

**MONTANA FISH, WILDLIFE & PARKS  
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION**

**Species: Black Bear**  
**Region: Region 1**  
**Hunting District: All Region 1 BMUs**  
**Year: 2024**

- 1. Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**

Allow FWP to request the submission of two premolar teeth from harvested black bears. Currently only one tooth is required. Asking hunters to submit two premolar teeth would increase effectiveness of obtaining an age due to broken teeth when extracting.

- 2. What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**

Region 1 initiated a pilot project evaluating a mandatory submission of a tooth from harvested black bears to replace a mandatory check of skulls. Teeth are collected to obtain age data on harvested bears. This information will be used to produce a population estimate via an Integrated Population Model (development in process), to inform biologist on black bear population trends and to generate management recommendations. Bear hunters in Region 1 are required to report a harvest through the FWP Call Center and have the option of mailing the tooth to a regional office, dropping the tooth off at an FWP satellite office (drop box), or bringing the tooth to a regional office. The objective of this proposal is to provide additional opportunity to age black bears since ~23% of teeth submitted during the pilot year were not viable for age analysis which is higher than the 16% average for teeth not viable for age analysis seen by other states.

- 3. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints.**

Success will be measured by the percentage of viable teeth submitted for aging. Age was obtained for 77% of the bears harvested in the spring of 2023. Success will be an increase in the percentage of bears aged by tooth submission.

- 4. What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

Black bears are an important game species for many hunters in Montana, particularly in Region 1 where 35-40% of the states bear harvest occurs. Bears are also important to the general public for viewing opportunity. Thus, populations need to be managed in a sustainable manner in order to continue to offer hunting and viewing opportunity. Sustainable management requires data about the population, such as age and sex information. By collecting 2 teeth from harvested black bears, the likelihood of obtaining its age is increased, which in turn will provide more data for estimating our populations and in turn, allow for more sustainable management of this important species.

- 5. Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).**

This change would require minimal additional effort by successful black bear hunters while providing increased data for management of the species.

- 6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**

During season setting meetings throughout the region (2023) we found support for the proposal owing to sportsmen understanding the need for increasing the percentage of viable teeth for aging.

Submitted by: Zack Farley  
Date: 19/July/2023

Approved: \_\_\_\_\_  
Regional Supervisor / Date

Disapproved / Modified by: \_\_\_\_\_  
Name / Date

Reason for Modification:



## Region 1 Pilot Project Summary: Mandatory Tooth Submission from Black Bears Harvested in Region 1 – Year 1 (2022).

The Fish and Wildlife Commission approved conducting a Region 1 pilot project evaluating mandatory submission of a tooth from harvested black bears to replace a mandatory check of hides and skulls, starting in 2022. The pilot project requires hunters to report a harvest through the FWP Call Center and mandatory submission of a tooth. Hunters have the option of mailing a tooth to a regional office, dropping the tooth off at an FWP satellite office (drop box), or bringing the tooth to a regional office. FWP communication, wildlife and enforcement staff provided education materials to hunters. Educational information was also available on the FWP web site.

The first year of the pilot project (2022) was considered an introductory year where FWP staff would learn and adapt to help improve the process and determine if additional educational outreach or changes to the regulations were necessary. The tooth age information will be used to produce a population estimate via an Integrated Population Model (in development and done in conjunction with DNA population estimates), to inform biologists on black bear population status and trends, and to generate management recommendations.

Educational efforts included: information on the FWP web site, FWP staff providing information to individuals when purchasing a license, contacts with hunters having questions about the process, and wildlife staff offering to show hunters how to collect teeth when available to do so. Further education and familiarity with the process should continue to improve tooth and data quality.

The processing and aging of teeth at the contract laboratory typically takes about 8 months. We received ages from both the 2022 spring and fall seasons. We do not have ages for the 2023 Spring season as of this date. Due to this delay the below analysis is for 2022 only.

### **R1 Front Office Staff Feedback:**

Front office staff are typically the first contact with hunters at the regional office. Based on R1 front office staff feedback, there was general appreciation and support of mandatory tooth submission. R1 front office staff indicated most hunters seemed supportive of submitting a tooth in lieu of having to bring in the skull and hide. Some of the issues observed involved missing information on tooth submission forms from both mailed and dropped off teeth, difficulty with mailing due to too much packing material for the envelope to go through the post office machinery resulting in additional postage due or returned mail, not enough packing material resulting in the tooth being lost during the mail sorting process, submission of broken teeth, and a few hunters not understanding which tooth to submit. Increased education has helped reduce some of these issues and the front office staff started handing out tooth submission data sheets to bear hunters purchasing a license. Additional and continued education is needed, particularly for teeth being mailed. Contact with sportsmen remained high and involved discussions about the process when people purchased licenses and dropped off teeth after harvest.

### **Wildlife Feedback:**

Initially, a few hunters pushed back on the change indicating FWP staff should just pull the tooth. Concern over the pilot project seemed to diminish as the 2022 spring season progressed and into the fall season. We have received verbal support for the new system by the hunters, taxidermists and outfitters, who liked the idea of not being required to present the hide and skull. The information received from the call center and tooth submission consists only of basic harvest information and information about the bear. If additional information is needed, this could be a drawback. There is a limit to the number of questions the call center can ask. As a result, we focused on the primary information needed for evaluating the harvest. No information related other areas hunted (hunter effort) was obtained. For the 2022 season, hound hunting did not occur in R1. Recent changes adopted by the Commission will allow hound hunting to occur in portions of R1. Obtaining information on black bear harvest by use of hounds will be important for evaluating this method of harvest and may require additional process. Overall, the issues related to the pilot project have been minor.

Feedback from the lab conducting cementum analysis on the teeth suggested FWP submit all the teeth collected, even if broken, as they can obtain an age from some broken teeth. All teeth collected were submitted for aging.

### **Enforcement Feedback:**

During the spring and fall seasons there was an initial 90 – 95% compliance rate for tooth submission. Approximately 50 hunters during the 2022 season did not submit a tooth, requiring further prompting. A letter was sent to hunters not submitting a tooth explaining it was mandatory and requesting a tooth be submitted. This was done after both the spring and fall season. For hunters still not submitting a tooth, a warden followed up with the hunter to collect the tooth. This was considered an educational year and tickets were not issued. Additional teeth were received from this effort.

### **2022 Results:**

#### Spring

- 447 bears harvested.
- 426 teeth received.
- 410 ages obtained (91.7% of harvest).

#### Fall

- 290 bears harvested.
- 279 teeth received.
- 272 ages obtained (93.8% of harvest).

**Total for the 2022 season**

Season	Total Harvest	Teeth Received	Teeth Aged	Broken, no age	Not Received
Spring	447	426	410	16	21
Fall	290	279	272	7	11
Total	737	705	682	23	32

- Ages were obtained from 92.5% of the bears harvested in 2022.
- Above the 84% average reported by other states with mandatory tooth submission.
- We were able to obtain additional teeth from hunters who did not submit a tooth through contacts conducted by enforcement.
- Some additional effort was required by enforcement.
- This is a new process and cooperation may change over time.

**Recommendations to improve the process:**

R1 has proposed to require the submission of two premolar teeth. Current regulations require only one tooth be submitted. Even though we had high return rates and over 90% success at obtaining an age from harvested black bears, the numbers would likely be increased by requesting 2 teeth. The percentage of teeth received from harvested bears in 2022 are adequate for informing Region 1 population estimates. For Regions that harvest much fewer bears increased the number of bears aged could be valuable, should the pilot project be expanded to other area of the state. By requiring hunters to submit a second tooth we would be able to evaluate if there is any benefit from requesting more than one tooth and inform future decisions.

Continued educational efforts to include tooth collection training sessions and information on how to properly package teeth when being mailed.

Identify ways to improve the tooth mailing process to reduce increased postage requirements and reduce tooth loss in the mailing process.

Evaluate education information to improve ability to extract an unbroken tooth.

**MONTANA FISH, WILDLIFE & PARKS  
HUNTING SEASON / QUOTA CHANGE SUPPORTING INFORMATION**

**Species: Black Bear**  
**Region: Region 1**  
**Hunting District: BMU 140, 141, 150, and 170**  
**Year: 2024**

**1. Describe the proposed season / quotas changes and provide a summary of prior history (i.e., prior history of permits, season types, etc.).**

Extend spring black bear season in BMUs 140, 141, 150 and 170 to June 15<sup>th</sup>.

Since 2012, the black bear season in Region 1 has consisted of a spring season running from April 15<sup>th</sup> through May 31<sup>st</sup>, and a fall season that includes an early archery season starting at the same time as the elk and deer archery season, ending September 14<sup>th</sup>, and a general black bear season that begins Sept 15<sup>th</sup> and continues through the end of the general elk and deer season. In 2022, the spring black bear season in BMU 130 was extended to June 15<sup>th</sup>. This proposal aims to extend the spring black bear season to June 15 in BMUs 140, 141, 150 and 170.

**2. What is the objective of this proposed change? This could be a specific harvest amount or resulting population level or number of game damage complaints, etc.**

The objective of this proposal is to provide additional black bear harvest opportunity in hunting districts that are difficult to access in the spring due to persistent snow cover and winter road closures (BMUs 140, 141, and 150); and provide additional hunting pressure in BMU 170 to reduce black bear density and bear conflicts in this urban unit.

**3. How will the success of this proposal be measured? This could be annual game or harvest surveys, game damage complaints.**

Extending spring black bear season is expected to provide increased harvest opportunity and will be evaluated using:

- Total harvest and proportion of female bears in the harvest.

In 2024, MFWP will be implementing a new black bear population monitoring strategy in Region 1 that will utilize DNA mark/recapture abundance estimate, a strategy that is similar to what is being implemented for mountain lions and will enhance our ability to monitor black bear populations and make harvest management recommendations. Until this new monitoring system is in place, MFWP continues to use the criteria developed in 1994<sup>1</sup>, with the understanding that these criteria, taken together, lack statistical power to determine changes in population trend in a timely manner required to meet the needs of an adaptive management framework.

These criteria were:

- a. *No more than 40% of the annual harvest be composed of females*
- b. *Median age of harvested females is >6 years for females and >4 years for males.*
- c. *If harvest does not comply with a) and b) in any 3 consecutive years, all data from the BMU would be evaluated to determine if management changes are needed.*

Evaluation of this 1994 criteria indicated the proportion of females in the harvest was the metric most often met and may be more sensitive in identifying possible overharvest than age criteria (Mace and Chilton-Radandt 2011)<sup>2</sup>. Until

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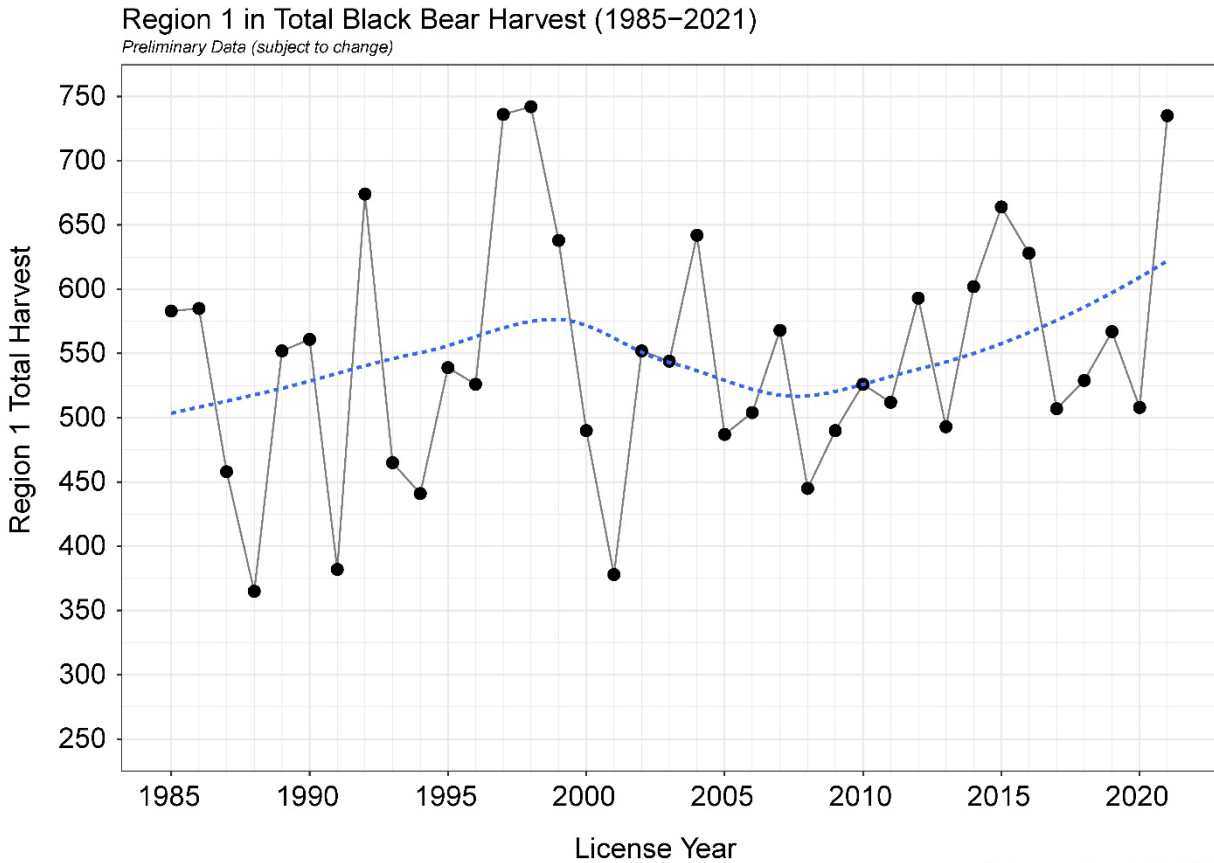
<sup>1</sup> Montana Fish, Wildlife, & Parks. 1994. Final environmental impact statement, management of black bears in Montana. Montana Fish, Wildlife, & Parks, Helena, Montana, USA.

<sup>2</sup> Mace, R.D. and T. Chilton-Radandt. 2011. Black bear harvest research and management in Montana: Final Report. Montana Department of Fish, Wildlife & Parks, Wildlife Division, Helena, Montana, USA.

implementation of our new DNA mark/recaptures monitoring strategy, short-term trend (2-3 years) in female proportion of harvest and total harvest is our best indicator of the population effect of management.

**4. What is the current population's status in relation to the management objectives? (i.e., state management objectives from management plan if applicable; provide current and prior years of population survey, harvest, or other pertinent information).**

Black bear harvest in Region 1 has varied by year and within individual BMUs. Since 1985, total black bear harvest in Region 1 has ranged from 378 in 2001 to 742 in 1998. Harvest in the 2021 season was 735 bears, the highest total harvest since 1998 (Figure 1).



**Figure 1.** Region 1 total black bear harvest by license year. The dashed line represents the harvest trend over time.

Hunter harvest is not evenly distributed across BMUs, and annual harvest in BMUs 141, 150 and 170 is among the lowest in the region (Table 1). While the spring bear season is usually the most productive, spring harvest accounts for only 10% of the total harvest in BMU 150 – a BMU located entirely within the Bob Marshall Wilderness and inaccessible well into May (Table 2).

**Table 1:** Total black bear harvest in Region 1 by BMU – 2021 Season. Highlighted cells indicate 2021 total harvest in BMUs subject to the proposed season extension.

<b>Region 1 Black Bear Harvest by BMU</b>														
BMU	100	101	103	104	110	120	121	122	123	130	140	141	150	170
<b>2021 Season Total Harvest</b>	75	52	126	48	51	40	99	93	44	42	37	7	11	10

Total annual black bear harvest in BMU 140 is more typical, but still lags much of the region. Primary access to this BMU is provided by forest service roads that run along the east and west sides of Hungry Horse Reservoir (East Side Reservoir Road #38 and West Side Reservoir Road #895). Snow can keep portions of these roads closed well into May, with winter closures along the majority of the East Side Reservoir Road extending to May 15 each year.

While implementation of a new black bear management strategy is imminent, until then, the proportion of females and total harvest remain our best indication of population effects of changes in harvest. With annual harvest averaging fewer than nine bears, the proportion of females in the harvest is less indicative of population status in these districts with low annual harvest. Based on available habitat and annual harvest, BMUs 141 and 150 can sustain additional harvest and season extension. In BMU 170, our objective is to increase harvest to reduce conflict in this largely urban unit. Extending the season in BMU 170 will help achieve that goal. Harvest trends in BMU 140 have been stable over the last ten years and female proportion below 40% of the total harvest (Table 2). Inclusion of BMU 140 within this season extension proposal will provide consistency across BMUs in the Swan (HD 130), South Fork (BMU 140 and 150), and Middle Fork (BMU 141), as well as provide additional hunting pressure on black bears within an area where ungulate numbers have been struggling in recent years (BMU 140, 141 and 150).

**Table 2:** Total harvest, proportion of total harvest taken during the spring season and proportion of female bears in the harvest for BMUs 140, 141, 150 and 170 for the ten-year period from 2012 – 2021.

License Year	BMU 140			BMU 141			BMU 150			BMU 170		
	Total Harvest	% Harvest in Spring	% Female	Total Harvest	% Harvest in Spring	% Female	Total Harvest	% Harvest in Spring	% Female	Total Harvest	% Harvest in Spring	% Female
2012	27	74%	37%	10	80%	50%	11	13%	18%	16	24%	25%
2013	33	84%	24%	7	71%	0%	6	0%	50%	10	64%	20%
2014	37	74%	16%	7	43%	14%	5	20%	0%	20	50%	25%
2015	46	79%	28%	12	100%	17%	4	0%	0%	24	25%	17%
2016	47	69%	19%	6	60%	50%	8	10%	0%	9	27%	22%
2017	36	94%	36%	6	80%	50%	4	40%	0%	13	47%	23%
2018	39	76%	21%	5	57%	20%	11	0%	73%	20	33%	25%
2019	38	95%	34%	9	100%	0%	10	8%	10%	19	47%	21%
2020	34	100%	15%	11	67%	9%	8	0%	12%	8	100%	0%
2021	37	82%	19%	7	71%	14%	11	10%	18%	10	46%	10%
<b>10 yr. ave.</b>	<b>37.4</b>	<b>83%</b>	<b>25%</b>	<b>8</b>	<b>73%</b>	<b>22%</b>	<b>7.8</b>	<b>10%</b>	<b>18%</b>	<b>14.9</b>	<b>46%</b>	<b>19%</b>

**5. Provide information related to any weather/habitat factors, public or private land use or resident and nonresident hunting opportunity that have relevance to this change (i.e., habitat security, hunter access, vegetation surveys, weather index, snow conditions, and temperature / precipitation information).**

Hunter access to BMUs 140, 141 and 150 during the spring bear season is limited by persistent snowpack, wilderness designation (BMU 141 and 150) and by road closures in BMU 140 that extend into the middle of May. BMU 170 is primarily urban and private lands where we would like to reduce black bear density to reduce conflicts.

**6. Briefly describe the contacts you have made with individual sportsmen or landowners, public groups or organizations regarding this proposal and indicate their comments (both pro and con).**

This proposal was discussed during R1 public during scoping meetings held in late June. The proposal received unanimous support.

Submitted by: Franz Ingelfinger

Date: 5/26/2023

Approved:

\_\_\_\_\_   
 Regional Supervisor / Date

Disapproved / Modified by:

\_\_\_\_\_   
 Name / Date



Reason for Modification: