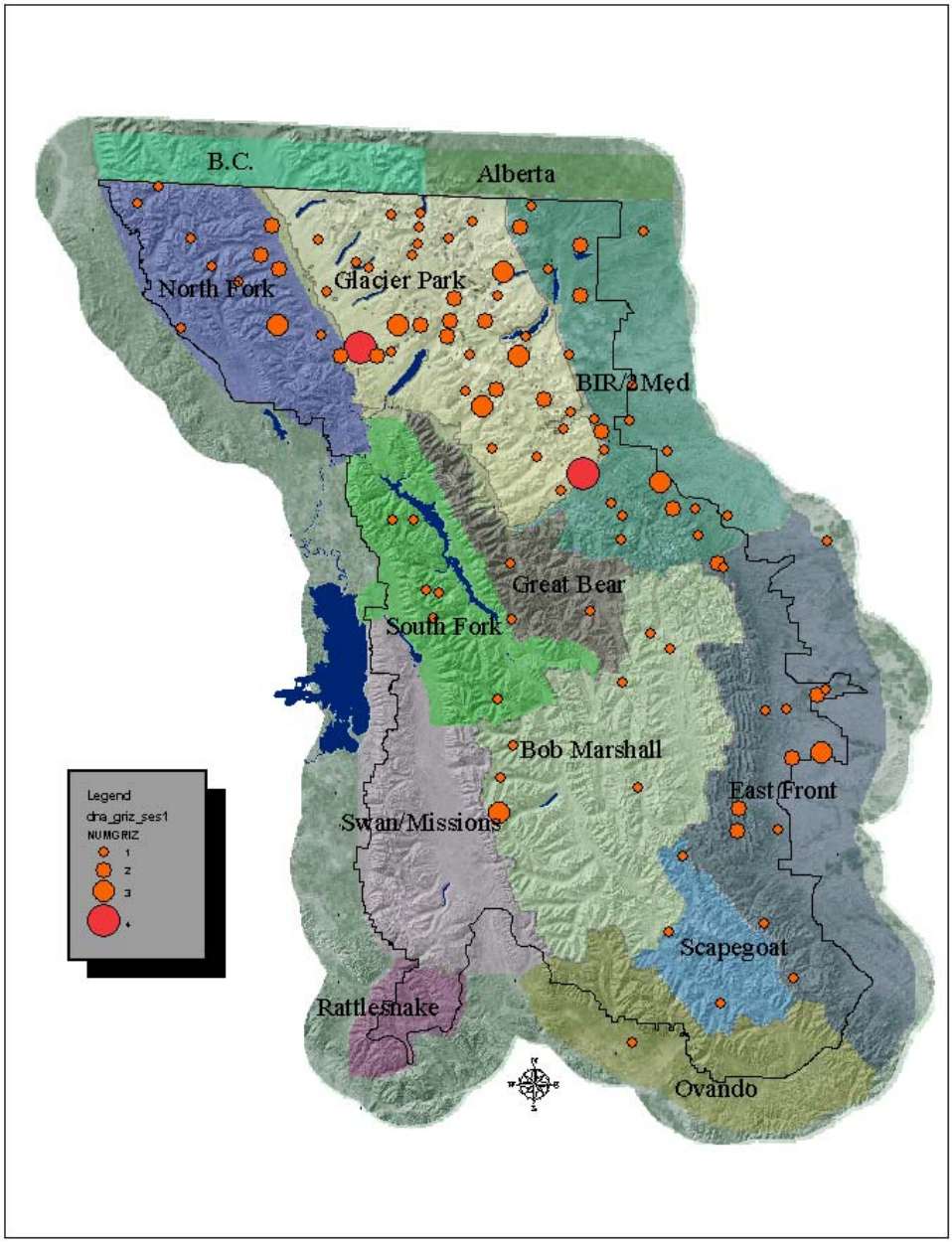


Fig. 3. Desired distribution of 29 radio-instrumented female grizzly bears in the NCDE by capture zone. Distribution of collared bears was based upon results of NCDE-wide DNA surveys during the June session of 2004.

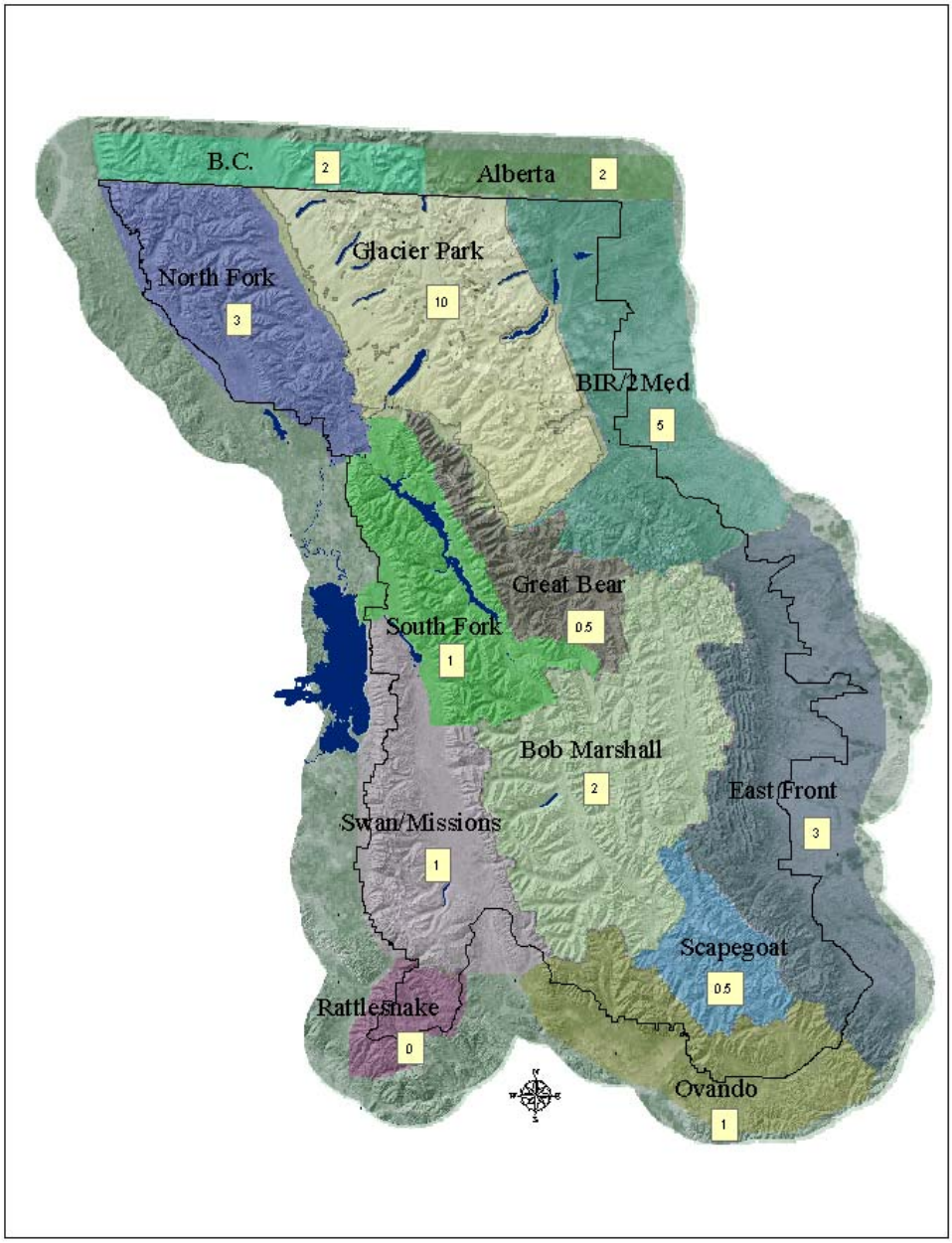


Table 1. Terms and definitions used to classify the cause, certainty, and discovery of grizzly bear mortalities (from Cherry et al. 2002).

Terms	Definitions
Cause of Mortality	
Known Natural	Positively or reasonably attributed to natural cause.
Known Human-caused	Positively or reasonably attributed to humans.
Management	Bear legally killed because of management action.
Defense of life	Bear legally killed by person while defending their life.
Capture related	Death of bear due to capture and immobilization. This includes dependent cubs that were abandoned following management relocation.
Illegal	Known, illegal, human-caused mortality.
Hunt	Bear legally harvested during a sanctioned hunting season.
Train	Bear killed by train.
Vehicle	Bear killed by motor vehicle.
Augmentation	Bear legally moved from NCDE to augment other ecosystems.
Undetermined	Cause could not be determined. However, death did not occur adjacent to area frequented by humans.
Certainty of Mortality	
Known	A carcass or parts to substantiate death
Probable	Strong evidence to indicate mortality, but no carcass recovered. Included cases where evidence indicates severe wounding and observations suggest the bear displayed abnormal behavior.
Possible	Some presumptive evidence of mortality but no prospects for validation. Includes defense-of-life situations where shots were fired (no evidence of significant wounding was found), Hearsay evidence of poaching or malicious death are included here.
Unresolved	Pulse rate and stationary location of a transmitter indicated a cast-off collar or mortality, and transmitters could not be retrieved due to location (i.e., cliff, log-jam in river) or failure; bear never recaptured, so fate was unresolved.
Unexplained	Premature failure of a working transmitter occurred that could not logically be attributed to expected battery life; bear never recaptured so loss was unexplained.
Discovery of Mortality	
Reported	Mortality of an instrumented or non-instrumented bear discovered without the aid of telemetry.
Unreported	Mortality of an instrumented bear discovered due to telemetry and not reported by the public.
Unexplained	Premature failure of radio collar that could not be attributed to battery life. Bear never encountered again.

Two capture efforts were attempted in the Bob Marshall Wilderness in 2006. In June we trapped in the Cannon Creek drainage where 1 male grizzly bear was caught. In October, we successfully captured 2 adult females in the Pendant Creek area.

In 2006, 3 male grizzly bears were captured in the U.S. that were originally captured in Canada (Fig. 6). Male bear No. 079283340 was captured in Glacier National Park in April 2006. This bear had originally been captured in management activities west of Pincher Creek, Alberta. Male No. 096808303 (GO59) is a bear known to travel extensively between Alberta and Montana. This bear was originally captured as a part of the Foothills Model Project and captured in 2006 in the North Fork Flathead River. Male No. 081576580 was originally captured during autumn 2005 in southern British Columbia for research and was recaptured at the southern in of the North Fork Flathead River in 2006.

Home Range and Telemetry

Minimum convex polygons were constructed for each radioed female to ascertain the extent that bears occupied our capture zones. Home ranges for 43 individuals were constructed (Fig. 7), some of which transcended capture zones. Of particular interest were the crossings of the international boundary by 3 of 5 Canadian females. Additionally, 3 of 6 monitored females moved seasonally from the East Front capture zone to the Bob Marshall capture zone. Several females were also documented as using both the Swan/Mission and the Bob Marshall captures zones.

To date, 55 radios have been fitted to female grizzly bears for trend monitoring. Approximately 13% of these collars were removed prematurely by bears (Table 4). A greater proportion (20%) of Argos collars (Telonics TGW-3580) were cast prematurely

relative to other collar types. Conversely, we have had good success in fitting and retaining collars on female grizzly bears with Telonics store-on-board GPS collars.

Table 2. The number of female and male grizzly bear captures and recaptures in the NCDE, 2004-2006. Table does not include 5 additional Canadian captures.

Capture Year	Sex/age Class	Number Individuals	Number Recaptures	Row Total
2004[a]	Adult Female	7	0	7
2004	Subadult Female	4	0	4
2004	Male	9	0	9
2004 Total		20	0	20
2005	Adult Female	15	0	15
2005	Subadult Female	6	1	7
2005	Male	18	3	21
2005 Total		39	4	43
2006	Adult Female	10	1	11
2006	Subadult Female[b]	3	2	5
2006	Male[b]	25	7	32
2006 Total		38	10	48
Grand Total		97	14	111

[a] Includes one adult female captured in 2003 but not monitored until 2004.
[b] An additional 10 male and 2 female grizzly bears were captured during capture efforts to augment CYE.

Table 3. Capture effort and success by capture zone, 2004-2006. Does not include Canadian captures.

Capture zone	Capture nights	Total captures	Capture success
Glacier Park[a]	569	25	22.7
South Fork	601	15	40.0
North Fork[b]	292	16	18.3
Swan/Missions	771	15	51.4
East Front	110	18	6.1
Blackfeet/Two Medicine[c]	83	11	7.5
Ovando	9	1	9.0
Scapegoat	26	2	13.0
Bob Marshall	85	3	28.3
All Zones	2546	106	24.0

[a] One additional female was free-ranged in Glacier National Park.

[b] Table includes one adult female (#648) captured outside of recovery zone near the North Fork capture zone in 2003.

[c] Additional bears were free-ranged in this capture zone. Free-ranging effort not displayed here.

Table 4. Types of radio collars fitted on female grizzly bears during 2004-2006, and percent premature casting. Data include Canadian bears.

Radio Collar Type	Number Deployed on Bears	Percent Prematurely Cast by Bears
No Collar	1	N/A
VHF	19	15.7%
Ear Tag Transmitter	1	0%
GPS store-on-board	15	0%
GPS Argos	20	20.0%

Fig. 4. The distribution of capture sites within the NCDE during 2004-2006. Red dots depict sites where either a male or a female grizzly bear was captured. Grizzly bears were not captured at sites represented by white triangles. Data do not include Canadian captures.

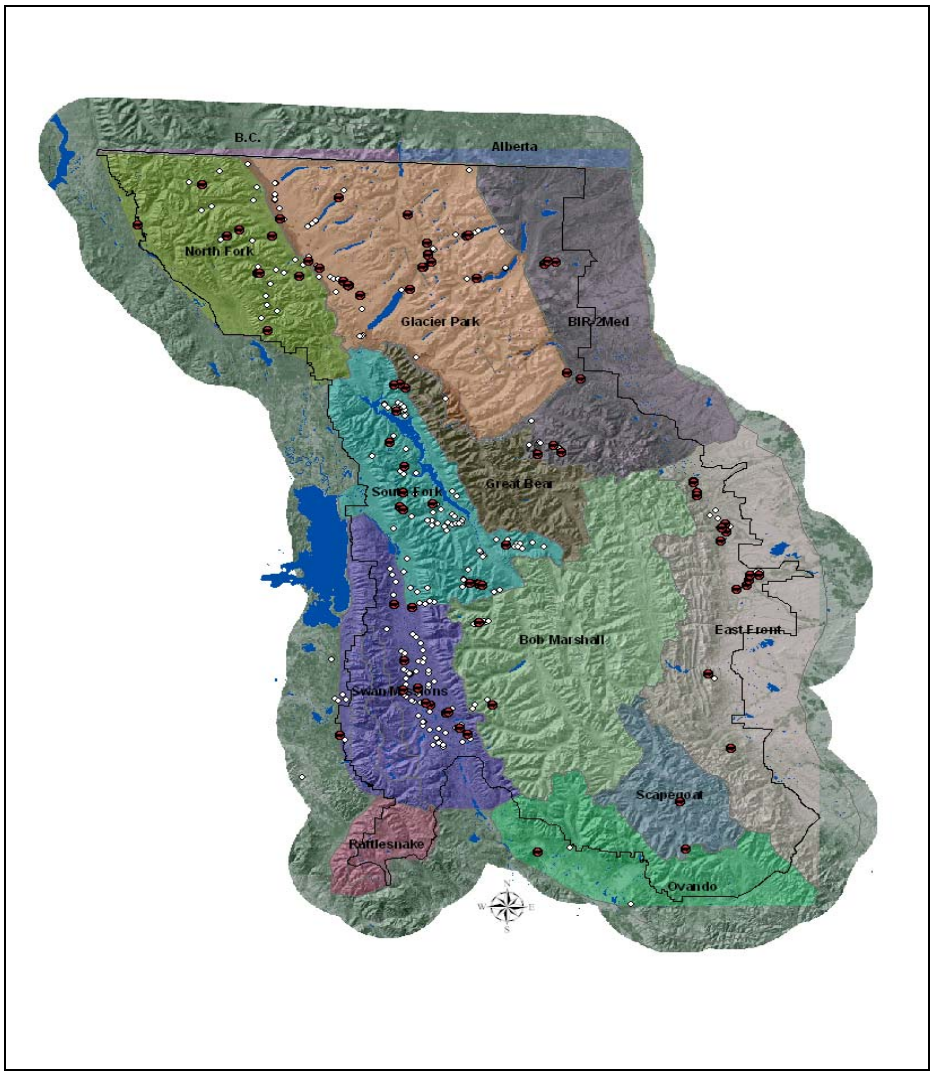


Fig. 5. Geographic distribution of radio-instrumented female grizzly bears. Females monitored in 2006 are shown in pink. Black dots represent bears monitored prior to 2006. Bear locations are generalized.

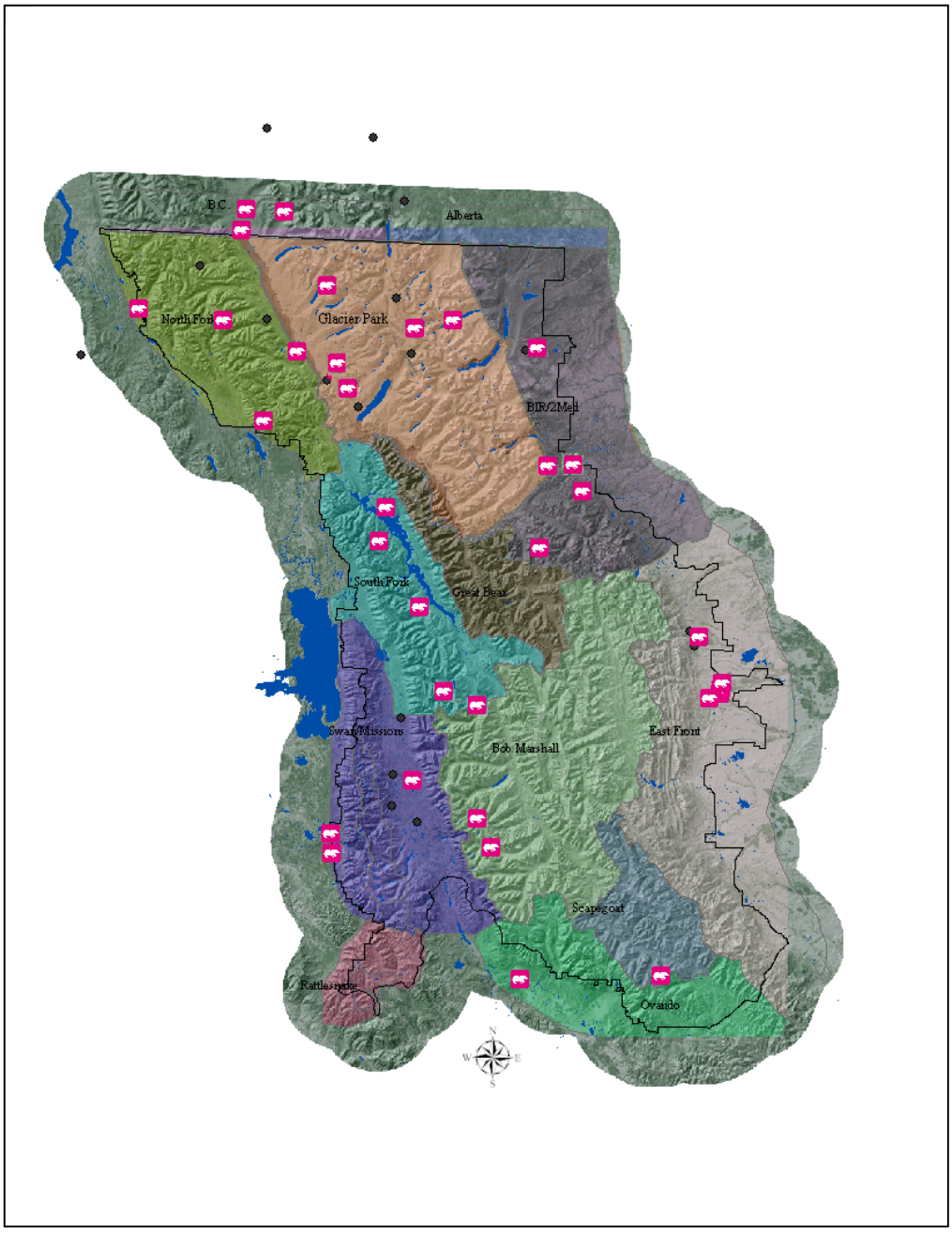
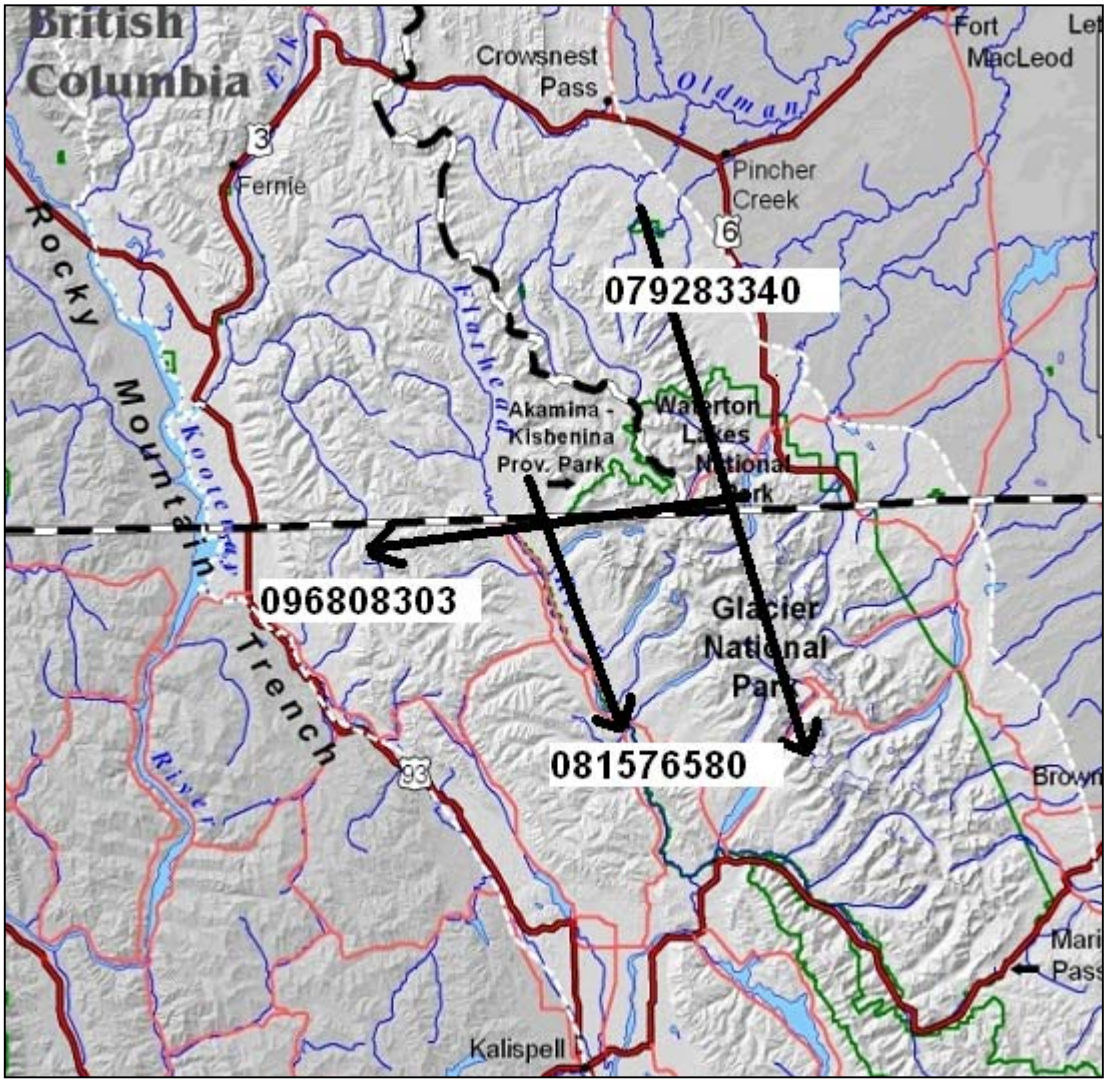


Fig. 6. Locations of 3 male grizzly bears captured in the NCDE during 2006 that originally were captured in Canada.



Annual Fate of Trend Monitoring Females

Fifteen female grizzly bears were radio-monitored in the U.S. portion of the NCDE and in Canada during 2004 (Table 5). Three of these females died in 2004, all in the Swan Valley area (Nos. 84625548, 37885843, and 84623296).

We monitored the fate of 31 female grizzly bears in 2005. Twenty-nine of 31 (94%) females survived either the entire year of 2005 or until their collars were prematurely shed. The mortality of one adult female was classified as capture-related. One adult female was classified as a possible mortality in 2005. The radio collar from this female (No. 84623110) was found under a bridge under suspicious circumstances; no carcass was found.

Thirty-four females were radio-monitored in 2006 (Table 5). Twenty-nine of 34 (85%) females survived the year. Two females were censored (shed collars). Three (9%) females died in 2006. Female Nos. 76553352 and 82024327 were illegally killed during the year, and the partial remains of female No. 76589366 were found. Cause of death could not be determined in this third case.

Table 5. Fate of trend monitoring female grizzly bears, 2004-2006. Data include bears in the United States and Canada.

	Female survived	Female died	Female Probably died	Female possibly died	Female censored	Unkn fate	Total females monitored
2004	11	3	0	0	1	0	15
2005	19	1	0	1	10	0	31
2006	29	3	0	0	2	0	34

Reproductive Data

The reproductive status of adult females was determined each year. In 2004, we monitored 10 adult females with 10 young of various ages (Table 6). In 2005, 25 adults were monitored and with a minimum of 16 young. The 26 adults monitored in 2006 were accompanied by a minimum of 21 young. The reproductive history of each adult female is given in Appendix B.

Monitoring of Management Bears

Between 2004 and 2006, we monitored the fate of 21 females (n = 17 adults) that were captured and radio-instrumented for management actions. In addition, we monitored the fate of 25 dependent young born to these females. Thirty-five, 17, and 12 management bears were monitored in 2004, 2005, and 2006, respectively (Table 7). Nineteen management bears, or their attendant young, were known to die between 2004-2006. These management bears are listed in Appendix C.

Grizzly Bear Mortalities in the NCDE, 2004-2006

Grizzly bear mortalities in the NCDE since 2004 are given in Appendix D and plotted in Fig. 8. The longer-term trend in mortality is provided in Fig. 9. In 2004, 34 known or probable man-caused mortalities were recorded in the NCDE. Management removal (n = 15) was the leading cause of mortality during the year (Table 8). Most of the mortalities in 2004 were female (Table 9).

Table 6. Reproductive status of adult female grizzly bears in the NCDE, 2004-2006.

Year	Number Adult Females	Status	# Litters	Total Young
2004	10	No young	5	10
		1 cub	1	
		2 yearlings	1	
		2 3-yr-olds	1	
		2 cubs	1	
		3 cubs	1	
2005	27	No young	17	Minimum of 16[a]
		1 cub	0	
		2 cubs	1	
		3 cubs	1	
		1 yearling	4	
		2 yearlings	2	
		2 2-yr-olds	1	
		unk, but cubs	1	
2006	26	No young	15	Minimum of 21
		1 cub	1	
		2 cubs	4	
		3 cubs	2	
		2 yearlings	3	
		unk	1	

[a] Tracks of one female with unknown number of cubs were observed near den.

Table 7. Fate of grizzly bears that had been captured during conflict management actions in the NCDE, 2004-2006.

Year	Radioed Female Survived	Radioed Female Died	Radioed Female Censored	Young Alive	Young Died	Young Censored/ Unknown	Total Bears Monitored
2004	9	7	4	5	7	3	35
2005	4	3	2	6	2	0	17
2006	6	0	1	4	0	1	12

We recorded 24 known/probable and man-caused grizzly bear mortalities in the NCDE during 2005 (Appendix C). An additional 5 mortalities that were either natural deaths (n = 2), possible (n = 2), or undetermined (n = 1) were tallied. These mortalities were distributed throughout the NCDE (Fig. 8). Illegal kills (n = 9) and management removals (n = 6) were leading causes of grizzly bear mortality in 2005 (Table 8). One adult female was moved from the NCDE to the Cabinet-Yaak Ecosystem in an effort to augment that population. Nine males and 9 females died in the NCDE in 2005 (Table 9).

Fourteen known man-caused mortalities were tallied for the NCDE in 2006 (Table 8). Three mortalities each were tabulated for management removals, train kills, and illegal deaths. One subadult female was moved from the NCDE to the CYE for population augmentation. Nine of 14 deaths in 2006 were male (Table 9).

Cabinet-Yaak Augmentation Efforts

FWP field crews captured and moved 2 suitable females from the NCDE to the CYE; one each in 2005 and 2006. These bears were received and monitored by USFWS staff. In 2005, female No. 84626290 was moved from the North Fork Flathead River to the CYE. She is known to have survived to the end of 2006. Female No. 81542363 was moved in 2006 from the South Fork Flathead River area and survived in the CYE through the remainder of the year. Neither bear has attempted to return to the NCDE.

Grizzly Use of the Salish Mountain Range:

Since 2004, we have documented 4 grizzly bears utilizing habitats between the NCDE and the CYE recovery areas (Fig. 10). Female No. 648 was captured in the Salish Range in August of 2003 and monitored until her collar dropped in May 2006. Female No. 84529806 was an adult female that was involved in minor human conflicts in 2004.

She was monitored throughout 2006 and exhibited no further conflict activity. Male No. 82033566 was captured in the southern Salish Range after a citizen report of a grizzly in the area and was monitored for several weeks. The bear was captured solely to document its movements. After initial capture, this male returned to the NCDE and was recaptured at Whitefish Lake following a human conflict. Relocated to the North Fork Flathead River, this bear was monitored until it denned in 2006. Male No. 81580106 was an incidental capture for trend females in 2006. We outfitted him with a VHF collar and monitored his movements throughout the autumn of 2006. None of these bears was known to use both recovery zones.

Table 8. Cause-specific, man-caused mortalities in the NCDE, 2004-2006. Table includes only known and probable mortalities.

Year	Cause	Known	Probable	Total
2004	Mgmt	15	0	15
2004	Train	2	0	2
2004	Self defense	1	0	1
2004	Illegal	5	0	5
2004	Mistaken Id	1	0	1
2004	Vehicle	3	0	3
2004	Capture-related	0	3	3
2004	Undetermined	0	0	0
2004	Augmentation	0	0	0
2004	Probable illegal	4	0	4
2004 Total		31	3	34
2005	Mgmt	6	0	6
2005	Self defense	2	0	2
2005	Illegal	6	3	9
2005	Mistaken Id	1	0	1
2005	Vehicle	0	1	1
2005	Capture-related	4	0	4
2005	Augmentation	1	0	1
2005 Total		20	4	24
2006	Mgmt	3	0	3
2006	Train	3	0	3
2006	Illegal	3	0	3
2006	Mistaken Id	1	0	1
2006	Capture-related	2	0	2
2006	Undetermined	1	0	1
2006	Augmentation	1	0	1
2006Total		14	0	14

Table 9. Sex and age class distribution of man-caused mortalities in the NCDE, 2004-2006. Table includes only known and probable mortalities.

	Age Class (2004, 2005, 2006)					
Sex	Adult	Sub-adult	Cub	Yrling	Unk	Row Total
Male	2,6,1	5,3,4	2,0,2	2,0,2	0,0,0	11,9,9
Female	5,7,1	5,0,3	8,2,0	3,0.0	0,0,0	21,9,4
Unknown	1,0,0	0,0,0	0,5,1	0,0,0	1,1,0	2,6,1
All groups	8,13,2	10,3,7	10,7,3	5,0,2	1,1,0	34,24,14

Fig. 7. Minimum convex polygon home ranges for 43 female grizzly bears monitored in the NCDE, Alberta, and British Columbia, 2004-2006. Black dots represent females with too few telemetry points for home range estimation.

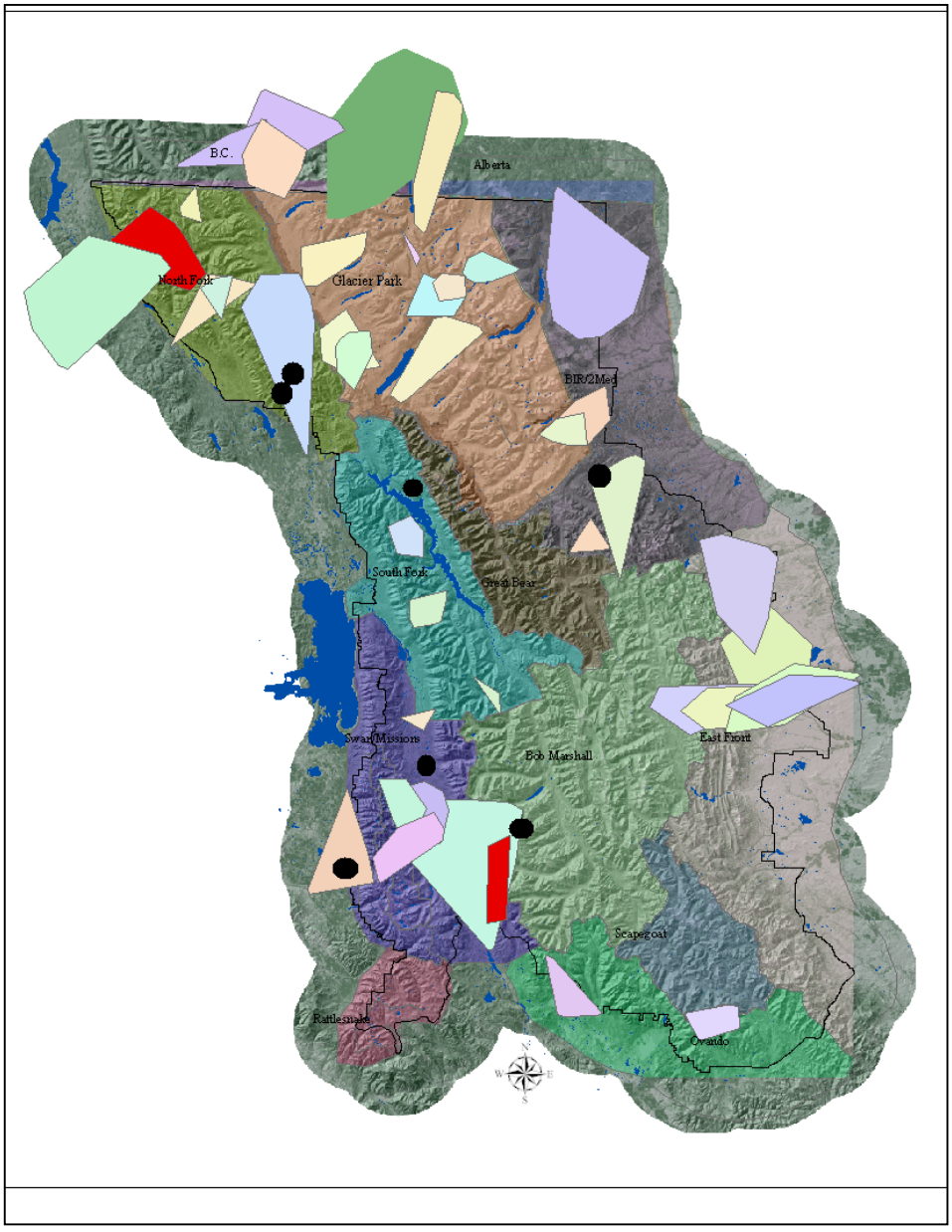


Fig. 8. The locations of grizzly bear mortalities in the NCDE, 2004-2006.

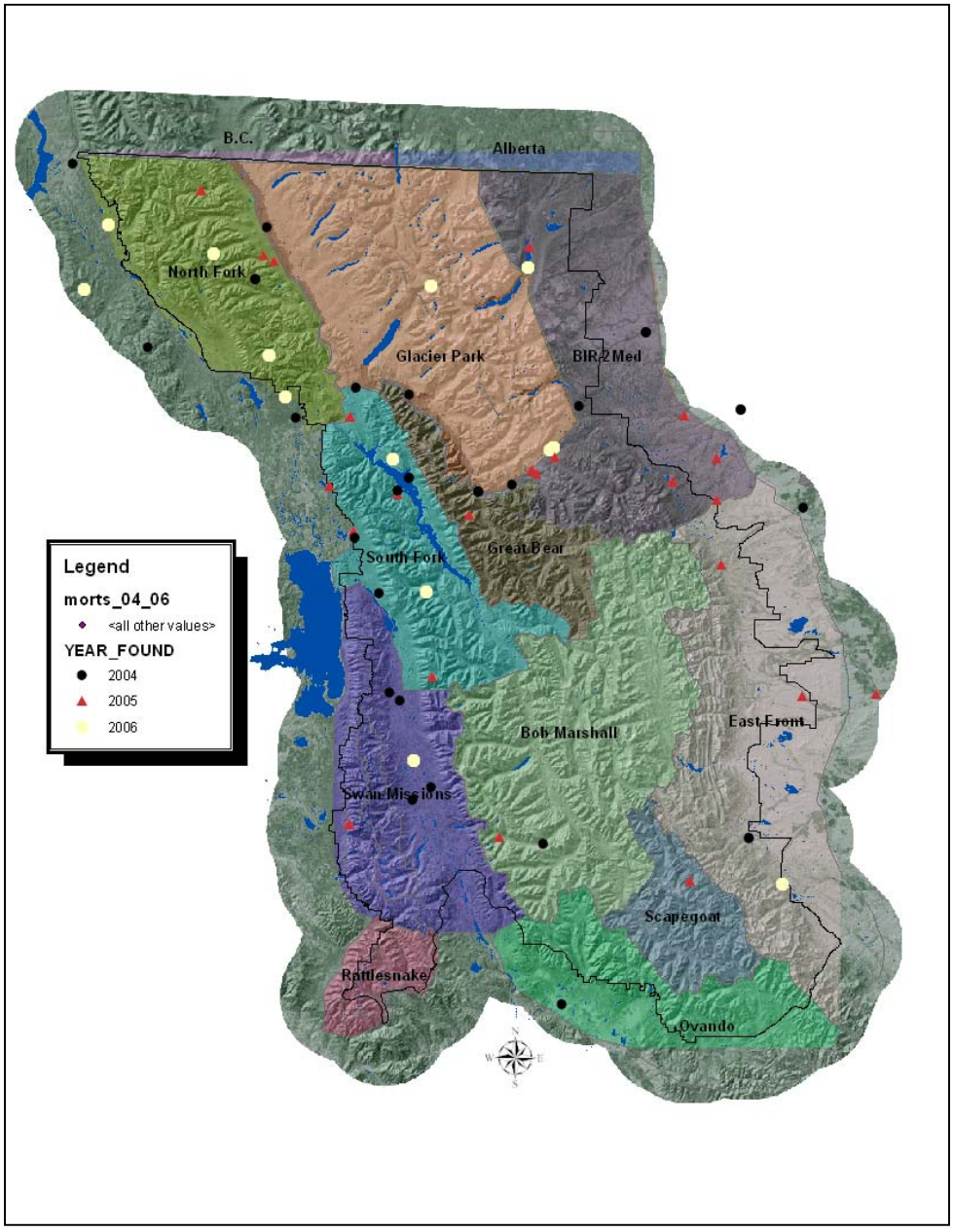


Fig. 9. Long-term, man-caused mortality trends (1967-2006) in the NCDE.

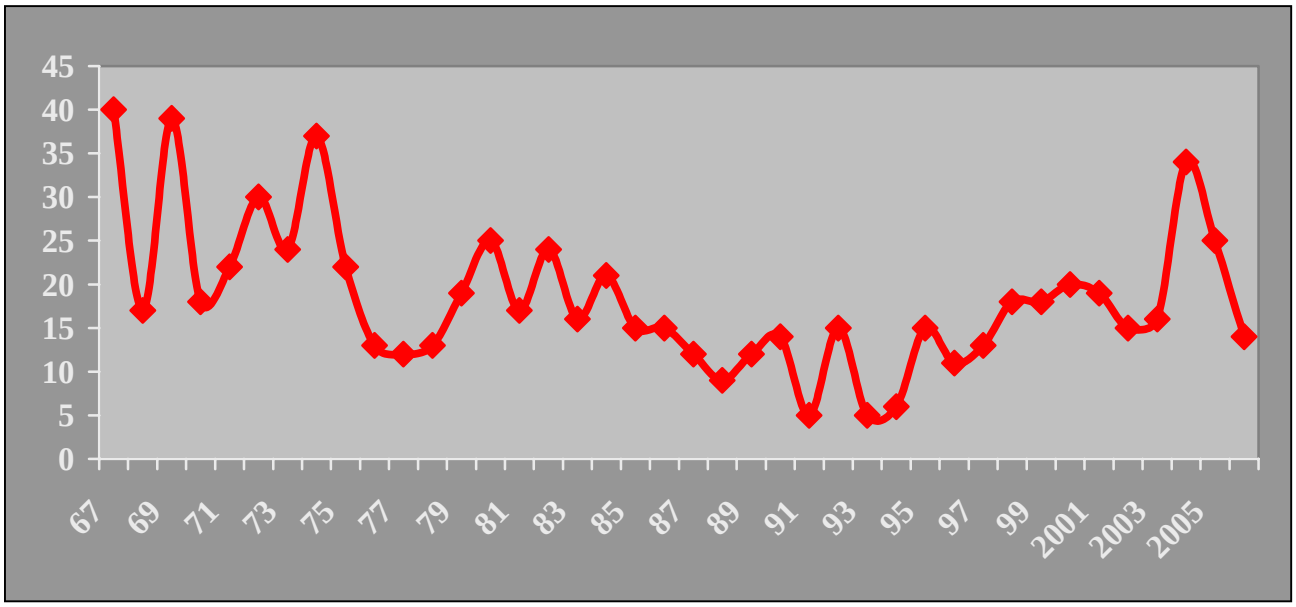
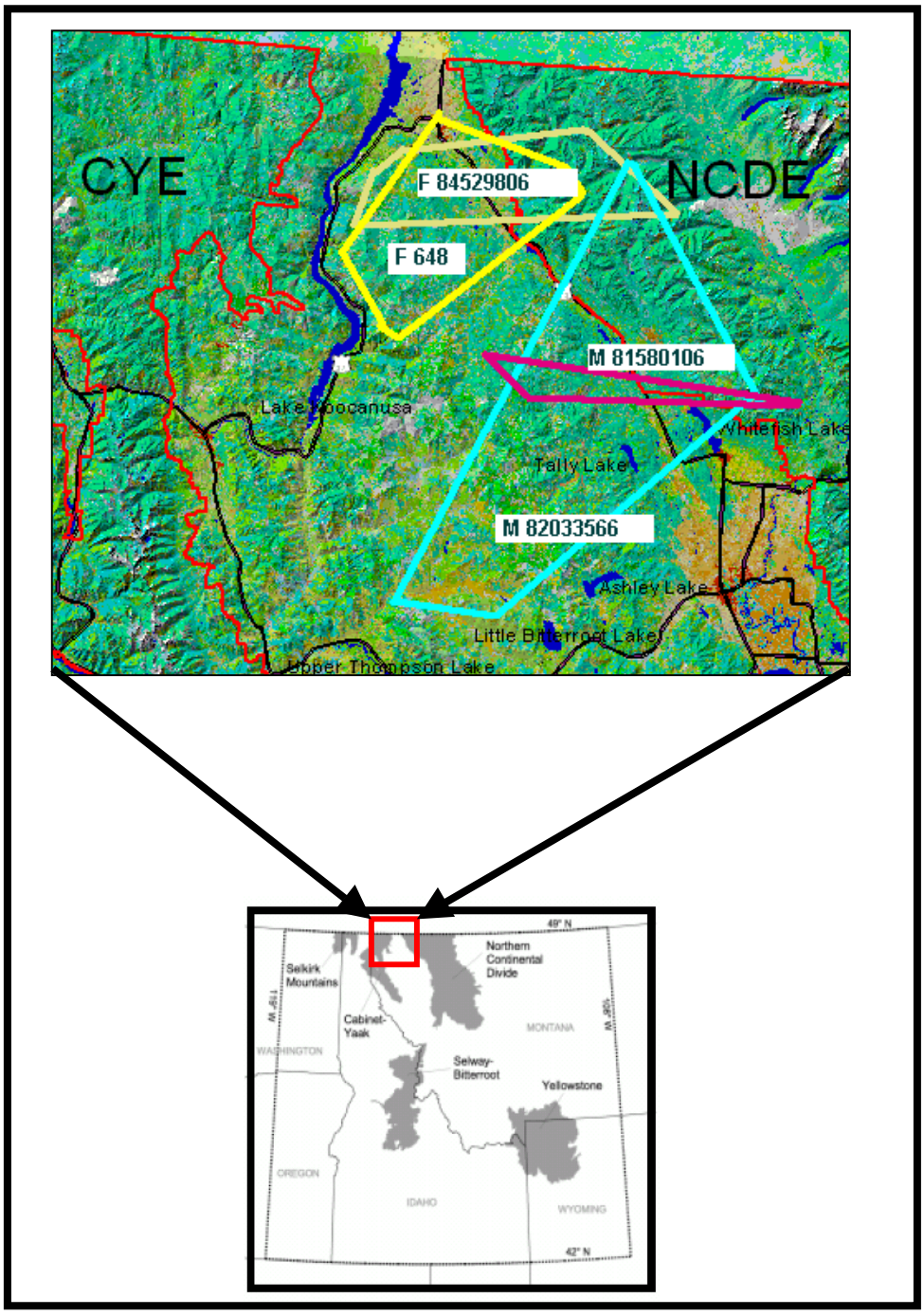


Fig. 10. Minimum convex home range polygons for 4 grizzly bears known to utilize the Salish Mountain Range, between the NCDE and the CYE recovery zones. Sample sizes for telemetry locations are small for some bears. Recovery zones are shown as red lines.



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Appendix A. Summary of grizzly bear research captures in the NCDE and Canada, 2004-2006.

Date	Left Tag	Right Tag	Avid	Sex	Age	Country	Area	Fate 2004	Fate 2005	Fate 2006
5/20/2004	40		38052875	F	Adult	US	Swan Valley	Alive	Censor	
4/20/2004	296	296	84529290	F	Adult	US	Swan Valley	Alive	Censor	
8/18/2003	648	648		F	Adult	US	Salish	Alive	Censor	
4/21/2004	111	111	84625548	F	Subadult	US	Swan Valley	DEAD		
4/27/2004	190	190	37885843, 84628512	F	Subadult	US	Swan Valley	DEAD		
5/16/2004	181	181	84623296	F	Subadult	US	Swan Valley	DEAD		
6/9/2004			84528858	F	Adult	US	N.F.Flathead	Alive	Censor	
9/15/2004			84525082	F	Adult	US	Glacier Park	Alive	Censor	
4/28/2004	285	285	51072381	F	Subadult	US	East Front	Censor		
10/13/2004			84623110	F	Adult	US	N.F.Flathead	Alive	POSSIBLE DEAD	
9/16/2004			84625525	F	Adult	US	Glacier Park	Alive	Alive	Alive
5/15/2005	297	297	76553865	F	Subadult	US	East Front		Alive	Alive
5/15/2005	205			F	Adult	US	East Front		Alive	Alive
5/15/2005	295	295	51071845	F	Subadult	US	East Front		Alive	Alive
5/13/2005	253	253	51605816	F	Adult	US	East Front		Alive	Alive
4/28/2005	312	312	84623066	F	Subadult	US	East Front		Alive	Alive
5/4/2005	312	312	84623066	F	Subadult	US	East Front			
5/28/2005	5	5	51586884	F	Adult	US	Ovando		Alive	Alive

Date	Left Tag	Right Tag	Avid	Sex	Age	Country	Area	Fate 2004	Fate 2005	Fate 2006
9/24/2004	418	418	67006850	F	Subadult	US	BIR	Alive		
5/26/2005	418	418	67006850	F	Subadult	US	N.F.Flathead		Alive	Alive
6/1/2005			71814874	F	Adult	US	BIR		Alive	Alive
5/31/2005			72023614	F	Adult	US	BIR		Alive	Censor
6/22/2005			71816812	F	Adult	US	BIR		Censor	
7/7/2005			72113035	F	Subadult	US	BIR		Censor	
5/12/2006			72113035	F	Subadult	US	BIR			Alive
6/10/2005	317	317	79050043	F	Adult	US	S.F.Flathead		Alive	Alive
6/25/2005			84524018	F	Adult	US	Middle fork		Alive	Alive
6/24/2005			76361015	F	Adult	US	Glacier Park		Alive	Alive
6/22/2005			76560093	F	Adult	US	Glacier Park		Censor	
8/8/2005	6	6	51561597	F	Adult	US	Scapegoat		Alive	Alive
9/7/2005			84523288	F	Adult	US	N.F.Flathead		Alive	Alive
9/9/2005			84624383	F	Subadult	US	Glacier Park			
9/17/2006			84624383	F	Subadult	US	Glacier Park			Alive
9/23/2005			84628889	F	Adult	US	N.F.Flathead		DEAD	
9/24/2005			76615038	F	Adult	US	Glacier Park		Alive	Alive
9/26/2005			23813296	F	Adult	US	Glacier Park		Unk	
	238	239		F	Adult	Canada	BC		Alive	Alive
	233	233		F	Adult	Canada	BC		Alive	
9/4/2006	233	233		F	Adult	Canada	N.F.Flathead			Alive

Date	Left Tag	Right Tag	Avid	Sex	Age	Country	Area	Fate 2004	Fate 2005	Fate 2006
5/2/2004	G064	G064	132353547	F	Adult	Canada	Alberta	Alive	Censor	
5/7/2004	G077	G077	132335546	F	Subadult	Canada	Alberta	Alive		
10/27/2004	G077	G077	132335546	F	Subadult	Canada	Alberta	Alive		
4/30/2005	G077	G077	132335546	F	Adult	Canada	Alberta		Alive	
5/12/2006			79110541	F	Adult	US	Glacier Park			
9/15/2006			79110541	F	Adult	US	Glacier Park			Alive
5/14/2006	14	13	4077420c51	F	Subadult	US	CSKT			Censor
5/15/2006			81577636	F	Adult	US	N.F.Flathead			Alive
6/2/2006			76553352	F	Adult	US	Swan Valley			DEAD
6/1/2006			71868109	F	Adult	US	BIR			Alive
6/11/2006	23	22	76584107	F	Adult	US	CSKT			Alive
6/26/2006			76589366	F	Subadult	US	S.F.Flathead			DEAD
9/26/2005	263			F	Subadult	Canada	Flathead			
6/23/2006	263			F	Subadult	Canada	Flathead			Alive
8/12/2006			76613125	F	Adult	US	S.F.Flathead			Alive
9/7/2006			82024327	F	Adult	US	N.F.Flathead			DEAD
9/23/2006			76600783	F	Adult	US	S.F.Flathead			Alive
9/23/2006			81886333	F	Adult	US	S.F.Flathead			Alive
10/8/2006			81602889	F	Adult	US	Bob Marshall			Alive
10/15/2006			81603277	F	Subadult	US	Bob Marshall			Alive
4/26/2005	191	191	5761	M	Adult	US	Swan Valley	Unk		

Date	Left Tag	Right Tag	Avid	Sex	Age	Country	Area	Fate 2004	Fate 2005	Fate 2006
4/25/2005	193	193		M	Adult	US	Swan Valley	Unk		
10/1/2005	12	12	84525021	M	Adult	US	Swan Valley	Unk		
6/19/2005			84627845	M	Adult	US	S.F.Flathead	Unk		
10/13/2004			84629344	M	Adult	US	N.F.Flathead	Unk		
10/10/2004			84525524	M	Adult	US	Middle fork	Alive		
10/17/2004			84525524	M	Adult	US	N.F.Flathead	Unk		
5/11/2004		1	84374365	M	Adult	US	Middle fork			
6/8/2004		1	84374365	M	Adult	US	S.F.Flathead	Unk		
10/24/2004		1	84374365	M	Adult	US	S.F.Flathead			
7/9/2006		1	84374365	M	Adult	US	S.F.Flathead			
9/16/2004			84627371	M	Adult	US	Glacier Park	Unk		
5/28/2006			84627371	M	Adult	US	Glacier Park			
5/3/2004	286	286	51320595	M	Adult	US	East Front	Alive		
4/30/2005	286	286	51320595	M	Adult	US	East Front			
5/26/2005			72072053	M	Adult	US	BIR			
5/6/2005			37585521	M	Adult	US	BIR			
5/22/2005			84529557	M	Subadult	US	N.F.Flathead			
5/5/2005			37619308	M	Adult	US	N.F.Flathead			
6/21/2005			84517797	M	Adult	US	MiddleFork			
8/25/2004			84624376	M	Yearling	US	Flathead	Alive		
5/17/2005			84624376	M	Subadult	US	S.F.Flathead			
5/20/2005			84624376	M	Subadult	US	S.F.Flathead			
6/2/2005			51088798	M	Adult	US	Glacier Park			

Date	Left Tag	Right Tag	Avid	Sex	Age	Country	Area	Fate 2004	Fate 2005	Fate 2006
5/13/2005		796	84625345	M	Adult	US	S.F.Flathead			
5/23/2005	316	316	79038096	M	Adult	US	S.F.Flathead			
5/6/2005	315	315	76316585	M	Adult	US	East Front			
5/15/2005	154 tattoo			M	Adult	US	East Front			
5/15/2005	296	296	51272891	M	Adult	US	East Front			
5/14/2006	296	296	51272891		Adult	US	East Front			
7/17/2004		417	67296863	M		US	BIR			
5/19/2005		417	67296863	M	Subadult	US	East Front			
5/19/2005	266 tattoo		51320361	M	Subadult	US	East Front			
5/13/2005	294	294		M	Adult	US	East Front			
9/21/2005			84624372	M	Adult	US	N.F.Flathead			
9/26/2005			84624372	M	Adult	US	N.F.Flathead			
9/26/2005			84383059	M	Adult	US	N.F.Flathead			
9/27/2005			23330315	M	Adult	US	Glacier Park			
5/17/2006			23330315	M	Adult	US	Glacier Park			
5/1/2006	19	18	40774D1C07	M	Yearling	US	Missions			
5/8/2006			81576580	M	Adult	US	N.F.Flathead			
5/13/2006			79050602	M	Adult	US	Glacier Park			
5/17/2006	966		79283340	M	Adult	US	Glacier Park			
5/15/2006			81596581	M	Subadult	US	N.F.Flathead			
8/27/2006			81596581	M	Subadult	US	N.F.Flathead			
5/15/2006			81774014	M	Subadult	US	N.F.Flathead			

Date	Left Tag	Right Tag	Avid	Sex	Age	Country	Area	Fate 2004	Fate 2005	Fate 2006
8/27/2006			81774014	M	Subadult	US	S.F.Flathead			
10/5/2006			81774014	M	Subadult	US	BIR			
5/26/2006	12	11	76517578	M	Adult	US	Swan Valley			
5/19/2006			79279098	M	Adult	US	Glacier Park			
5/28/2006			79046784	M	Adult	US	Glacier Park			
5/17/2006	300	300	76600112	M	Subadult	US	East Front			
5/17/2006		4262	76614342	M	Subadult	US	East Front			
5/17/2006		4261	51589351	M	Subadult	US	East Front			
5/11/2006		299	76554835	M	Subadult	US	East Front			
6/2/2006			76558780	M	Adult	US	Swan Valley			
6/11/2006			80626085	M	Adult	US	N.F.Flathead			
6/12/2006			79075329	M	Subadult	US	Glacier Park			
6/18/2006				M	Adult	US	N.F.Flathead			
6/20/2006				M	Subadult	US	Glacier Park			
6/25/2006				M	Subadult	US	Glacier Park			
6/23/2006	7		63615794	M	Subadult	US	Swan Valley			
7/10/2006			81610591	M	Subadult	US	N.F.Flathead			
7/11/2006				M	Subadult	US	N.F.Flathead			
7/13/2006			96808303	M	Adult	US	N.F.Flathead			

Date	Left Tag	Right Tag	Avid	Sex	Age	Country	Area	Fate 2004	Fate 2005	Fate 2006
7/16/2006	8		51573784	M	Adult	US	Bob Marshall			
8/16/2006			76305807	M	Subadult	US	Middle fork			
8/19/2006				M	Subadult	US	N.F.Flathead			
8/30/2006			81552593	M	Adult	US	N.F.Flathead			
9/1/2006			81631088	M	Adult	US	N.F.Flathead			
9/3/2006	unk1	unk1		M	Adult	US	Glacier Park			
9/26/2006	unk1	unk1		M	Adult	US	Glacier Park			
9/3/2006			81580106	M	Adult	US	N.F.Flathead			
9/1/2006			53594886	M	Subadult	US	Glacier Park			
9/1/2006				M	Subadult	US	Glacier Park			
5/18/2006			72001530	M	Subadult	US	BIR			
5/22/2006			71783886	M	Subadult	US	BIR			
5/24/2006			71876351	M	Subadult	US	BIR			
7/14/2006			72265850	M	Subadult	US	BIR			
7/17/2006			72265850	M	Subadult	US	BIR			

Appendix B. Reproductive histories of trend monitoring females in the NCDE and Canada, 2004-2006.

Year	Zone	Age Class	Tag	Avid	Number Young
2004	Swan/Missions	Adult	40	38052875	2 yearlings
2005	Swan/Missions	Adult	40	38052875	2 2-year-olds
2004	Swan/Missions	Adult	296		None
2005	Swan/Missions	Adult	296		Unk, but cubs
2004	North Fork	Adult	648		1 cub
2005	North Fork	Adult	648		1 yearling
2004	Glacier Park	Adult		84525082	None
2005	Glacier Park	Adult		84525082	None
2004	Glacier Park	Adult		84625525	None
2005	Glacier Park	Adult		84625525	None
2006	Glacier Park	Adult		84625525	None
2004	North Fork	Adult		84623110	None
2005	North Fork	Adult		84623110	3 cubs
2004	East Front	Adult	205		2 cubs
2005	East Front	Adult	205		2 yearlings
2006	East Front	Adult	205		3 cubs
2005	East Front	Adult	312	84623066	None
2006	East Front	Adult	312	84623066	2 cubs
2005	East Front	Adult	253	51605816	2 yearlings

Year	Zone	Age Class	Tag	Avid	Number Young
2006	East Front	Adult	253	51605816	
2004	North Fork	Adult		84528858	None
2005	North Fork	Adult		84528858	None
2005	Ovando	Adult	5	51586884	1 yearling
2006	Ovando	Adult	5	51586884	UUnk
2005	BIR/2Med	Adult		71814874	None
2006	BIR/2Med	Adult		71814874	Unk
2005	BIR/2Med	Adult		72023614	None
2006	BIR/2Med	Adult		72023614	Unk
2005	BIR/2Med	Adult		71816812	None
2005	South Fork	Adult	317	79050043	None
2006	South Fork	Adult	317	79050043	None
2005	BIR/2Med	Adult		84524018	None
2006	BIR/2Med	Adult		84524018	None
2005	Glacier Park	Adult		76361015	None
2006	Glacier Park	Adult		76361015	2 cubs
2005	Glacier Park	Adult		76560093	None
2005	Scapegoat	Adult	6	51561597	None
2006	Scapegoat	Adult	6	51561597	Unk

Year	Zone	Age Class	Tag	Avid	Number Young
2005	North Fork	Adult		84523288	2 cubs
2006	North Fork	Adult		84523288	2 yearlings
2005	North Fork	Adult		84628889	None
2005	Glacier Park	Adult		76615038	None
2006	Glacier Park	Adult		76615038	None
2005	Glacier Park	Adult		23813296	1 yearling
2004	British Columbia	Adult	238		3 cubs
2005	British Columbia	Adult	238		None
2006	British Columbia	Adult	238		1 cub
2004	British Columbia	Adult	233		2 3-year-olds
2005	British Columbia	Adult	233		Unk
2006	British Columbia	Adult	233		None
2004	Alberta	Adult	G064		2 cubs
2005	Alberta	Adult	G064		1 yearling
2005	North Fork	Subadult	418	67006850	None
2006	North Fork	Adult	418	67006850	None
2006	Glacier Park	Adult		79110541	None
2006	North Fork	Adult		81577636	2 yearlings

Year	Zone	Age Class	Tag	Avid	Number Young
2006	Swan/Missions	Adult		76553352	None
2006	BIR	Adult		71868109	2 yrlings
2006	Missions	Adult	23	76584107	3 cubs
2006	Swan/Missions	Adult		82024327	None
2006	South Fork	Adult		76600783	1 cub
2006	South Fork	Adult		81886333	None
2006	Bob Marshall	Adult		81602889	2 cubs
2006	Bob Marshall	Adult		81603277	None

Appendix C. Information on female grizzly bears and their young (not all young were captured) involved in management actions, 2004-2006.

Year	Type of Bear	Left tag	Right tag	Avid #	Area	Fate	Cause of death
2004	Mgmt solitary adult	257	257	34375517	BIR	ALIVE	
2004	Mgmt subadult			51085276	BIR	Censor	
2004	Mgmt subadult			51593054	BIR	Censor	
2004	Mgmt adult with young			37887572	Flathead Valley	ALIVE	
2004	Mgmt young			84625280	Flathead Valley	ALIVE	
2004	Mgmt young			84624376	Flathead Valley	ALIVE	
2005	Mgmt adult with young			37887572	Flathead Valley	ALIVE	
2005	Mgmt young			84625280	Flathead Valley	ALIVE	
2005	Mgmt young			84624376	Flathead Valley	ALIVE	
2006	Mgmt adult with young			84624376	Flathead Valley	ALIVE	
2006	Mgmt young				Flathead Valley	ALIVE	
2006	Mgmt young				Flathead Valley	ALIVE	
2004	Mgmt subadult			84528778	Swan Valley	DEAD	Management
2004	Mgmt adult with young			84529806	N.F.Flathead	ALIVE	
2005	Mgmt solitary adult			84529806	N.F.Flathead	ALIVE	
2004	Mgmt young			84623883	Fortine	DEAD	Capture-related
2004	Mgmt young			084624095_b	Fortine	DEAD	Capture-related
2004	Mgmt young			084383813_c	Fortine	DEAD	Capture-related
2006	Mgmt adult, unk cubs			84529806	N.F.Flathead	ALIVE	
2004	Mgmt adult with young	254	254	232996344	Glacier Park	ALIVE	
2004	Mgmt young	254_a	254_a		Glacier Park	ALIVE	
2004	Mgmt young	254_b	254_b		Glacier Park	ALIVE	
2005	Mgmt solitary adult	254	254	232996344	Glacier Park	Censor	
2005	Mgmt adult with young			53323794	Glacier Park	ALIVE	
2005	Mgmt young				Glacier Park	ALIVE	

Year	Type of Bear	Left Tag	Right Tag	Avid #	Area	Fate	Cause of death
2005	Mgmt young				Glacier Park	ALIVE	
2006	Mgmt solitary adult			53323794	Glacier Park	ALIVE	
2004	Mgmt solitary adult			23518519	Middle Fork	ALIVE	
2004	Mgmt subadult			37557822	Middle Fork	DEAD	Malicious
2005	Mgmt adult with young			23518519	Middle Fork	DEAD	Management
2005	Mgmt young				Middle Fork	DEAD	Management
2005	Mgmt young				Middle Fork	DEAD	Management
2004	Mgmt adult with young	212	4263	51566878	Middle Fork	ALIVE	
2004	Mgmt young			84382811	Middle Fork	ALIVE	
2005	Mgmt solitary adult	212	4263	51566878	Rocky Mtn Front	DEAD	Management
2003	Mgmt solitary adult	92	92		Swan Valley	ALIVE	
2004	Mgmt solitary adult	92	92		Swan Valley	ALIVE	
2005	Mgmt solitary adult	92	92		Swan Valley	DEAD	
2003	Mgmt solitary adult	22	22	38100864	Swan Valley	ALIVE	
2004	Mgmt solitary adult	22	22	38100864	Swan Valley	ALIVE	
2005	Mgmt adult with young	22	22	38100864	Swan Valley	ALIVE	
2005	Mgmt young	22_a	22_a	81770822	Swan Valley	ALIVE	
2005	Mgmt young	22_b	22_b	96597530	Swan Valley	ALIVE	
2006	Mgmt adult with young	22	22	38100864	Swan Valley	ALIVE	
2006	Mgmt young	22_a	22_a	81770822	Swan Valley	ALIVE	
2006	Mgmt young	22_b	22_b	96597530	Swan Valley	ALIVE	
2004	Mgmt solitary adult	216	216		Rocky Mtn Front	ALIVE	
2005	Mgmt solitary adult	216	216		Rocky Mtn Front	Censor	
2004	Mgmt adult with young			144	Rocky Mtn Front	Censor	
2004	Mgmt young		mclellan		Rocky Mtn Front	UNRESOLVED	
2004	Mgmt subadult	4	22		Rocky Mtn Front	DEAD	Management
2004	Mgmt subadult	3	21	51561278	Rocky Mtn Front	DEAD	Management
2004	Mgmt adult with young	206	206	84524096	Fortine	DEAD	Management

Year	Type of Bear	Left Tag	Right Tag	Avid #	Area	Fate	Cause of Death
2004	Mgmt young			84381861	Fortine	DEAD	Management
2004	Mgmt young			84516308	Fortine	DEAD	Management
2004	Mgmt adult with young			84383870	Middle Fork	DEAD	Train
2004	Mgmt young			84623527	Middle Fork	DEAD	Management
2004	Mgmt young			84623539	Middle Fork	DEAD	Management
2004	Mgmt subadult			84626296	North Fork	DEAD	Management
2006	Mgmt solitary adult			82018000	Flathead Valley	ALIVE	
2006	Mgmt adult with young	21	20	41503d5a16	Missions	Censor	
2006	Mgmt young				Missions	Censor	
2006	Mgmt solitary adult			72121834	BIR	ALIVE	
2004	Mgmt adult with young	413-414		34259287,34259592	BIR	Censor	
2004	Mgmt young				BIR	Censor	
2004	Mgmt young				BIR	Censor	

Appendix D. Summary of grizzly bear mortalities in the NCDE, 2004-2006.

Date	Avid #	Tag #	Sex	Age Class	Cause	Certainty	Discovery	Notes
05/10/2006			M	Subadult	Mistaken Id	Known	Reported	Mistaken id
05/26/2006			Unk	Cub	Train	Known	Reported	Train
05/26/2006			M	Cub	Train	Known	Reported	Train
05/28/2006	79046784		M	Adult	Capture related	Known	Reported	Died after capture
06/16/2006	81583847		M	Subadult	Mgmt	Known	Reported	Mgmt removal, bear wounded
07/10/2006	81610591		M	Subadult	Capture related	Known	Reported	Died of injuries
07/20/2006	76553352		F	Subadult	Illegal	Known	Unreported	Illegal, shot
08/16/2006	81542363	782	F	Subadult	Augmentation	Known	Reported	Augmentation
08/27/2006	81596581		M	Yearling	Mgmt	Known	Reported	Habituated, live removal
07/04/2006	76554835	299	M	Subadult	Illegal	Known	Unreported	Bear found shot
09/11/2006	82024327		F	Adult	Illegal	Known	Unreported	Bear shot
10/02/2006	81774014		M	Yearling	Illegal	Known	Reported	Mgmt, habituated
09/28/2006	76589366		F	Subadult	Unk	Known	Unreported	Transmitter/hair found
10/22/2006			M	Cub	Train	Known	Reported	Train
04/10/2005		274	M	Adult	Mgmt	Known	Reported	Cattle
04/30/2005	84626074		M	Subadult	Self defense	Known	Reported	Self defense
05/02/2005			M	Adult	Natural	Known	Reported	Natural-fighting
05/03/2005			M	Subadult	Natural	Known	Reported	Natural-fighting
05/12/2005			F	Adult	Illegal	Known	Reported	Poached/malicious
05/14/2005		13	M	Adult	Mistaken Id	Known	Reported	Mistaken id
05/15/2005	51303813		M	Adult	Illegal	Known	Reported	Poached/malicious
05/17/2005			Unk	Cub?	Illegal	Known	Reported	Poached/malicious
06/05/2005	51273314	291	M	Subadult	Mgmt	Known	Reported	Sheep depredation, mgmt removal
06/10/2005			Unk	Unk	Vehicle	Probable	Reported	Road kill
06/19/2005	84629365		M	Adult	Illegal	Known	Unreported	Poached/malicious
06/20/2005	407751970	16 and 17	F	Adult	Capture related	Known	Unreported	Research capture

Date	Avid #	Tag #	Sex	Age Class	Cause	Certainty	Discovery	Notes
06/20/2005			Unk	Cub	Capture related	Known	Unreported	Research capture
06/20/2005			Unk	Cub	Capture related	Known	Unreported	Research capture
07/08/2005	37605609	92	F	Adult	Undetermined	Known	Unreported	Suspected poisoning
09/06/2005			M	Subadult	Illegal	Known	Reported	Poached/malicious
09/14/2005	84623110		F	Adult	Illegal	Probable	Reported	Poached/malicious
09/14/2005			Unk	Cub	Illegal	Probable	Reported	Poached/malicious
09/14/2005			Unk	Cub	Illegal	Probable	Reported	Poached/malicious
09/15/2005	51566878	212	F	Adult	Mgmt	Known	Reported	Cattle depredation, mgmt removal
09/20/2005			Unk	Unk	Self defense	Possible	Reported	Self defense
09/30/2005	84626290		F	Adult	Augmentation	Known	Reported	Augmentation
09/30/2005	84628889		F	Adult	Capture related	Known	Unreported	Research capture
10/05/2005	23518519		F	Adult	Mgmt	Known	Reported	Front country development, mgmt removal
10/05/2005			F	Cub	Mgmt	Known	Reported	Front country development, mgmt removal
10/05/2005			F	Cub	Mgmt	Known	Reported	Front country development, mgmt removal
10/17/2005			F	Adult	Illegal	Possible	Reported	Front country development, illegal
10/18/2005	84525021	12	M	Adult	Illegal	Known	Reported	Front country development, illegal
10/27/2005			M	Adult	Self defense	Known	Reported	Self defense
04/26/2004		1	M	Subadult	Illegal	Known	Reported	Possible mistaken id
05/16/2004			M	Adult	Mistaken Id	Known	Reported	Mistaken id, confession
06/07/2004	38051794		F	Subadult	Illegal	Known	Reported	Suspected poisoning
05/26/2004	37885843,84628512	190	F	Subadult	Illegal	Known	Reported	Possible mistaken id
07/08/2004	84623296	181	F	Subadult	Probable illegal	Known	Reported	Suspected poisoning
07/23/2004			M	Subadult	Vehicle	Known	Reported	Vehicle
08/02/2004	84379069		M	Yearling	Mgmt	Known	Reported	Orphaned - to zoo
08/02/2004	84626296		F	Yearling	Mgmt	Known	Reported	Bear died
08/17/2004		111	F	Subadult	Probable illegal	Known	Reported	Undetermined
08/17/2004	34259287,34259592	413-414	F	Adult	Mgmt	Known	Reported	Front country development, mgmt removal
08/17/2004			F	Cub	Mgmt	Known	Reported	Front country development, mgmt removal

Date	Avid #	Tag #	Sex	Age Class	Cause	Certainty	Discovery	Notes
08/17/2004			M	Cub	Mgmt	Known	Reported	Front country development, mgmt removal
08/31/2004			F	Cub	Vehicle	Known	Reported	Vehicle
08/31/2004			M	Adult	Mgmt	Known	Reported	Front country development, mgmt removal
09/05/2004			M	Subadult	Vehicle	Known	Reported	Vehicle
09/15/2004	38047294,84524096	206	F	Adult	Mgmt	Known	Reported	Front country development, mgmt removal
09/15/2004	84381861		F	Cub	Mgmt	Known	Reported	Front country development, mgmt removal
09/15/2004	84516308		F	Cub	Mgmt	Known	Reported	Front country development, mgmt removal
09/16/2004		4 or 22	F	Yearling	Mgmt	Known	Reported	Front country development, mgmt removal
09/16/2004			F	Yearling	Mgmt	Known	Reported	Front country development, mgmt removal
09/24/2004			F	Adult	Self defense	Known	Reported	Self defense
09/29/2004	84383870		F	Adult	Train	Known	Reported	Train
09/29/2004	84623527		F	Cub	Mgmt	Known	Reported	Orphaned - to zoo
09/29/2004	84623539		M	Cub	Mgmt	Known	Reported	Orphaned - to zoo
10/05/2004	84528778		F	Subadult	Mgmt	Known	Reported	Front country development, mgmt removal
10/06/2004		292	M	Yearling	Mgmt	Known	Reported	Front country development, mgmt removal
10/24/2004			M	Subadult	Illegal	Known	Reported	Front country development, mgmt removal
10/25/2004		17	F	Adult	Illegal	Known	Reported	Poach/malicious
10/28/2004			Unk	unk	Probable illegal	Known	Reported	Poach/malicious
11/09/2004			Unk	Adult	Probable illegal	Known	Reported	Poach/malicious
11/17/2004	84626881		M	Subadult	Train	Known	Reported	Train
11/01/2004	84623883		M	Cub	Capture related	Probable	Unreported	Orphaned in wild after capture
11/01/2004	84624095		F	Cub	Capture related	Probable	Unreported	Orphaned in wild after capture
11/01/2004	84383813		F	Cub	Capture related	Probable	Reported	Orphaned in wild after capture