

Responses prepared by WDFW staff to Commissioner Questions after on the Black Bear Spring Special Permit Rule November 10, 2021

At the Fish and Wildlife Commission meeting on October 22, after the staff briefing on the proposed black bear spring hunt special permit rule and public testimony period was completed, some Commissioners posed questions for staff response prior to the decision scheduled for November 19, 2021. The Commission asked that the questions be provided in writing, along with any other questions Commissioners felt would be useful in making an informed decision. This document provides responses to follow-up questions received by WDFW staff from the Fish and Wildlife Commissioners. Questions are not consecutively numbered and are organized by topic in response to Commissioner's questions.

This document will be discussed at a special meeting of the Commission, noticed to the public to occur on November 15, 2021. Commissioner questions are presented as asked or noted without phrasing modifications and may require clarification at the November 15.

Topic: Bear population, density, harvest numbers

Commissioner Smith

1. What specific black bear population or density estimates are being used for season setting? What information is being used to evaluate harvest given that bears are so susceptible to over harvest?

Response: We use the guidelines outlined in the Game Management Plan (GMP) that consider percent females in the harvest and the average ages of harvested males and females. This methodology is a common tool used by managers in other states. We do not currently use a population or density estimate to set black bear seasons.

Harvest trends are a good indicator of population levels and we monitor those over time. Based on the trend assessment of these data we do not see direct indicators of over-harvest within the Black Bear Management Units. We regulate the spring harvest by limiting the number of hunters by using special permits.

In addition, we have started collecting density estimates in specific areas of the state. Biologists use these densities, where they exist, as supplemental information on local black bear population. We are working towards a system that would make these data an integral part of harvest recommendations, but this process is still in its infancy.

Commissioner Smith

2. How are black bear density estimates derived from Welfelt et al. (2019) and WDFW (2021) research on black bear density being used for management and when considering permit levels, etc.?

Response: As explained in greater detail above, we use percent females in the harvest and age structure as an indicator of population viability. WDFW Biologists also consider the newly derived densities, where they exist, as supplemental information on local black bear populations. We are working towards a system that would make these data an integral part of harvest recommendations, but this process is still in its infancy as we are still collecting data.

Commissioner Smith

3. Present permit/license numbers and harvest by sex annually for all GMUs and distinguish between those killed for spring hunt, timber damage, and fall hunt for the past 10 years. These trends and population effects are critical to making informed decisions.

Response: Please see Appendix A (titled: Appendix A_Annual_Bear Harvest) which shows bear mortality, by type, year, and sex. Please see the Excel file. Also, trend information is provided below in Commissioner Smith's question #4 and Appendix B, illustrating 10-year trends (titled: Appendix B_Graphs of 10-year harvest).

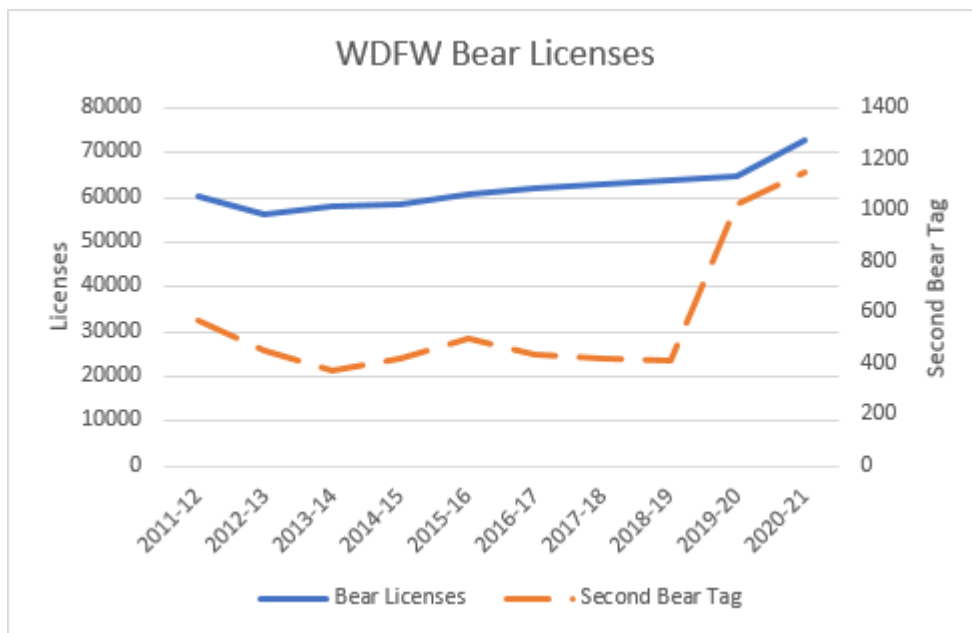
Commissioner Smith

4. What has been the change in harvest numbers (females and ages) since the statewide 2 bear bag limit and August 01 start date changes? Can spring hunts continued to be justified given these substantial increases? What is the long-term effect?

Response: Please see Appendix B (titled: Appendix B_Graphs of 10-year harvest) which illustrates the 10-year trends by Black Bear Management Unit of harvest, age, and % female recorded in the harvest. The objective is to maintain female harvest at 35-39% of the total, median age of females at 5-6 years and median age of males at 2-4 years. These thresholds are illustrated in the graphs (see color-coded bands).

In 2019, with changes in dates and bag limits, general season harvest increased by approximately 50% statewide, the highest harvest in the past decade, and that level continued in 2020. For these 2 years, substantial increases were seen in all western WA BBMU's (1-4) and 2 eastern WA BBMU's, 5 (Okanogan) and 6 (Chelan). How these data correlate to bear population size and viability is difficult to determine. For example, it could be a result of increased populations or increased hunting success depending upon a variety of factors. How harvest trends interact with population trajectory is not always known but can offer insight by monitoring over time. Currently, based on no indication of increased harvest in BBMUs 7 and 8, and the limited number of spring special permits offered in the western BBMUs, our assessment is that spring special permits can be offered with continued monitoring and limited permit numbers without negative impact to the bear population.

See figure below



Below are the second bear harvest numbers for the past 5 years. We anticipated an increase in the number of 2nd tags sold when the second bear bag limit was expanded across the state. The percent increase corresponds with number of tags sold, but the absolute number remain a small portion of the overall harvest and overall number of bear license sales (>0.02% for 2019-2020 and 2020-2021). Through using the spring special permits, a limited number of hunters may harvest only one bear during the spring, which applies toward the total 2 bear limit.

License Year	2 nd Bear Harvest	Percent of Total Harvest (fall and spring)
2016	48	3
2017	35	2.5
2018	42	2.8
2019	102	4.6
2020	103	4.9

Commissioner Smith

5. What is considered a stable black bear harvest rate and what is the actual harvest rate? What is the appropriate scale for managers to make this assessment?

Response: Harvest rates differ between eastern and western states and provinces. Western landscapes are generally less productive, so bear density tends to be lower, average age at first reproduction is higher, and litter sizes tend to be smaller. Harvest quotas are implemented in 11 of the 14 western states and provinces, Washington does not use a harvest quota. Generally, most agree that harvest rates for a stable black bear population should be between 9 and 11% (bears >1 year old). These rates should be applied at a suitable scale, which we currently

determine at a BBMU level in WA. We are working on acquiring density estimates to further inform acceptable rates at the appropriate scale.

In western states, CA and NV restrict harvest to 5% of their estimated population which they achieve through a harvest quota, WY and NM limit harvest to 10% at the BBMU level or a limit of 40% F of that rate, whichever comes first, and AZ has a 10% harvest rate of females.

Based on research findings, Table 1 below shows harvest rates for hunter harvest with references to additional timber removals.

Table 1. Results of black bear monitoring in Game Management Units in Washington, 2013-2020, Washington Department of Fish and Wildlife.

Study Year	Study Area GMU	Bear Habitat (km ²)	Average Total Density /100km ²	Abundance >1 year old	5-year Average Annual Harvest	5-year Average Harvest Rate
2019	117	2450	31.1	610	58	10%
2013-16	245	1504	19.2	231	20	9%
2013-16	454	1091	18.7	163	25	15%
2013-16	460	2401	25.4	487	25	5%
2013	466/485	590	17.5 ¹	103	NA	NA
2020	550/556	1468	7.6	89	9	10% ²
2020	654	842	16.9	114	23	20% ³
2019	672	662	7.7	41	5	12% ⁴

¹Muckleshoot project 2013; >1-year old density, harvest info not available

²0-8 bears are taken annually for timber damage so the combined mortality rate may be up to 19%

³0-15 bears are taken annually for timber damage so combined mortality rate may be up to 33% (spring hunts occurred 2014-19)

⁴0-5 bears are taken annually for timber damage so the combined mortality rate may be up to 24%

Commissioner Smith

6. How is tribal hunting off reservation being included In WDFWs harvest calculations?

Response: Tribes have their own wildlife management programs with similar objectives of maintaining sustainable populations. The tribal wildlife management programs maintain their own harvest information. Currently the harvest information we receive is limited for many species including bears and therefore, tribal harvest is not included in our assessments. However, we would expect to see a collective affect in our annual assessment of the harvest guidelines. We continue working with tribes to improve information sharing.

Commissioner Baker

- **Recreational hunt.** Do we have population models that substantiate a spring hunt in addition to the long summer/fall hunt we offer every year?
 - When asked how many bears we have, the answer is always that carnivores are difficult to count, but we have embarked on a multi-year

study to try to get a better handle on that. But we have no results upon which we can rely.

Response: Yes, the current information on which we base our decisions indicate that the current fall and spring harvest is not causing a decline in the black bear population at BBMU scale. The current estimate using the research data would be between 18-21,000 bears. That doesn't mean there has necessarily been a population decline, it merely means we now have a better way of estimating the number of bears. This does not contradict the information we currently use to manage but supplements it. What we also documented was that bear density varies greatly between Districts. We have never used density estimates to determine the population levels relative to harvest and we will review this information as we prepare for the new game management plan.

Commissioner Koontz

- **Do we add depredation kills of bears (or any carnivore) in total, state harvests and setting quotas in the fall? If not, why not? Do we analyze these bears in regard to their spatial distribution and effect on fall bear harvest results?**

Response: All known mortalities are included in the review and assessments. Annually, the number of mortalities and animals harvested fluctuates and adjustments are made when needed to the spring special permits. We incorporate the ages and sexes of depredation kills for those that we receive. We do not always receive the samples and are making improvements for the tracking of depredation kills by WDFW staff.

We combine all kill types: timber damage removals, spring special permit harvest, fall harvest, and timber removals. We use the combined data to evaluate if % Females in the harvest exceeded guidelines (see tables below) and median ages of both sexes but neither has required management action. Median ages have not yet been calculated for 2019 & 2020.

See tables below – percent female mortality and median ages (2008-2018) tables.

	Percent Female Mortality									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
BBMU 1	N/A	30	32	28	27	29	35	36	31	36
BBMU 2	N/A	36	42	39	34	43	35	33	26	24
BBMU 3	N/A	36	32	38	31	42	26	40	27	29
BBMU 4	N/A	31	31	44	24	37	35	40	27	33
BBMU 5	N/A	33	27	32	27	32	36	38	31	36
BBMU 6	N/A	27	30	34	34	35	31	34	27	34
BBMU 7	N/A	33	31	33	34	32	37	33	27	31
BBMU 8	N/A	35	29	29	38	37	29	43	42	29
BBMU 9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 2. Median ages of 4,667^a black bear mortalities, by sex and year, submitted in Washington, 2008-2018

	2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	
BBMU 1	4	5	3	6	4	6	4	7	4	5	3	7	4	4	4	5	4	5	4	6	3.5	5	
BBMU 2	2.5	3	3	6	3	6	3	8	3	5	3	6	2.5	2	2	4	2	4	3	4	3	2	
BBMU 3	4	7	5	6	4	6	4	8	5	6	5	6	4	8	5	9	4	6.5	3	5	3	4	
BBMU 4	3	3	3	4	3	3	4	5	3	5	3	3	3	5	3	7	4	5.5	3	4	4	4	
BBMU 5	2	7	5	2	3	6	5	3	6	6	3	2.5	3	3	1	4	3	1	3	6	2.5	2.5	
BBMU 6	3	4	4	6.5	3	4.5	3	5	4	4	4	4	2	7	3	5	4	4	4	4.5	3	5	
BBMU 7	3	3	3	4	3	4.5	3	2	5	5	4	4	2	3.5	3	5.5	4	7	3	5	3	6.5	
BBMU 8	3	4	5	5	2.5	5.5	4.5	3	3.5	4.5	5.5	3	5	7	3	3.5	2.5	4	5	3	3	3.5	
BBMU 9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
average	3	5	3	6	3	5	4	5	4	5	4	5	3	4.5	3	5	4	5	3	5	3	5	

^aEquates to 24% of the 19,483 total mortalities recorded

Commissioner Koontz

5) On slide 13, Special Permit History. On this slide and a few other places, you discuss one purpose of the hunt is to adjust spatial harvest of bears across the state. You failed to discuss if there are other possible ways to adjust regional differences in species harvest.

- Are there? Does the adjustment brought about by spring bear hunting make an important population difference?

Response: We are attempting to provide recreational hunting opportunity where the opportunity exists.

Yes, there are other options that could be considered but we view the special permits as the simplest and most effective approach by allowing the department more control over the number of hunters.

Options such as unit closures is not supported by the available information on Washington black bear populations and align less with the mandate of the department to provide recreational opportunity while protecting and perpetuating the species. Hunt unit closures can lead to crowding, overharvest in units not intended, and potentially lower selectivity by hunters. Another option is to consider harvest quotas or sex ratio percent quotas in certain areas; however, this does not align with the current Game Management Plan and would require an extensive overhaul of the current methods used to manage bear populations. A quota option is something that could be considered during the revision of the Game Management Plan.

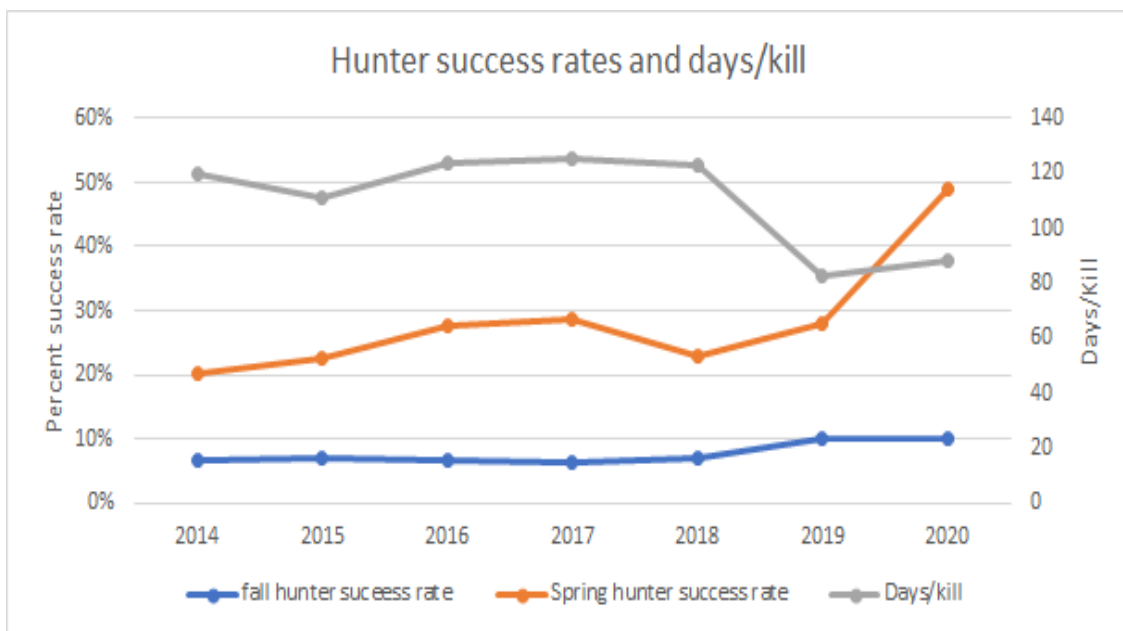
The spring special permit hunt as proposed supplies additional biological and economic benefits to the department's wildlife management efforts while meeting the legislative mandate. Additionally, as proposed the spring special permits hunts provide a satisfactory opportunity for hunters and is not deemed detrimental to the black bear population.

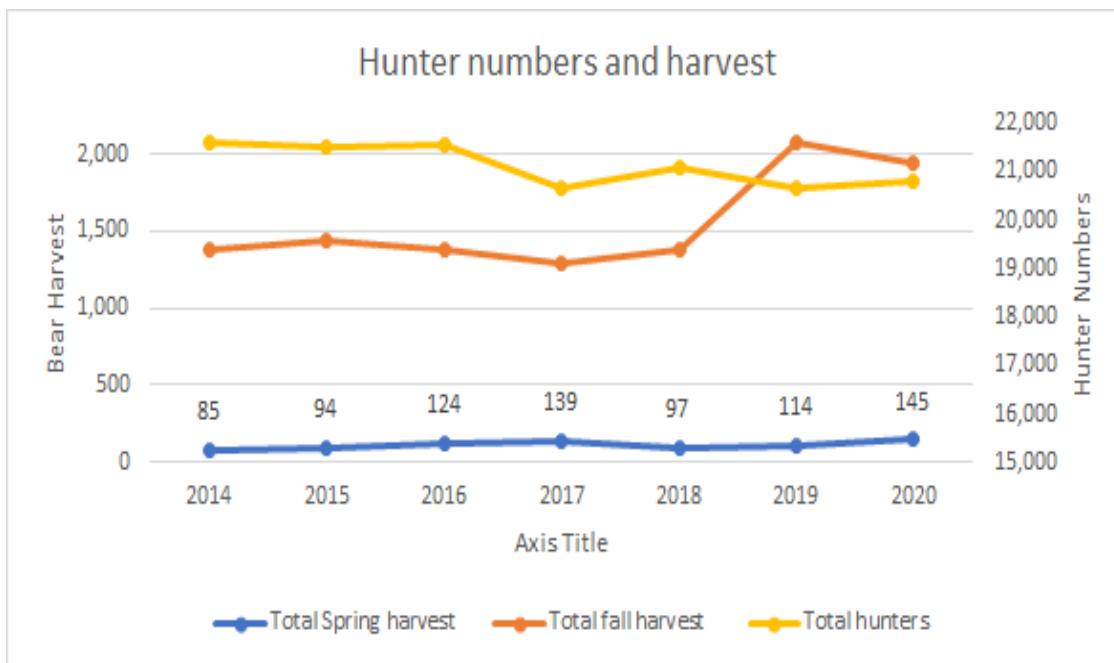
Commissioner McIsaac

6. What is the spring hunt take rate for black bears per year —not just the raw number of the take--, and how would that change if it were closed or taken to an over-the-counter tag system? If not a quantitative answer, is there a qualitative answer?

Response: Hunter harvest success in the Spring is usually 20%-30%, while harvest success in the Fall is usually 6%-10%. Roughly 21,000 bear hunters participate in the Fall bear hunt. The permitted Spring bear hunt is limited to roughly 660 permits annually. The graphs below show some of those harvest statistics. The trends indicate a growing bear population as evident by increasing success rates and decreasing catch per unit effort (Days/kill). It is unclear how an over-the-counter Spring bear season would change that dynamic. However, an over-the-counter season will likely need additional sideboards to maintain viable black bear populations. Spring hunter success rate will likely decrease while remaining higher than the Fall. Interest is likely to be high as we already receive more applications for the special permit hunts than the number of permits available. It is easier to predict what removing the spring bear hunt would do since we know the number of permits and the harvest rates. Harvest would be reduced by the average number of bears taken during the Spring bear hunt.

Please see figures below.





Topic: Timber damage, damage permits, methods to mitigate timber damage

Commissioner Koontz

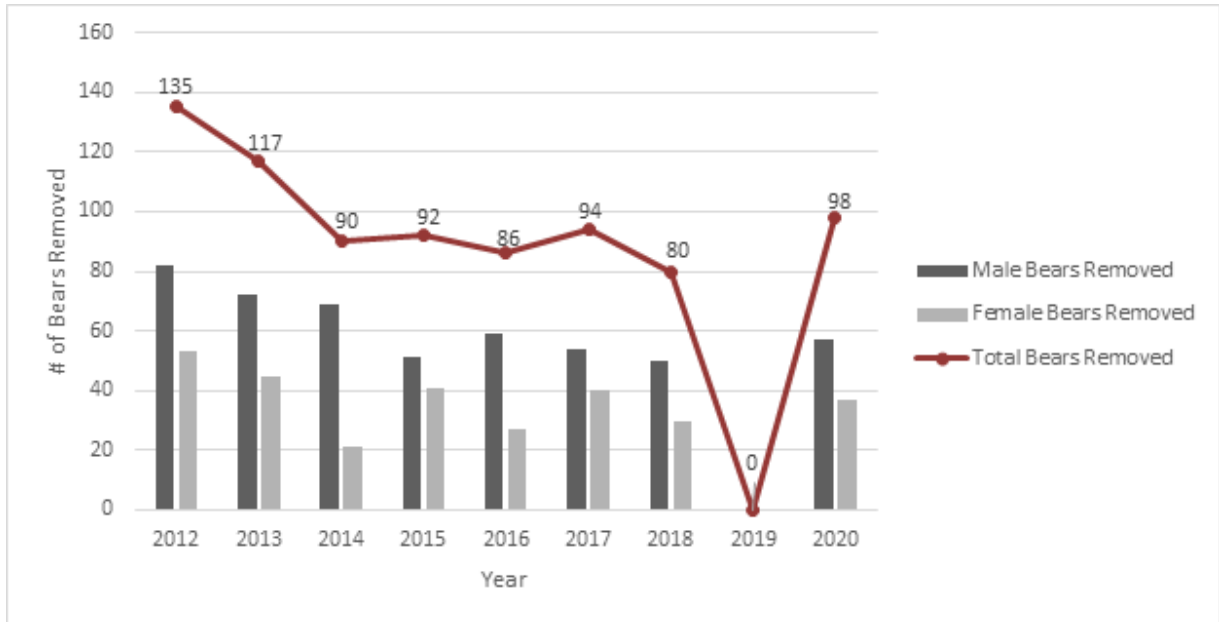
- Does the timber industry consider the recreational hunt necessary?

Response: There are few methods available for the timber industry to mitigate bear caused timber damage and having the ability to use recreational hunters has been viewed as a favorable option by the timber companies that have allowed this activity on their properties. Although we have not surveyed the timber companies to assess their view on the necessity of the recreational hunt, we do receive some signal of their preference. The signal is in the form of timber company allowing recreational hunters access to their lands. Our approach has been to provide a recreational opportunity in areas where we hope that there are some ancillary benefits, like a reduction in timber damage.

My understanding is that in 2019, in response to public complaints after the 2017 King 5 story and a lost lawsuit, (<https://www.wfaa.com/article/tech/science/environment/loophole-allows-illegal-bear-hunt-involving-dogs-every-year/281-441848427>) DFW stopped using hounds to kill up to 300 bears on timber lands each spring.

In October 2020, the Washington Court of Appeals, Division II, reversed and remanded a superior court decision and invalidated WAC 220-440-210 as exceeding WDFW's statutory authority. The Court of Appeals concluded RCW 77.15.245(2)(a) further limits the use of dogs to hunt bears than WDFW's prior understanding of the statute. WDFW did not issue any bear timber damage permits for the use of dogs in 2021.

Below is a graph that illustrates the number bears removed from 2012-2020 using WDFW authorized permits.



Commissioner Koontz

- Do we know in 2020 and 2021 how many permits were given to take adult bears, by sex, and how many lactating females and cubs on timber lands with permits were actually killed?

Response: Timber damage permits are separate from the spring bear special permit recreational hunt, although we use the data from the timber damage permits in our annual assessments.

The bear timber damage program is not currently issuing hound or trapping permits to address timber damage. We issued 76 timber damage permits (which used hounds) in 2020 that resulted in 98 bears removed (59 males, 37 females, 2 unidentified). The lactation status for those females is as follows: lactation status unknown (2), lactation status yes (2), and lactation status no (33).

We issued 23 boot hunter permits during spring 2021 and removed 2 bears, both males. APHIS Wildlife Services also removed 32 black bears (25 males, 7 females). We do not have information on lactation status for bears handled by APHIS.

Commissioner Koontz

- **Are hounds and bait used on any of these timber lands?**

***Response:** The Department did not issue any trapping permits, which would use lure or bait, in 2020, but we did issue hound permits to landowners. The Department did not issue any trapping or hound permits in 2021, but we did issue boot hunter permits. In 2021 APHIS Wildlife Services did use bait to trap and remove 32 black bears.*

Commissioner Koontz

- **Are tribal hunters with hounds (on ceded lands) being hired and used by private landowners to carry out DFW permits?**

***Response:** In the past we had more information since we worked directly with landowners, which indicated they were not using tribal hunters. We do not have information on the use of tribal hunters by private landowners since they do not need to be permitted by WDFW. WDFW did not issue any timber damage permits for the use of hounds or trapping in 2021. We did issue boot hunter permits. We issued 23 boot hunter permits (2021) and removed 2 bears, both males. APHIS Wildlife Services also removed 32 black bears (25 males, 7 females).*

Commissioner Koontz

- **From a law enforcement perspective, are we confident that the reported numbers from timber owners are accurate?**

***Response:** Per the permit, the permittee is required to report. Failure to report is in violation of RCW 77.15.750, 77.15.280, 77.15.410, and 77.15.420 and may result in a hunting infraction.*

Commissioner Baker

Understanding that the agency uses the spring hunt for several management objectives within the context of a recreational hunt:

- **Several commenters asked how we ask hunters to avoid feeding stations when their locations are a closely guarded secret. That question makes sense to me. Do we have an answer?**

***Response:** WDFW staff work with the timber owners to provide opportunity for the permitted hunts in areas where the supplemental feed is not present. Where supplemental feed is or has*

been present, timber owners are encouraged to remove supplemental feeding stations when spring special permit hunts are offered and/or to post signs stating that supplemental feed is in the area and hunting is not allowed.

In addition, WDFW sends letters to all spring black bear special permit hunters reminding them that it is unlawful to hunt over bait, some timber companies use supplemental feed and as hunters they need to avoid those areas, and to be knowledgeable and aware of their surroundings before hunting to determine where the supplemental feed sites are in use on the property they are hunting.

Commissioner Baker

- **Timber damage.** Do we have any information to support whether this works or not? Does a spring hunt result in fewer girdled trees? Is there any truth to the concern I've heard that timber growers hybridize trees to promote growth and resistance to insects, but that process also increases the sugar content of the cambium layer, making the trees in those stands more attractive to bears?

***Response:** We are not aware of hybridization that results in sugar increases within the cambium layer. However, we reached out to foresters in the Department of Natural resources to verify our knowledge and they confirmed the statement is unsubstantiated. The industry standard is not to grow hybridized trees but to promote tree growth using fertilizers and on occasion herbicides to minimize competition within the stand.*

Commissioner McIsaac

7. Tree damage: can the staff make an assessment of some sort of measurement of comparative tree damage, comparing the spring hunt as proposed, without a spring hunt, or if there was not a permit limit but a season open to over-the-counter licenses? If no quantitative analysis can be provided, can the staff provide a qualitative assessment? If there is no data collected on this, has there ever been, and how difficult would it be to design a data-driven study in at least a pilot area?

And

Commissioner Baker

- I understand the answer I was given that this services a social benefit. That is not what I am looking for. In the absence of answers, I tried to do some of my own research. There are many recent published studies on this in Washington. Not one indicates that the spring bear hunt provides any relief. Several indicate that historically lethal removal was the solution of choice and most of those point out that this is not popular with the general population. So, they go on to what they know works, which is generally forest

management - thinning, pruning, etc., in addition to targeted removal when appropriate.

Response: *The spring black bear special permit hunts are only one tool and are not intended to solely mitigate bear caused timber damage. The spring black bear special permits allow recreational hunting opportunity in areas where timber damage is occurring. The intent is to have human presence on the landscape, remove a few bears using recreational harvest, and thereby have some level of mitigation of damage. We have not assessed how effective these recreational hunts are in reducing tree damage. The benefit this hunt to the landowner is not a direct cause and effect assessment, and often having a hunt open in these areas is enough to mitigate the damage even if it does not actually reduce the damage.*

Note that the harvest level that result from these hunts are not substantial and do not harm the overall bear population. If there was evidence that the bear population would be harmed by these hunts, we would close the hunt rather than researching the effect of continuing.

Topic: Lactating females, females with cubs, and cub losses

Commissioner Koontz

3) On slide 12, "Spring Hunts." The chart would be enhanced by adding which of the eight states with spring bear hunts do not allow hunting females (e.g., Alaska) or killing females with cubs (e.g., Oregon)? Unfortunately, not killing females is easier said than done as it is difficult for recreational hunters to distinguish male from female black bears, and cubs can be 100-200 yards away from their mothers or safely stashed in trees. Do you know that Alaska requires all bear hunters to pass an online test demonstrating their ability to distinguish male from female black bears?

And

Commissioner McIsaac

4. What does Oregon and Idaho have as a spring hunt regulation, especially with regard to allowing the take of female bears?

- Can the staff provide an analysis of a prohibition on the take of sows with cubs as is the case in Oregon and Idaho?
 - A list of pros and cons as a minimum.
 - A more detailed analysis if time permits.
- There was a "yes/no" display of spring hunt status in western states on the staff presentation on the website on the morning of 10/22, but this

was not in the active presentation provided. Can the staff include this in the presentation to be posted, including the State of New Mexico, and provide us with a perspective on why this information is meaningful to the issue at hand?

Response:

States with Regulations RE: harvest of females with cubs and cubs		
	Offer spring hunts	Exception
Alaska	Yes	Cubs, sows with cubs depending upon the hunt unit.
Arizona	Yes	Except sows with cubs and cubs with sows
Colorado	No	Black bears accompanied by one or more cubs cannot be killed. Cubs (bears younger than one year old) cannot be killed.
Idaho	Yes	No female black bear accompanied by young may be taken.
Montana	Yes	Unlawful to harvest/take black bear cubs. Cubs are defined as bears less than one year old. Unlawful to harvest/take a female black bear with cubs.
New Mexico	Yes	No cub younger than one-year old or any female accompanied by a cub(s) may be taken.
Oregon	Yes	Unlawful to take cubs less than one year old or sows with cubs less than one year old.
Utah	Yes	May not be a cub or a female accompanied by cubs.
Washington	Yes	Advised not to shoot females with cubs.
Wyoming	Yes	Except dependent young and female black bears with dependent young at side. (Chapter 3 Section 4(b)).
OTHER WESTERN STATES		
California	NA	A bear less than one year old or weighing less than 50 lbs. CCRT14-365(c)

Nevada	NA	No restriction
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New Mexico, California, and Nevada have been added to the table.

The information is illustrative to the value these opportunities have in western states and to demonstrate that Washington is not an outlier by proposing to offer these permit-only hunt opportunities. In addition, this information was included in response to questions and requests provided by Commissioners to staff.

Below are a few Pros and Cons regarding creating a regulation to restrict harvest of cubs and females with cubs:

Pros to creating a regulation:

- a) Absolute prohibition may strengthen the value of waiting to determine if the female has cubs or is nursing cubs*
- b) Positive support from the public because it holds hunters accountable*
- c) May improve cub survival and recruitment*

Cons to creating a regulation:

- a) Challenging to enforce unless on scene at the time of the event*
- b) Unless they are with another bear or a female bear it can be difficult to determine the age and the weight of young bears*
- c) May reduce reporting*

Other:

- a) If choosing to instill a rule which protects females and cubs, then it is critical to consider:

 - i. If intent is protecting females with cubs, then is the language limited to females with cubs or is it females with cubs and young bears with females?*
 - ii. If the intent is to protect females, cubs and possibly yearlings then the language may need to include "groups of bears".**
- b) A hunter that mistakenly harvests a cub or female with cubs would face violation. Hunting is highly regulated, and we operate under the premise of ethical hunters.*
- c) While protecting females with offspring should result in greater population growth, females may gain a fitness benefit through increased survival when having dependent young --- resulting in prolonged maternal care. This effect will depend on harvest pressure and timing and length of the hunts but may negatively affect recruitment and population growth. It is not clear if protecting females with young will impact the frequency of females reproducing and if the protection of those young in turn compensates for less reproduction.*

Based on data collected by WDFW (tooth samples and aging analysis) 1 cub (>0.01%) was reported harvested during the spring special permit hunt and 33 (>0.01%) cubs during fall hunts from 2010-2019. Using field analysis, no cubs were reported harvested during 2020. The actual numbers are likely slightly higher because the reporting rate for tooth samples averages approximately 25% annually.

Commissioner Anderson

1. Provide/discuss the timing of hibernation emergence of bears (sows) as it relates/coincides with proposed Spring Bear hunt dates. Are there geographical differences by BBMU?

Response: *From research in WA, den emergence dates from research are as follows:*

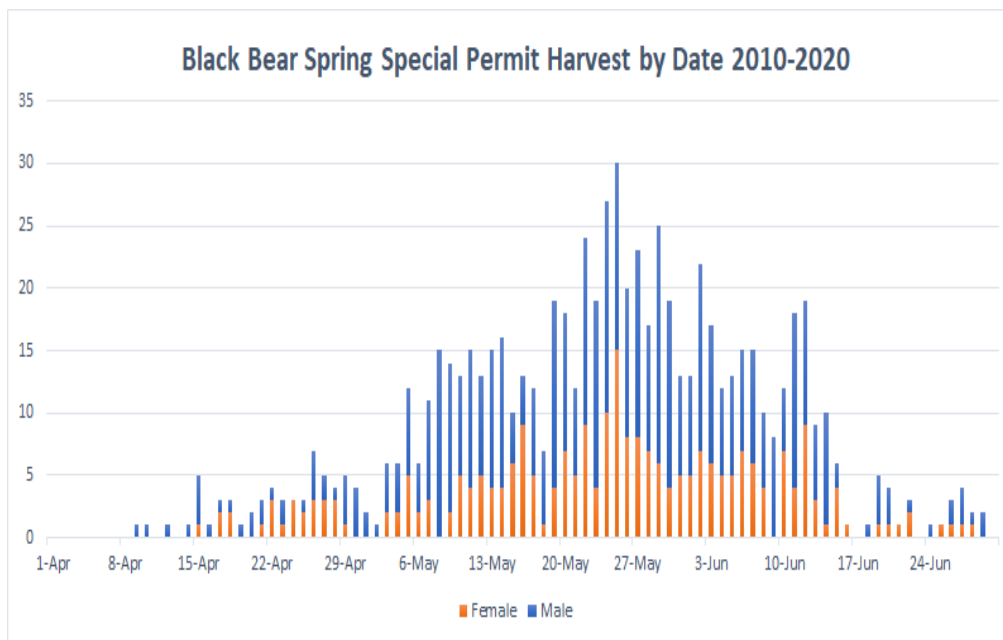
- *All Females (with and without cubs)*
 - *Western WA – March 26*
 - *Eastern WA– April 1*
- *Females with Cubs*
 - *Western WA – April 1*
 - *Eastern WA – April 8*
- *Males*
 - *Western WA – March 16*
 - *Eastern WA – March 26*

Commissioner Anderson

2. Show the timing (by week) of harvest/kill of bears (sows) by BBMU and/or GMU/areas)

Response: *Based on the one year of data the Spring Special Permit harvest of females occurs from early May to early June.*

Please see figure below.



Commissioner Koontz

4) We know that nearly 50% of adult age female bears have cubs because they have offspring every other year, well, mostly. So, we might lower the 50% figure to 40% because some just won't breed for various reasons and some 15% (?) will lose their cubs before emergence. For this thought exercise, let's say 35% of females in 2021 had cubs during the spring hunt season.

Based on bear biology alone, we would expect 16 (35% of the 45 harvested females) to be lactating and 36 cubs (18 females and 18 males) to be accidentally harvested (2.3 cubs is a reasonable average litter size). So how can we explain this?

And

Commissioner Mclsaac

1. Science on status of bear populations.
 - What percent of females emerging from hibernation have cubs? Is there anything the staff would like to say if one was to compare this percentage to the percentage of lactating females taken in the spring hunt (1 out of 124 in the 10/22 presentation (?)). This question is in the context of public testimony on the one hand that the take of sows with cubs in the spring season has a population impact concern, while on the other hand that hunters are highly successful in actively select against sows with cubs.

Response: Hunters are being selective in their harvest and not randomly taking bears. This was evident through the mandatory harvest inspection during the spring 2021 special permit hunts. Those data show 46 females harvested, and one was lactating.

Data for WA indicate 35-45% of the adult female bears over 4 years old would have cubs of the year (lower end for eastern WA, higher end for western WA due to differences in age at first reproduction and interbirth interval). From WDFW research, about 25% of the bear population are breeding age females. We estimate ~40% of the breeding age females would be expected to have newborns with an average litter size of 2.0 cubs/litter derived from research. Survival of cubs of the year orphaned prior to July is low if at all. Managers commonly estimate 0% survival without intervention prior to July. Losses of cubs of the year after July is more difficult to assess as many can and do survive if loss of the adult female occurs later in the year. Survival of these offspring is impossible to know, but it is still likely below 50% given their dependence on the adult female.

Commissioner Mclsaac

5. Does the staff have any additional thoughts about an enhanced education program on not shooting sows with cubs?

Response: Yes, we are planning to update the videos which illustrate tips to distinguish male bears from female bears and how the female and cubs interact on the landscape. Additionally, we would like to have illustrations and quick guides which can be printed by the user, explained, and handed to hunters that attend special permit meetings for specific hunt units, and included in the hunter education programs. If we determine these tools are not meeting the desired intent, we may consider proposing a mandatory test like the bear identification test. There may be an option to modify existing rules or create a new rule which prohibits the harvest of cubs and females with cubs. This effort would likely involve a full rule-making process.

Commissioner Koontz

1. Hunters actually can determine lactating females very well. A test of this hypothesis would be to ask the hunters how many bears they passed on before shooting their first bear? What should that answer be if they are accurately identifying females? Did we ask? What did they say? What is the expected compliance to answer this type of question honestly?

Response: No, we do not gather that information. In the past, only date of harvest, sex, and GMU were required for reporting during the spring special permit hunt. During 2020, we were able to conduct the harvest inspections and if we incorporated the question into our harvest inspection then every hunter that successfully harvested would be asked and subsequently reply.

Commissioner Koontz

2. It was unclear from your presentation how many days after the bears were harvested were the pelts examined (not just reported). I think this is very important. I have been told by a bear biologist friend (who inspected pelts in for the Alaska Fish and Game for six years and is now a part-time spring bear hunting guide in Alaska)

that he believes from experience that the accuracy of determining lactation probably decreases after 72 hours. What was the average number of days after harvest that the pelts were examined? Estimating the number of lactating females is such an important question we should in my opinion require in the future a telephone reporting of harvest with 24 hours and pelt examination within 72 hours. As an aside, my friend told me that the best reason for guided bear hunts is that the average recreational hunter cannot tell male from female bears.

Response: The average number of hours and days between the date of harvest and the date of harvest inspections for the 2021 records is 68.6 hours or 2.9 days, with some hunters having inspections the day of harvest or within a day.

Commissioner Koontz

3. Different spatial behavior. One explanation for finding only one lactating female of 45 is that bears with cubs and those without offspring forage very differently, and thus, the odds of randomly “colliding” are different. This should be tested. Again, as an aside: This harvest in a stable population around 65% males and 35% females seems similar across many US states. But this similar result might not be from hunters preferring males; a surprising study that looked at road kills found the same percentage. Males roam over wider distances and the likelihood of crossing paths with a car or hunter are surprisingly the same. In other words, it is more about random choice than hunter choice.

Response: Thank you for your insight. There may be an effect of hunter selection but even if we assume there isn't, the theory that male bears are likely to be harvested more frequently due to behavioral characteristics still works in favor of the intended result where a higher male harvest is sought.

Commissioner Koontz

4. The discrepancy of lower-than-expected lactating females (and cub harvest) might also be because of under reporting in general, especially of lactating females. I suspect this is likely because of the sensitivity of accidentally killing a lactating female and taking cubs -- and with controversy on spring bear hunting growing underreporting is likely to increase.

This raises the question of DFW estimates of (nonreported) wounding loss (I have been told by former DFW biologist 10% is likely) and what compliancy rate DFW uses for simply failed reporting (65% was cited as compliance in WDFW 2020 Status Report, pp. 407). This underreporting, of course, adds to the total number of bears killed and harvested lactating females and cubs accidentally killed; this was not explained in your presentation.

Response: We operate under the premise of ethical hunting and that hunters are legally required to report any harvest. The 65% reported in WDFW 2020 Status and Trends report combines both fall general and spring special permit seasons. The spring is generally higher due to issuance of special permits and the mandatory harvest inspection.

Commissioner Mclsaac

2. Science on boar shooting actually saving cubs from natural mortality.

- **Can the staff bring forward the scientific information on infanticide as a black bear phenomenon (does it happen and how common is it) and some sort of impact analysis? Noting the many assumptions would need to be made such an analysis, is there any kind of opinion—even if just qualitative—that would compare surviving cubs in the absence of hunting and the number of surviving cubs (to the winter hibernation stage or some near-term stage) with the removal of x% of the boars in the spring?**

Response: For many large carnivores in general, mortality of dominant males can have a population effect through increased cub and juvenile mortality due to sexually selected infanticide following male mortality and subsequent immigration of new males (Swenson et al. 1997; Zedrosser et al. 2009). Male territory reorganization following adult male mortality depends on age of bears, hunting intensity, and population density (Leclerc et al. 2017). In addition, decreased reproductive success has been reported when females choose less productive habitats to avoid potentially infanticidal males (Wielgus and Bunnell 1994, 2000, Steyaert et al. 2013).

The links between hunting and infanticide have primarily been documented in brown bear populations but it is not consistent across the species range (McLellan 2005). Though infanticide has been observed in black bear populations, less information is available. In Alberta cub survival was lower in an un hunted, higher bear density area (Czetwertynski et al. 2007), and in Florida, infanticide was a dominant factor before black bear hunting was initiated (Garrison et al. 2007), suggesting there may be density dependent effects.

Bottom line: the potential effects of reducing infanticide in black bear populations by increasing harvest would apply to an un hunted or very lightly hunted population, which is not relevant to Washington. Intraspecific killing of yearling bears (not infanticide) by adult males has been documented by WDFW research, but it is not to increase the ability to breed with an adult female, as those yearlings would have dispersed by breeding season; therefore, these were likely predation events. Although we don't believe that hunting is reducing infanticide directly, infanticide is less prevalent in hunted populations.

Topic: Ungulates

Commissioner Mclsaac

3. Science on fawn mortality by bears

- There has been various testimony about the meaning of a Blue Mountains study on elk calves on bear hunting—
 - can the staff provide us the study results and what we should make of it from a neutral scientific perspective on the issues associated with the spring hunting season?

Response: *The abstract from the project report is below:*

*This report summarizes activities and preliminary findings from field investigations of mortality rates and causes in calf elk (*Cervus elaphus nelsoni*) from June 1992 through June 1998. Two hundred forty calf elk (12 in 1992, 35 in 1993, 53 in 1994, 43 in 1995, 49 in 1996 and 48 in 1997) were captured and instrumented with radio- telemetry transmitters. Mean calf weights showed no significant differences ($p=0.39$). One hundred thirteen calf deaths were documented, resulting in estimated annual survival rates of radio-marked calf elk of 0.41 in 1993, 0.45 in 1994, 0.47 in 1995, 0.55 in 1996 and 0.48 in 1997. Cumulative monthly survival rates were similar between years except between July and August 1993 and 1994. July survival rates were 0.93 (95% C.I.=0.84-1.00) in 1993 and 0.66 (95% C.I.=0.53-0.79) in 1994; August survival rates were 0.89 (95% C.I.=0.77-1.00) in 1993 and 0.54 (95% C.I.=0.40-0.68) in 1994. Causes of death included predation by mountain lion (48.6%), black bear (15.9%), unidentified predators (8.4%), coyote (4.7%), human caused (4.7%), and 15.8% from undeterminable causes; predation accounted for 77.6% of observed deaths. Eighty-five percent of observed calf mortality occurred between May and September each year.*

In summary: A total of 240 calf elk were captured and instrumented between 1992 and 1997 and 113 mortalities documented. Eighty-five percent of calf deaths occur between May and September each year. Mountain lions were responsible for most (48.6 percent) calf deaths, black bears were second at 15.9 percent followed by unidentified predators (8.4 percent), coyotes and humans (4.7 percent each), and accidents (1.9 percent); a total of 15.8 percent of deaths could not be determined. Predation accounted for most (77.6 percent) of observed deaths of radio-marked calves. On the average, approximately half (mean of 47 percent) of the calf elk survive each year. The researchers did not recommend reducing predator numbers solely to increase calf survival but suggested calf survival rates and the overall elk population would likely increase with habitat quality and quantity.

Myers, W.L., B. Lyndaker, P.E. Fowler and W. Moore. 1999. Investigations of calf elk mortalities in southeast Washington. Final Federal Aid to Wildlife. Restoration Report PR Project W-96-R. Olympia, Washington. 21 pp.

Commissioner McIsaac

3. Science on fawn mortality by bears

- **We have heard about some sort of study on the Olympic peninsula on black-tailed deer fawns—can there be a response to the same request and question as above?**

Response: From 2009-2017 the Department conducted a study of the effects of forest management practices on black-tailed deer doe survival and reproduction. For this study, adult female deer were captured and fitted with GPS collars to determine their habitat use and their fawns were captured and monitored for survival. This project had study sites in 8 locations in western Washington, 4 on private commercial timberlands and 4 on land managed by the Washington Department of Natural Resources. Over the course of the project, 212 does and 235 fawns were captured for monitoring. Of those, 80 does and 125 fawns were captured in GMUs 601, 621, 627, 633, and 651, within the Olympic Black-tailed Deer Management Zone.

In summary, there were many competing models indicating a lack of clearly definitive effects on reproduction and survival. However, most mortalities were due to predation and is worth consideration for further research to document reproductive dynamics of black-tailed deer. During the research study 10% of known fawn mortality was attributed to bear.

The table below is from the internal progress report: Forest Management and Black-tailed Deer Reproduction

Table 4. Mortality attribution for fawns and does. Perinatal mortalities were fawns that were found dead during capture operations.

Group	Category	Fawns	Does
Indeterminate		21% (34)	15% (10)
Non-predation	Indeterminate	81% (30)	100% (10)
Mortality	Perinatal mortality	16% (6)	
	Road kill	3% (1)	
	All	23% (37)	15% (10)
Predation	Bear	10% (9)	2% (1)
Mortality	Bobcat	11% (10)	0% (0)
	Cougar	14% (13)	57% (26)
	Cougar or Bobcat	3% (3)	0% (0)
	Coyote	21% (19)	7% (3)

Hunter	0% (0)	7% (3)
Indeterminate	41% (38)	28% (13)
All	56% (92)	70% (46)
All	100% (163)	100% (66)

Rice, Clifford G. 2018. *Forest Management and Black-tailed Deer Reproduction – Draft report*. Washington Department of Fish and Wildlife. 26 pp.

Other ungulate work on the peninsula:

Past

The Makah Tribe conducted a study to determine sources of fawn mortality, estimate survival rates, identify factors influencing survival rates, assess the influence of hair loss syndrome on winter survival, and estimate population growth.

McCoy, R. H., Murphie, S. L., Gunther, M. S., and Murphie, B. L. 2014. *Influence of Hair Loss Syndrome on Black-Tailed Deer Fawn Survival*. *The Journal of Wildlife Management*, 78(7), 1177–1188. <http://www.jstor.org/stable/43188257>

Current, ongoing work:

The Lower Elwa Klallem Tribe on the Olympic Peninsula have an on-going research study to collect information on black tailed deer population demographics, home range and resource use, and mortality sources of black-tailed deer fawns and bucks in light of apparent population declines and the presence of hair-loss syndrome in the population. The study is occurring on approximately 150,000 acres along the northwest segment of the Olympic Peninsula in Clallam County. The area encompasses approximately 150,000 acres (235 miles²), and is bounded by Highways 112/113 on the west, the Strait of Juan de Fuca on the north, the Elwha River on the east, and Olympic National Park and Highway 101 on the south. Specific information is pending completion of their work.

Future work:

The Makah Tribe have a new project beginning next year that will include collaring deer fawns, elk calves, and cougars.

Commissioner Mclsaac

3. Science on fawn mortality by bears

- We have heard about some sort of study on East-side white-tail deer fawns—can there be a response to the same request and question as above?

Response: The research is being conducted through the University of Washington and specific information is pending completion of their work.

Commissioner Mclsaac

3. Science on fawn mortality by bears

- **In terms of a comparison of impacts with or without a spring hunt on bears, what is the take rate—not just the take number—on black bears, and what would then be the effect on deer fawns or elk calves, in the immediate sense of within the year of the hunt, or the long term?**

Response: We do not manage on a harvest rate. However, assuming a minimum statewide black bear population of 20,000, the average harvest for the past 5 years (2016-2020) is 6.5% (spring and fall combined) and hunter success ranges from 5-12% across the Black Bear Management Units. Spring special permit hunts are considerably lower overall across the state but have greater impact at the GMU level, which can aid in the distribution of harvest. The table below illustrates the spring harvest as a percentage of the total harvest within each GMU (ranging from 10 to 44% of total harvest).

We do not have specific predation rates on elk calves and deer fawns as we do not monitor those parameters annually. Our information is obtained from research studies that are conducted periodically and show predation effects on ungulates.

2020 Black Bear Harvest Comparison for Fall and Spring				
GMU	Fall	Spring	Total Harvest	Spring % of total harvest
101	79	9	88	0.10
105	19	14	33	0.42
121	42	15	57	0.26
108	29	8	37	0.22
111	24	12	36	0.33
117	82	13	95	0.14
154	37	4	41	0.10
162	16	7	23	0.30
166	8	1	9	0.11
169	9	4	13	0.31
172	5	7	12	0.58
175	15	1	16	0.06
181	4	3	7	0.43
418	82	9	91	0.10
642	11	5	16	0.31
648	17	7	24	0.29
681	8	1	9	0.11
684	5	4	9	0.44

Commissioner Baker

- **Predation on ungulates.** Same question - where and what numbers support the issuance of permits.
 - When I asked that question, I was told that “the science is there” and that we’d issued some extra permits in the Blues this year due to bear predation on elk calves. No question that calves are not doing well there. My response was that there is significant commission interest in that survey but we can’t seem to obtain the information that everyone else already has. EMT has been briefed, Andy Wolgamot has written about it. The reason this is important is that, apparently, the survey concludes that 47% of the calves this year were killed by *cougars*. When I raised this, I was told that our response this year was based on an older study. If so, killing more bears there makes no sense to me.

Response: Black bear predation is largely opportunistic and generally limited to elk calves during a 28-day period immediately following parturition (White et al. 2010). The effects of black bear predation on vital rates vary both in their significance and spatial distribution (Griffin et al. 2011, Lukacs et al. 2018). For example, black bear predation had a relatively minor impact on elk calf recruitment in western Montana (Eacker et al. 2016, Forzley 2019), but black bears were the primary proximate cause of mortality in a nearby study in Idaho (White et al. 2010). Previous investigations of cause-specific mortality of elk calves in the Blue Mountains attributed 16% (Myers et al. 1999) and 14% (Johnson et al. 2019) of deaths to black bears with Johnson et al. (2019) concluding that black bear predation was largely compensatory. Current elk calf monitoring in the Washington Blue Mountains during 2021 has yielded similar results with 9 of 76 predation events being identified as black bear along with four additional events identified, by DNA analysis, as either black bear or cougar. The significance of black bear predation can increase in the presence of wolves (Griffin et al. 2011) and may be of greater consequence now compared to previous investigations. However, the potential of high harvest rates for black bears and the lack of predator-prey research following wolf recolonization means the current impacts of black bear predation on elk calves in the Blue Mountains are unknown.

Bottom line: Whether increased bear harvest would benefit the Blue Mountains elk herd is unknown, but White (2010) specifically suggests benefits is likely to be more strongly associated with increasing harvest during special permit seasons in the spring since harvest rates tend to be higher and occur prior to or during the calving season.

Eacker, D. R., M. Hebblewhite, K. M. Proffitt, B. Jimenez, M. S. Mitchell, and H. S. Robinson. 2016. Landscape-level effects of risk factors on annual elk calf survival in a multiple carnivore system. The Journal of Wildlife Management 80: 1345-1359.

Forzley, M. J. 2019. Spatiotemporal covariates, individual characteristics, and mountain lion harvest as potential sources of variation in elk calf survival. Thesis, Montana State University, Bozeman, MT, USA.

Griffin, K.A., Hebblewhite, M., Robinson, H.S., Zager, P., Barber-Meyer, S.M., Christianson, D. Creel, S., Harris, N.C., Hurley, M.A., Jackson, D.H., Johnson, B.K., Mech, L.D., Myers, W.L., Raithel, J.D., Schlegel, M., Smith, B.L., White, C.G. & White, P.J. 2011. Neonatal mortality of elk driven by climate, predator phenology and predator community composition. *Journal of Animal Ecology*, 80, 1246–1257.

Johnson, B.K., D.H. Jackson, R.C. Cook, D.A. Clark, P.K. Coe, J.G. Cook, S.N. Rearden, S.L. Findholt, and J.H. Noyes. 2019. Roles of maternal condition and predation in survival of juvenile elk in Oregon. *Wildlife Monographs* 201:3-60

Lukacs, P.M., M. S. Mitchell, M. Hebblewhite, B.K. Johnson, H. Johnson, M. Kauffman, K.M. Proffitt, P. Zager, J. Brodie, K. Hersey, A.A. Holland, M. Hurley, S. McCorquodale, A. Middleton, M. Nordhagen, J.J. Nowak, D.P. Walsh, and P.J. White. 2018. Factors influencing elk recruitment across ecotypes in the Western United States. *The Journal of Wildlife Management* 10:698-710.

Myers, W.L., B. Lyndaker, P.E. Fowler, and W. Moore. 1999. Investigations of calf elk mortalities in southeast Washington Final Federal Aid to Wildlife. Restoration report PR Project WW-96-R. Olympia, Washington. 21 pp.

White, C. G., P. Zager, and M. W. Gratson. 2010. Influences of predator harvest, biological factors, and landscape on elk calf survival in Idaho. *The Journal of Wildlife Management* 74: 355-369.

Topic: Human-wildlife conflict

Commissioner Mclsaac

8. Is there any data or information on the impact of the spring season on the human interaction concern? For example, when we heard that cougar safety problems could be associated with cougars losing their fear of humans after the ban on hound hunting, we were presented with a time series of “problem cougar incidents” showing a significant increase over a period of some years.

Response: *There is no direct information that indicated that spring bear seasons reduces human bear conflict. This is only one tool and is not intended to solely reduce that conflict. Spring special permits are only used to mitigate human interactions in a few instances. It is the smallest proportion of the spring bear permits. The reason we don’t often use them is due to the difficulty of finding places where human bear conflict occurs, and enough open land exists to hunt. The area where we are proposing a spring special permit hunt and looking for an ancillary effect is the Long Beach area where there is limited habitat and bountiful non-natural food resources for bears. The presence of recreational hunters may discourage bears from visiting the area.*

Commissioner Baker

- **Human/bear conflict.** What are we even talking about here? Numbers, examples, etc?
 - My understanding is that conflict between bears and humans is very rare. When that occurs, we generally go out and kill the bear. And we do a good job educating re: grounds management to keep bears from getting into trash cans, etc.
 - So when and where do we issue permits to hunt bears due to conflict?

Response: Human-bear conflict is common and widespread with unsecured attractants such as garbage, bird seed, fruit trees, and chickens available throughout WA. Typically, this conflict does not result in agency removal but may occur if the bear shows aggression towards people, breaks into structures to acquire food, or if conflict is not resolved by education and removal of attractants. Spring special permits that were initiated to use recreational hunters rather than WDFW enforcement include those GMUs on Long Beach, the Kitsap peninsula and NE Washington, though those in NE Washington and the Kitsap peninsula are no longer considered as such. There is little consensus as to whether hunting can reduce human-bear conflict, as many of these areas occur within firearm restricted zones, areas with significant attractants can attract bears from far away, and conflict tends to relate more to the distribution and abundance of natural and human provided foods than the size of the bear population. However, it is more likely to be effective in isolated areas where immigration is limited and human presence places pressure to avoid an area.

Topic: Other

Commissioner Mclsaac

9. And last, can the staff bring forward information and analysis on any claims of a scientific or factual nature that is received in the extended comment period different than what we have heard in public testimony leading up to and including 10/22?

Response: The comments we received during the extended comment period did not substantially differ from the comments we received prior.

2020

GMU	Spring Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	79	23	56
GMU 101	29	Spring	13	1	12
GMU 105		Fall	19	5	14
GMU 105	37	Spring	16	2	14
GMU 108		Fall	29	6	23
GMU 108	30	Spring	10	4	6
GMU 111		Fall	24	9	15
GMU 111	42	Spring	5	2	3
GMU 113		Fall	47	14	33
GMU 113		Timber	2	0	2
GMU 117		Fall	82	24	58
GMU 117	75	Spring	17	6	11
GMU 121		Fall	42	18	24
GMU 121	67	Spring	19	10	9
GMU 124		Fall	13	6	7
GMU 127		Fall	7	2	5
GMU 130		Fall	0	0	0
GMU 133		Fall	13	5	8
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	0	0	0
GMU 154		Fall	37	7	30
GMU 154	12	Spring	4	1	3
GMU 162		Fall	16	2	14
GMU 162	8	Spring	4	2	2

GMU 163		Fall	2	0	2
GMU 166		Fall	8	3	5
GMU 166	3	Spring	3	1	2
GMU 169		Fall	9	3	6
GMU 169	39	Spring	13	5	8
GMU 172		Fall	5	2	3
GMU 172	14	Spring	9	4	5
GMU 175		Fall	15	5	10
GMU 175	13	Spring	4	0	4
GMU 178		Fall	2	0	2
GMU 178	4	Spring	0	0	0
GMU 181		Fall	4	2	2
GMU 181	3	Spring	1	1	0
GMU 186		Fall	4	2	2
GMU 186	2	Spring	0	0	0
GMU 203		Fall	8	3	5
GMU 204		Fall	44	10	34
GMU 209		Fall	6	3	3
GMU 215		Fall	38	12	26
GMU 218		Fall	26	10	16
GMU 224		Fall	21	7	14
GMU 231		Fall	10	0	10
GMU 233		Fall	8	2	6
GMU 239		Fall	9	0	9
GMU 242		Fall	15	10	5
GMU 243		Fall	14	9	5
GMU 244		Fall	6	0	6
GMU 245		Fall	22	11	11
GMU 246		Fall	8	3	5
GMU 247		Fall	15	7	8

GMU 248		Fall	5	2	3
GMU 249		Fall	13	4	9
GMU 250		Fall	17	5	12
GMU 251		Fall	38	15	23
GMU 254		Fall	0	0	0
GMU 260		Fall	0	0	0
GMU 262		Fall	2	0	2
GMU 266		Fall	0	0	0
GMU 269		Fall	0	0	0
GMU 272		Fall	0	0	0
GMU 284		Fall	0	0	0
GMU 290		Fall	0	0	0
GMU 328		Fall	5	0	5
GMU 329		Fall	4	2	2
GMU 334		Fall	2	0	2
GMU 335		Fall	28	9	19
GMU 336		Fall	9	3	6
GMU 340		Fall	4	2	2
GMU 342		Fall	1	0	1
GMU 346		Fall	9	2	7
GMU 352		Fall	2	0	2
GMU 356		Fall	8	3	5
GMU 360		Fall	5	0	5
GMU 364		Fall	0	0	0
GMU 368		Fall	23	13	10
GMU 372		Fall	0	0	0
GMU 373		Fall	2	2	0
GMU 381		Fall	0	0	0
GMU 382		Fall	18	8	10
GMU 388		Fall	21	6	15

GMU 407		Fall	41	10	31
GMU 418		Fall	82	26	56
GMU 418	30	Spring	9	1	8
GMU 418		Timber	0	0	0
GMU 419		Fall	2	2	0
GMU 420		Fall	0	0	0
GMU 426		Fall	9	3	6
GMU 437		Fall	40	12	28
GMU 437		Timber	2	1	1
GMU 448		Fall	70	21	49
GMU 448		Timber	4	1	3
GMU 450		Fall	15	5	10
GMU 454		Fall	15	2	13
GMU 460		Fall	39	10	29
GMU 460		Timber	0	0	0
GMU 466		Fall	12	2	10
GMU 485		Fall	0	0	0
GMU 485		Timber	0	0	0
GMU 501		Fall	12	6	6
GMU 501		Timber	6	2	3
GMU 503		Fall	2	0	2
GMU 503		Timber	0	0	0
GMU 504		Fall	7	2	5
GMU 505		Fall	12	3	9
GMU 505		Timber	0	0	0
GMU 506		Fall	23	8	15
GMU 506		Timber	0	0	0
GMU 510		Fall	5	3	2
GMU 510		Timber	3	2	1
GMU 513		Fall	12	9	3

GMU 516		Fall	9	3	6
GMU 516		Timber	0	0	0
GMU 520		Fall	3	0	3
GMU 520		Timber	6	2	4
GMU 524		Fall	7	2	5
GMU 524		Timber	1	0	1
GMU 530		Fall	26	10	16
GMU 530		Timber	1	1	0
GMU 550		Fall	12	3	9
GMU 550		Timber	9	4	5
GMU 554		Fall	0	0	0
GMU 556		Fall	4	2	2
GMU 556		Timber	7	1	6
GMU 560		Fall	47	12	35
GMU 560		Timber	0	0	0
GMU 564		Fall	10	3	7
GMU 566		Timber	0	0	0
GMU 568		Fall	46	16	30
GMU 568		Timber	0	0	0
GMU 572		Fall	12	6	6
GMU 572		Timber	4	1	3
GMU 574		Fall	11	2	9
GMU 578		Fall	49	14	35
GMU 601		Fall	2	0	2
GMU 601		Timber	0	0	0
GMU 602		Fall	31	9	22
GMU 602		Timber	1		
GMU 603		Fall	7	5	2
GMU 603		Timber	6	5	1
GMU 607		Fall	8	3	5

GMU 607		Timber	0	0	0
GMU 612		Fall	7	4	3
GMU 615		Fall	15	7	8
GMU 618		Fall	7	3	4
GMU 621		Fall	42	11	31
GMU 621		Timber	0	0	0
GMU 624		Fall	7	2	5
GMU 627		Fall	22	4	18
GMU 627	3	Spring	0	0	0
GMU 627		Timber	0	0	0
GMU 633		Fall	5	3	2
GMU 633	4	Spring	0	0	0
GMU 636		Fall	14	5	9
GMU 636		Timber	2	1	1
GMU 638		Fall	3	0	3
GMU 642		Fall	11	6	5
GMU 642	43	Spring	11	3	8
GMU 642		Timber	2	0	2
GMU 648		Fall	17	7	10
GMU 648		Timber	14	4	10
GMU 651		Fall	7	0	7
GMU 651		Timber	0	0	0
GMU 652		Fall	21	5	16
GMU 653		Fall	16	5	11
GMU 654		Fall	33	12	21
GMU 654		Timber	15	7	8
GMU 658		Fall	5	2	3
GMU 660		Fall	25	7	18
GMU 660		Timber	4	1	3
GMU 663		Fall	20	8	12

GMU 663		Timber	0	0	0
GMU 666		Fall	5	0	5
GMU 667		Fall	18	3	15
GMU 667		Timber	8	3	5
GMU 672		Fall	19	5	14
GMU 672		Timber	1	1	0
GMU 673		Fall	12	4	8
GMU 673		Timber	0	0	0
GMU 681		Fall	8	5	3
GMU 681	16	Spring	4	1	3
GMU 684		Fall	5	0	5
GMU 684	9	Spring	3	2	1
GMU 699		Fall	0	0	0
Total Spring Permits Issued			Total Harvest		
			2192		
		Fall Total	1951		
		Timber Total	96		
483		Spring Total	145		

2019

GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	38	12	26
GMU 101	49	Spring	9	1	8
GMU 105		Fall	26	3	23
GMU 105	50	Spring	11	4	7
GMU 108		Fall	21	3	18
GMU 108	40	Spring	9	3	6

GMU 111		Fall	24	7	17
GMU 111	50	Spring	7	2	5
GMU 113		Fall	38	9	29
GMU 117		Fall	58	17	41
GMU 117	100	Spring	10	4	6
GMU 121		Fall	41	12	29
GMU 121	100	Spring	16	6	10
GMU 124		Fall	43	9	34
GMU 127		Fall	5	2	3
GMU 130		Fall	0	0	0
GMU 133		Fall	3	0	3
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	0	0	0
GMU 154		Fall	30	14	16
GMU 154	15	Spring	4	1	3
GMU 162		Fall	25	13	12
GMU 162	15	Spring	3	0	3
GMU 163		Fall	0	0	0
GMU 166		Fall	5	5	0
GMU 166	4	Spring	0	0	0
GMU 169		Fall	6	3	3
GMU 169	45	Spring	11	1	10
GMU 172		Fall	7	2	5
GMU 172	15	Spring	3	2	1
GMU 175		Fall	8	2	6
GMU 175	14	Spring	2	0	2
GMU 178		Fall	3	0	3
GMU 181		Fall	0	0	0

GMU 181	4	Spring	0	0	0
GMU 186		Fall	8	6	2
GMU 186	5	Spring	1	0	1
GMU 203		Fall	4	2	2
GMU 204		Fall	44	14	30
GMU 209		Fall	9	3	6
GMU 215		Fall	29	11	18
GMU 218		Fall	26	11	15
GMU 224		Fall	32	10	22
GMU 231		Fall	18	5	13
GMU 233		Fall	3	0	3
GMU 239		Fall	12	2	10
GMU 242		Fall	25	6	19
GMU 243		Fall	24	6	18
GMU 244		Fall	15	0	15
GMU 245		Fall	27	7	20
GMU 246		Fall	4	0	4
GMU 247		Fall	17	7	10
GMU 248		Fall	5	0	5
GMU 249		Fall	16	5	11
GMU 250		Fall	38	8	30
GMU 251		Fall	21	5	16
GMU 254		Fall	0	0	0
GMU 260		Fall	0	0	0
GMU 262		Fall	0	0	0
GMU 266		Fall	2	0	2
GMU 269		Fall	0	0	0
GMU 272		Fall	0	0	0
GMU 284		Fall	0	0	0
GMU 328		Fall	34	12	22
GMU 329		Fall	9	3	6

GMU 334		Fall	0	0	0
GMU 335		Fall	42	21	21
GMU 336		Fall	13	2	11
GMU 340		Fall	7	2	5
GMU 342		Fall	2	2	0
GMU 346		Fall	16	5	11
GMU 352		Fall	6	2	4
GMU 356		Fall	7	2	5
GMU 360		Fall	2	0	2
GMU 364		Fall	5	0	5
GMU 368		Fall	15	5	10
GMU 371		Fall	0	0	0
GMU 372		Fall	0	0	0
GMU 373		Fall	1	0	1
GMU 381		Fall	0	0	0
GMU 382		Fall	12	0	12
GMU 388		Fall	18	4	14
GMU 407		Fall	50	12	38
GMU 418		Fall	86	24	62
GMU 418	30	Spring	6	2	4
GMU 419		Fall	0	0	0
GMU 420		Fall	0	0	0
GMU 426		Fall	7	2	5
GMU 437		Fall	56	16	40
GMU 448		Fall	45	10	35
GMU 450		Fall	19	4	15
GMU 454		Fall	10	2	8
GMU 460		Fall	50	12	38
GMU 466		Fall	16	2	14
GMU 485		Fall	0	0	0
GMU 501		Fall	27	15	12

GMU 503		Fall	6	0	6
GMU 504		Fall	7	2	5
GMU 505		Fall	9	3	6
GMU 506		Fall	25	9	16
GMU 510		Fall	6	2	4
GMU 513		Fall	22	12	10
GMU 516		Fall	19	3	16
GMU 520		Fall	32	1	31
GMU 524		Fall	0	0	0
GMU 530		Fall	25	8	17
GMU 550		Fall	16	10	6
GMU 554		Fall	9	1	8
GMU 556		Fall	3	0	3
GMU 560		Fall	35	9	26
GMU 564		Fall	6	0	6
GMU 568		Fall	38	12	26
GMU 572		Fall	9	4	5
GMU 574		Fall	15	5	10
GMU 578		Fall	44	7	37
GMU 601		Fall	11	2	9
GMU 602		Fall	15	5	10
GMU 603		Fall	7	0	7
GMU 607		Fall	23	7	16
GMU 612		Fall	5	0	5
GMU 615		Fall	40	13	27
GMU 618		Fall	9	7	2
GMU 621		Fall	36	4	32
GMU 624		Fall	6	1	5
GMU 627		Fall	28	12	16
GMU 627	5	Spring	1	1	0
GMU 633		Fall	23	3	20

GMU 633	5	Spring	1	1	0
GMU 636		Fall	16	3	13
GMU 638		Fall	9	3	6
GMU 642		Fall	19	4	15
GMU 642	50	Spring	12	2	10
GMU 648		Fall	40	8	32
GMU 651		Fall	8	3	5
GMU 652		Fall	12	2	10
GMU 653		Fall	32	7	25
GMU 654		Fall	30	10	20
GMU 654	150	Spring	4	2	2
GMU 658		Fall	6	6	0
GMU 660		Fall	11	5	6
GMU 663		Fall	17	8	9
GMU 666		Fall	6	3	3
GMU 667		Fall	22	4	18
GMU 672		Fall	32	10	22
GMU 673		Fall	17	2	15
GMU 681		Fall	21	11	10
GMU 681	20	Spring	3	1	2
GMU 684		Fall	9	3	6
GMU 684	12	Spring	1	0	1
GMU 699		Fall	0	0	0

2018

GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	38	10	28
GMU 101	50	Spring	9	4	5

GMU 105		Fall	21	4	17
GMU 105	50	Spring	12	4	8
GMU 108		Fall	14	2	12
GMU 108	40	Spring	8	0	8
GMU 111		Fall	18	4	14
GMU 111	50	Spring	5	1	4
GMU 113		Fall	32	15	17
GMU 113		Timber			
GMU 117		Fall	28	2	26
GMU 117	100	Spring	6	5	1
GMU 121		Fall	30	11	19
GMU 121	100	Spring	10	5	5
GMU 124		Fall	10	7	3
GMU 127		Fall	13	10	3
GMU 130		Fall	2	0	2
GMU 133		Fall	10	4	6
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	2	0	2
GMU 149		Fall	1	0	1
GMU 154		Fall	44	21	23
GMU 154	15	Spring	7	1	6
GMU 162		Fall	27	10	17
GMU 162	15	Spring	2	0	2
GMU 163		Fall	2	0	2
GMU 166		Fall	3	3	0
GMU 166	5	Spring	1	0	1
GMU 169		Fall	7	4	3
GMU 169	45	Spring	9	3	6

GMU 172		Fall	7	4	3
GMU 172	15	Spring	5	1	4
GMU 175		Fall	6	6	0
GMU 175	15	Spring	0	0	0
GMU 178		Fall	3	0	3
GMU 181		Fall	2	2	0
GMU 181	4	Spring	1	1	0
GMU 186		Fall	0	0	0
GMU 186	5	Spring	0	0	0
GMU 203		Fall	10	3	7
GMU 204		Fall	47	16	31
GMU 209		Fall	7	3	4
GMU 215		Fall	31	7	24
GMU 218		Fall	11	6	5
GMU 224		Fall	6	3	3
GMU 231		Fall	10	3	7
GMU 233		Fall	12	11	1
GMU 239		Fall	8	4	4
GMU 242		Fall	14	3	11
GMU 243		Fall	27	10	17
GMU 244		Fall	12	3	9
GMU 245		Fall	31	9	22
GMU 246		Fall	5	3	2
GMU 247		Fall	24	4	20
GMU 248		Fall	7	0	7
GMU 249		Fall	10	1	9
GMU 250		Fall	18	4	14
GMU 251		Fall	29	8	21
GMU 254		Fall	2	0	2
GMU 260		Fall	0	0	0

GMU 262		Fall	0	0	0
GMU 266		Fall	2	2	0
GMU 269		Fall	0	0	0
GMU 272		Fall	3	0	3
GMU 328		Fall	10	2	8
GMU 329		Fall	6	3	3
GMU 334		Fall	2	0	2
GMU 335		Fall	34	16	18
GMU 336		Fall	6	0	6
GMU 340		Fall	4	2	2
GMU 342		Fall	0	0	0
GMU 346		Fall	9	6	3
GMU 352		Fall	0	0	0
GMU 356		Fall	7	0	7
GMU 360		Fall	3	3	0
GMU 364		Fall	4	2	2
GMU 368		Fall	17	8	9
GMU 371		Fall	0	0	0
GMU 372		Fall	0	0	0
GMU 373		Fall	0	0	0
GMU 382		Fall	7	3	4
GMU 388		Fall	15	9	6
GMU 407		Fall	25	8	17
GMU 418		Fall	63	19	44
GMU 418	30	Spring	5	1	4
GMU 418		Timber	2	0	2
GMU 420		Fall	0	0	0
GMU 426		Fall	2	0	2
GMU 437		Fall	29	13	16
GMU 437		Timber			

GMU 448		Fall	46	25	21
GMU 448		Timber	5	3	2
GMU 450		Fall	4	2	2
GMU 454		Fall	16	3	13
GMU 460		Fall	37	14	23
GMU 460		Timber	2	0	2
GMU 466		Fall	3	0	3
GMU 485		Fall	1	0	1
GMU 485		Timber			
GMU 501		Fall	16	0	9
GMU 501		Timber	1	0	1
GMU 503		Fall	0	0	0
GMU 503		Timber			
GMU 504		Fall	5	2	3
GMU 505		Fall	11	7	4
GMU 505		Timber	1	1	0
GMU 506		Fall	19	9	10
GMU 506		Timber			
GMU 510		Fall	4	2	2
GMU 510		Timber	6	3	3
GMU 513		Fall	6	2	4
GMU 516		Fall	16	8	8
GMU 516		Timber	1	0	1
GMU 520		Fall	8	3	5
GMU 520		Timber	4	1	3
GMU 524		Fall	2	0	2
GMU 524		Timber	1	1	0
GMU 530		Fall	20	9	11
GMU 530		Timber			
GMU 550		Fall	6	2	4

GMU 550		Timber	2	0	2
GMU 554		Fall	0	0	0
GMU 556		Fall	0	0	0
GMU 556		Timber			
GMU 560		Fall	16	7	9
GMU 560		Timber			
GMU 564		Fall	5	2	3
GMU 566		Timber			
GMU 568		Fall	7	3	4
GMU 568		Timber			
GMU 572		Fall	17	6	11
GMU 572		Timber			
GMU 574		Fall	4	0	4
GMU 578		Fall	24	8	16
GMU 601		Fall	5	2	3
GMU 601		Timber	7	3	4
GMU 602		Fall	18	6	12
GMU 602		Timber	11	4	7
GMU 603		Fall	6	0	6
GMU 603		Timber			
GMU 607		Fall	9	2	7
GMU 607		Timber			
GMU 612		Fall	3	1	2
GMU 615		Fall	25	11	14
GMU 618		Fall	4	2	2
GMU 621		Fall	19	8	11
GMU 621		Timber			
GMU 624		Fall	9	3	6
GMU 627		Fall	19	13	6
GMU 627	5	Spring	0	0	0

GMU 627		Timber	2	0	2
GMU 633		Fall	5	0	5
GMU 633	5	Spring	0	0	0
GMU 636		Fall	6	0	6
GMU 636		Timber	1	0	1
GMU 638		Fall	2	0	2
GMU 642		Fall	7	4	3
GMU 642	50	Spring	3	1	2
GMU 642		Timber	2	2	0
GMU 648		Fall	18	3	15
GMU 648		Timber	3	0	3
GMU 651		Fall	2	0	2
GMU 651		Timber			
GMU 652		Fall	8	2	6
GMU 653		Fall	13	6	7
GMU 654		Fall	12	2	10
GMU 654	150	Spring	7	3	4
GMU 654		Timber	15	7	8
GMU 658		Fall	8	3	5
GMU 660		Fall	21	8	13
GMU 660		Timber	1	0	1
GMU 663		Fall	20	7	13
GMU 663		Timber			
GMU 666		Fall	2	2	0
GMU 667		Fall	10	2	8
GMU 667		Timber	9	2	7
GMU 672		Fall	7	4	3
GMU 672		Timber	2	1	1
GMU 673		Fall	14	2	12
GMU 673		Timber	2	2	

GMU 681		Fall	12	4	8
GMU 681	20	Spring	6	2	4
GMU 684		Fall	2	0	2
GMU 684	12	Spring	1	1	0
GMU 699		Fall	0	0	0

2017

GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	67	33	34
GMU 101	50	Spring	10	3	7
GMU 105		Fall	24	3	21
GMU 105	50	Spring	26	11	15
GMU 108		Fall	33	15	18
GMU 108	40	Spring	6	2	4
GMU 111		Fall	17	3	14
GMU 111	50	Spring	12	3	9
GMU 113		Fall	28	9	19
GMU 113		Timber			
GMU 117		Fall	47	17	30
GMU 117	100	Spring	9	4	5
GMU 121		Fall	46	24	22
GMU 121	100	Spring	13	2	11
GMU 124		Fall	10	4	6
GMU 127		Fall	4	0	4
GMU 130		Fall	0	0	0
GMU 133		Fall	5	2	3
GMU 136		Fall	3	0	3

GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	0	0	0
GMU 154		Fall	21	3	18
GMU 154	15	Spring	6	1	5
GMU 157		Fall	0	0	0
GMU 162		Fall	11	6	5
GMU 162	15	Spring	4	3	1
GMU 163		Fall	2	0	2
GMU 166		Fall	3	0	3
GMU 166	5	Spring	1	0	1
GMU 169		Fall	3	0	3
GMU 169	45	Spring	11	2	9
GMU 172		Fall	8	2	6
GMU 172	15	Spring	3	0	3
GMU 175		Fall	14	7	7
GMU 175	15	Spring	5	3	2
GMU 178		Fall	0	0	0
GMU 181		Fall	0	0	0
GMU 181	4	Spring	1	0	1
GMU 186		Fall	0	0	0
GMU 186	5	Spring	0	0	0
GMU 203		Fall	6	0	6
GMU 204		Fall	47	17	30
GMU 209		Fall	6	0	6
GMU 215		Fall	19	3	16
GMU 218		Fall	9	2	7
GMU 224		Fall	6	3	3
GMU 231		Fall	13	9	4

GMU 233		Fall	8	6	2
GMU 239		Fall	25	11	14
GMU 242		Fall	11	3	8
GMU 243		Fall	13	6	7
GMU 244		Fall	13	6	7
GMU 245		Fall	17	6	11
GMU 246		Fall	3	0	3
GMU 247		Fall	12	2	10
GMU 248		Fall	2	2	0
GMU 249		Fall	10	4	6
GMU 250		Fall	18	6	12
GMU 251		Fall	23	7	16
GMU 254		Fall	0	0	0
GMU 260		Fall	2	0	2
GMU 262		Fall	0	0	0
GMU 266		Fall	4	0	4
GMU 269		Fall	0	0	0
GMU 272		Fall	0	0	0
GMU 278		Fall	0	0	0
GMU 284		Fall	0	0	0
GMU 290		Fall	0	0	0
GMU 328		Fall	12	3	9
GMU 329		Fall	9	3	6
GMU 330		Fall	0	0	0
GMU 334		Fall	0	0	0
GMU 335		Fall	10	3	7
GMU 336		Fall	9	5	4
GMU 340		Fall	7	3	4
GMU 342		Fall	2	0	2
GMU 346		Fall	5	2	3

GMU 352		Fall	4	2	2
GMU 356		Fall	2	0	2
GMU 360		Fall	9	2	7
GMU 364		Fall	4	2	2
GMU 368		Fall	17	3	14
GMU 371		Fall	0	0	0
GMU 372		Fall	0	0	0
GMU 373		Fall	0	0	0
GMU 379		Fall	0	0	0
GMU 381		Fall	0	0	0
GMU 382		Fall	7	2	5
GMU 388		Fall	14	3	11
GMU 407		Fall	9	3	6
GMU 418		Fall	54	16	38
GMU 418	30	Spring	10	2	8
GMU 418		Timber			
GMU 426		Fall	2	2	0
GMU 437		Fall	44	10	34
GMU 437		Timber	3	1	2
GMU 448		Fall	38	8	30
GMU 448	25	Spring	4	3	1
GMU 448		Timber	5	0	5
GMU 450		Fall	8	2	6
GMU 454		Fall	22	5	17
GMU 460		Fall	13	3	10
GMU 460		Timber			
GMU 466		Fall	0	0	0
GMU 485		Fall	0	0	0
GMU 485		Timber			
GMU 490		Fall	0	0	0

GMU 501		Fall	2	0	2
GMU 501		Timber			
GMU 503		Fall	0	0	0
GMU 503		Timber	4	0	4
GMU 504		Fall	4	2	2
GMU 505		Fall	21	4	17
GMU 505		Timber	1	0	1
GMU 506		Fall	12	3	9
GMU 506		Timber	2	1	1
GMU 510		Fall	2	0	2
GMU 510		Timber	8	6	2
GMU 513		Fall	3	0	3
GMU 516		Fall	14	2	12
GMU 516		Timber			
GMU 520		Fall	7	3	4
GMU 520		Timber	7	5	2
GMU 522		Fall	0	0	0
GMU 524		Fall	2	0	2
GMU 524		Timber	1	1	0
GMU 530		Fall	14	3	11
GMU 530		Timber			
GMU 550		Fall	10	9	1
GMU 550		Timber	4	2	2
GMU 554		Fall	2	2	0
GMU 556		Fall	0	0	0
GMU 556		Timber	2	1	1
GMU 560		Fall	12	3	9
GMU 560		Timber			
GMU 564		Fall	4	2	2
GMU 566		Timber			

GMU 568		Fall	11	2	9
GMU 568		Timber	3	0	3
GMU 572		Fall	5	2	3
GMU 572		Timber	3	1	2
GMU 574		Fall	15	3	12
GMU 578		Fall	35	10	25
GMU 601		Fall	5	2	3
GMU 601		Timber	5	3	2
GMU 602		Fall	9	3	6
GMU 602		Timber	7	2	5
GMU 603		Fall	12	6	6
GMU 603		Timber			
GMU 607		Fall	7	2	5
GMU 607		Timber			
GMU 612		Fall	13	0	13
GMU 615		Fall	18	7	11
GMU 618		Fall	6	3	3
GMU 621		Fall	27	8	19
GMU 621		Timber			
GMU 624		Fall	5	3	2
GMU 627		Fall	12	7	5
GMU 627	5	Spring	1	1	0
GMU 627		Timber			
GMU 633		Fall	3	0	3
GMU 633	5	Spring	0	0	0
GMU 636		Fall	10	7	3
GMU 636		Timber	1	0	1
GMU 638		Fall	9	2	7
GMU 642		Fall	12	2	10
GMU 642	50	Spring	5	2	3

GMU 642		Timber	1	0	1
GMU 648		Fall	17	6	11
GMU 648		Timber	9	1	8
GMU 651		Fall	5	2	3
GMU 651		Timber			
GMU 652		Fall	6	2	4
GMU 653		Fall	11	4	7
GMU 654		Fall	6	0	6
GMU 654	150	Spring	7	2	5
GMU 654		Timber	8	7	1
GMU 655		Fall	0	0	0
GMU 658		Fall	14	6	8
GMU 660		Fall	6	3	3
GMU 660		Timber			
GMU 663		Fall	12	5	7
GMU 663		Timber	2	1	1
GMU 666		Fall	5	3	2
GMU 667		Fall	26	7	19
GMU 667		Timber	18	8	10
GMU 672		Fall	9	5	4
GMU 672		Timber			
GMU 673		Fall	6	3	3
GMU 673		Timber			
GMU 681		Fall	7	3	4
GMU 681	20	Spring	3	1	2
GMU 684		Fall	6	2	4
GMU 684	20	Spring	2	1	1
GMU 699		Fall	0	0	0

2016

GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	63	18	45
GMU 101	50	Spring	16	8	8
GMU 105		Fall	41	8	33
GMU 105	50	Spring	11	2	9
GMU 108		Fall	17	7	10
GMU 108	40	Spring	7	2	5
GMU 111		Fall	41	16	25
GMU 111	50	Spring	15	4	11
GMU 113		Fall	53	23	30
GMU 113		Timber			
GMU 117		Fall	57	21	36
GMU 117	100	Spring	10	5	5
GMU 121		Fall	68	21	47
GMU 121	100	Spring	15	8	7
GMU 124		Fall	18	5	13
GMU 127		Fall	6	0	6
GMU 130		Fall	0	0	0
GMU 133		Fall	2	0	2
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	0	0	0
GMU 154		Fall	26	11	15
GMU 154	15	Spring	4	3	1
GMU 157		Fall	0	0	0

GMU 162		Fall	21	5	16
GMU 162	15	Spring	4	1	3
GMU 163		Fall	3	0	3
GMU 166		Fall	3	1	2
GMU 166	5	Spring	0	0	0
GMU 169		Fall	6	2	4
GMU 169	45	Spring	12	4	8
GMU 172		Fall	7	3	4
GMU 172	15	Spring	5	3	2
GMU 175		Fall	7	2	5
GMU 175	15	Spring	2	2	0
GMU 178		Fall	4	2	2
GMU 181		Fall	5	0	5
GMU 181	4	Spring	0	0	0
GMU 186		Fall	2	2	0
GMU 186	5	Spring	0	0	0
GMU 203		Fall	6	3	3
GMU 204		Fall	69	18	51
GMU 209		Fall	9	2	7
GMU 215		Fall	29	10	19
GMU 218		Fall	14	2	12
GMU 224		Fall	17	4	13
GMU 231		Fall	8	5	3
GMU 233		Fall	24	8	16
GMU 239		Fall	13	9	4
GMU 242		Fall	19	2	17
GMU 243		Fall	8	2	6
GMU 244		Fall	5	2	3
GMU 245		Fall	14	3	11
GMU 246		Fall	5	3	2

GMU 247		Fall	8	4	4
GMU 248		Fall	6	0	6
GMU 249		Fall	12	1	11
GMU 250		Fall	10	3	7
GMU 251		Fall	11	2	9
GMU 254		Fall	0	0	0
GMU 260		Fall	5	3	2
GMU 262		Fall	0	0	0
GMU 266		Fall	0	0	0
GMU 269		Fall	0	0	0
GMU 272		Fall	0	0	0
GMU 278		Fall	0	0	0
GMU 284		Fall	0	0	0
GMU 290		Fall	0	0	0
GMU 328		Fall	5	2	3
GMU 329		Fall	3	3	0
GMU 330		Fall	0	0	0
GMU 334		Fall	0	0	0
GMU 335		Fall	27	14	13
GMU 336		Fall	13	2	11
GMU 340		Fall	3	3	0
GMU 342		Fall	5	2	3
GMU 346		Fall	10	6	4
GMU 352		Fall	0	0	0
GMU 356		Fall	3	0	3
GMU 360		Fall	4	0	4
GMU 364		Fall	12	2	10
GMU 368		Fall	9	3	6
GMU 371		Fall	0	0	0
GMU 372		Fall	0	0	0

GMU 373		Fall	0	0	0
GMU 379		Fall	0	0	0
GMU 381		Fall	0	0	0
GMU 382		Fall	9	2	7
GMU 388		Fall	17	4	13
GMU 407		Fall	20	9	11
GMU 418		Fall	44	20	24
GMU 418	30	Spring	3	1	2
GMU 418		Timber	5	2	3
GMU 426		Fall	4	2	2
GMU 437		Fall	42	18	24
GMU 437		Timber	4	1	3
GMU 448		Fall	49	19	30
GMU 448	25	Spring	2	1	1
GMU 448		Timber	2	2	0
GMU 450		Fall	5	2	3
GMU 454		Fall	25	10	15
GMU 460		Fall	25	10	15
GMU 460		Timber			
GMU 466		Fall	3	0	3
GMU 485		Fall	0	0	0
GMU 485		Timber			
GMU 490		Fall	0	0	0
GMU 501		Fall	3	0	3
GMU 501		Timber	6	1	5
GMU 503		Fall	2	0	2
GMU 503		Timber	1	0	1
GMU 504		Fall	0	0	0
GMU 505		Fall	3	0	3
GMU 505		Timber	1	0	1

GMU 506		Fall	4	2	2
GMU 506		Timber	2	1	1
GMU 510		Fall	2	0	2
GMU 510		Timber	5	1	4
GMU 513		Fall	0	0	0
GMU 516		Fall	4	0	4
GMU 516		Timber			
GMU 520		Fall	4	2	2
GMU 520		Timber	7	3	4
GMU 522		Fall	0	0	0
GMU 524		Fall	2	2	0
GMU 524		Timber			
GMU 530		Fall	7	3	4
GMU 530		Timber	4	0	4
GMU 550		Fall	0	0	0
GMU 550		Timber	2	1	1
GMU 554		Fall	0	0	0
GMU 556		Fall	3	3	0
GMU 556		Timber	2	1	1
GMU 560		Fall	25	12	13
GMU 560		Timber			
GMU 564		Fall	3	2	1
GMU 566		Timber	2	1	1
GMU 568		Fall	22	9	13
GMU 568		Timber	3	0	3
GMU 572		Fall	8	6	2
GMU 572		Timber	2	0	2
GMU 574		Fall	8	3	5
GMU 578		Fall	25	5	20
GMU 601		Fall	2	0	2

GMU 601		Timber	2	0	2
GMU 602		Fall	10	4	6
GMU 602		Timber	6	2	4
GMU 603		Fall	12	8	4
GMU 603		Timber	5	2	3
GMU 607		Fall	2	0	2
GMU 607		Timber	2	0	2
GMU 612		Fall	3	0	3
GMU 615		Fall	26	3	23
GMU 618		Fall	6	3	3
GMU 621		Fall	19	6	13
GMU 621		Timber			
GMU 624		Fall	7	2	5
GMU 627		Fall	8	0	8
GMU 627		Timber			
GMU 633		Fall	8	5	3
GMU 636		Fall	5	0	5
GMU 636		Timber	2	0	2
GMU 638		Fall	5	5	0
GMU 642		Fall	2	2	0
GMU 642		Timber	1	0	1
GMU 648		Fall	8	0	8
GMU 648		Timber	3	0	3
GMU 651		Fall	2	0	2
GMU 651		Timber			
GMU 652		Fall	11	5	6
GMU 653		Fall	13	5	8
GMU 654		Fall	17	4	13
GMU 654		Timber			
GMU 655		Fall	0	0	0

GMU 658		Fall	3	0	3
GMU 660		Fall	10	5	5
GMU 660		Timber	5	3	2
GMU 663		Fall	5	2	3
GMU 663		Timber	3	1	2
GMU 666		Fall	0	0	0
GMU 667		Fall	26	9	17
GMU 667		Timber	9	5	4
GMU 672		Fall	5	2	3
GMU 672		Timber			
GMU 673		Fall	8	2	6
GMU 673		Timber			
GMU 681		Fall	6	2	4
GMU 681	20	Spring	2	0	2
GMU 684		Fall	2	2	0
GMU 684	20	Spring	1	0	1
GMU 699		Fall	3	0	3

2015

GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	85	26	59
GMU 101	25	Spring	6	1	5
GMU 105		Fall	35	14	21
GMU 105	25	Spring	9	2	7
GMU 108		Fall	29	5	24
GMU 108	20	Spring	6	2	4
GMU 111		Fall	37	17	20

GMU 111	25	Spring	10	3	7
GMU 113		Fall	43	15	28
GMU 113		Timber			
GMU 117		Fall	49	15	34
GMU 117	50	Spring	8	3	5
GMU 121		Fall	63	25	38
GMU 121	50	Spring	12	6	6
GMU 124		Fall	33	10	23
GMU 127		Fall	10	3	7
GMU 130		Fall	1	1	0
GMU 133		Fall	10	3	7
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	1	1	0
GMU 154		Fall	31	11	20
GMU 154	15	Spring	5	2	3
GMU 162		Fall	26	8	18
GMU 162	15	Spring	6	2	4
GMU 163		Fall	0	0	0
GMU 166		Fall	7	2	5
GMU 166	5	Spring	1	1	0
GMU 169		Fall	5	4	1
GMU 169	45	Spring	3	1	2
GMU 172		Fall	8	3	5
GMU 172	15	Spring	0	0	0
GMU 175		Fall	6	1	5
GMU 175	15	Spring	1	1	0
GMU 178		Fall	4	1	3

GMU 181		Fall	6	3	3
GMU 181	4	Spring	0	0	0
GMU 186		Fall	1	0	1
GMU 186	5	Spring	0	0	0
GMU 203		Fall	7	0	7
GMU 204		Fall	48	15	33
GMU 209		Fall	4	1	3
GMU 215		Fall	20	4	16
GMU 218		Fall	11	3	8
GMU 224		Fall	13	4	9
GMU 231		Fall	4	0	4
GMU 233		Fall	10	3	7
GMU 239		Fall	15	8	7
GMU 242		Fall	12	3	9
GMU 243		Fall	8	2	6
GMU 244		Fall	4	1	3
GMU 245		Fall	25	5	20
GMU 246		Fall	4	3	1
GMU 247		Fall	9	4	5
GMU 248		Fall	3	0	3
GMU 249		Fall	7	4	3
GMU 250		Fall	13	8	5
GMU 251		Fall	25	8	17
GMU 254		Fall	0	0	0
GMU 260		Fall	1	0	1
GMU 262		Fall	0	0	0
GMU 266		Fall	3	0	3
GMU 272		Fall	0	0	0
GMU 278		Fall	0	0	0
GMU 284		Fall	0	0	0

GMU 328		Fall	15	8	7
GMU 329		Fall	6	1	5
GMU 334		Fall	0	0	0
GMU 335		Fall	23	7	16
GMU 336		Fall	9	1	8
GMU 340		Fall	2	1	1
GMU 342		Fall	1	1	0
GMU 346		Fall	12	5	7
GMU 352		Fall	1	0	1
GMU 356		Fall	4	0	4
GMU 360		Fall	3	0	3
GMU 364		Fall	6	3	3
GMU 368		Fall	7	4	3
GMU 371		Fall	0	0	0
GMU 372		Fall	1	0	1
GMU 381		Fall	0	0	0
GMU 382		Fall	5	1	4
GMU 388		Fall	21	7	14
GMU 407		Fall	23	10	13
GMU 410		Fall	0	0	0
GMU 418		Fall	59	19	40
GMU 418	30	Spring	8	5	3
GMU 418		Timber	3	2	1
GMU 426		Fall	4	0	4
GMU 437		Fall	34	10	24
GMU 437		Timber			
GMU 448		Fall	46	13	33
GMU 448	25	Spring	4	0	4
GMU 448		Timber			
GMU 450		Fall	2	1	1

GMU 454		Fall	29	8	21
GMU 460		Fall	23	7	16
GMU 460		Timber	1	1	0
GMU 466		Fall	4	0	4
GMU 485		Fall	0	0	0
GMU 485		Timber			
GMU 501		Fall	5	4	1
GMU 501		Timber	4	2	2
GMU 503		Fall	3	0	3
GMU 503		Timber	6		6
GMU 504		Fall	0	0	0
GMU 505		Fall	6	3	3
GMU 505		Timber			
GMU 506		Fall	10	1	9
GMU 506		Timber	2	1	1
GMU 510		Fall	0	0	0
GMU 510		Timber	8	5	3
GMU 513		Fall	4	3	1
GMU 516		Fall	6	1	5
GMU 516		Timber			
GMU 520		Fall	1	0	1
GMU 520		Timber	2	2	
GMU 524		Fall	2	1	1
GMU 524		Timber			
GMU 530		Fall	11	3	8
GMU 530		Timber	2	1	1
GMU 550		Fall	8	0	8
GMU 550		Timber			
GMU 554		Fall	1	0	1
GMU 556		Fall	1	0	1

GMU 556		Timber	3	2	1
GMU 560		Fall	4	0	4
GMU 560		Timber			
GMU 564		Fall	3	0	3
GMU 566		Timber			
GMU 568		Fall	14	3	11
GMU 568		Timber			
GMU 572		Fall	13	4	9
GMU 572		Timber	7	2	5
GMU 574		Fall	5	0	5
GMU 578		Fall	28	4	24
GMU 601		Fall	3	0	3
GMU 601		Timber	2	1	1
GMU 602		Fall	1	0	1
GMU 602		Timber	5	4	1
GMU 603		Fall	10	3	7
GMU 603		Timber	5	1	4
GMU 607		Fall	4	0	4
GMU 607		Timber			
GMU 612		Fall	6	3	3
GMU 615		Fall	13	4	9
GMU 618		Fall	1	1	0
GMU 621		Fall	19	11	8
GMU 621		Timber	3	2	1
GMU 624		Fall	9	4	5
GMU 627		Fall	17	5	12
GMU 627		Timber			
GMU 633		Fall	11	3	8
GMU 636		Fall	5	1	4
GMU 636		Timber	1	0	1

GMU 638		Fall	8	1	7
GMU 642		Fall	1	0	1
GMU 642	100	Spring	7	4	3
GMU 642		Timber			
GMU 648		Fall	12	1	11
GMU 648		Timber	7	2	5
GMU 651		Fall	3	0	3
GMU 651		Timber			
GMU 652		Fall	14	3	11
GMU 653		Fall	3	0	3
GMU 654		Fall	20	3	17
GMU 654	150	Spring	6	2	4
GMU 654		Timber			
GMU 658		Fall	9	1	8
GMU 660		Fall	10	1	9
GMU 660		Timber	2	1	1
GMU 663		Fall	10	3	7
GMU 663		Timber	3	1	2
GMU 666		Fall	2	1	1
GMU 667		Fall	11	4	7
GMU 667		Timber	18	8	10
GMU 672		Fall	2	1	1
GMU 672		Timber	5	1	4
GMU 673		Fall	5	1	4
GMU 673		Timber	3	2	1
GMU 681		Fall	12	5	7
GMU 684		Fall	10	3	7
GMU 699		Fall	3	3	0

2014

GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	79	19	60
GMU 101	25	Spring	7	3	4
GMU 105		Fall	40	13	27
GMU 105	25	Spring	7	2	5
GMU 108		Fall	23	10	13
GMU 108	20	Spring	1	0	1
GMU 111		Fall	44	11	33
GMU 111	25	Spring	0	0	0
GMU 113		Fall	39	19	20
GMU 113		Timber			
GMU 117		Fall	69	24	45
GMU 117	50	Spring	5	2	3
GMU 121		Fall	60	21	39
GMU 121	50	Spring	4	2	2
GMU 124		Fall	19	6	13
GMU 127		Fall	10	3	7
GMU 130		Fall	1	0	1
GMU 133		Fall	8	3	5
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	0	0	0
GMU 154		Fall	22	7	15
GMU 154	15	Spring	2	0	2

GMU 157		Fall	0	0	0
GMU 162		Fall	14	5	9
GMU 162	15	Spring	3	1	2
GMU 163		Fall	1	0	1
GMU 166		Fall	8	1	7
GMU 166	5	Spring	1	1	0
GMU 169		Fall	6	1	5
GMU 169	45	Spring	5	1	4
GMU 172		Fall	3	0	3
GMU 172	15	Spring	2	1	1
GMU 175		Fall	4	3	1
GMU 175	15	Spring	2	0	2
GMU 178		Fall	0	0	0
GMU 181		Fall	1	0	1
GMU 181	4	Spring	0	0	0
GMU 186		Fall	3	0	3
GMU 186	5	Spring	0	0	0
GMU 203		Fall	2	1	1
GMU 204		Fall	60	22	38
GMU 209		Fall	11	5	6
GMU 215		Fall	20	7	13
GMU 218		Fall	8	3	5
GMU 224		Fall	5	0	5
GMU 231		Fall	9	4	5
GMU 233		Fall	12	4	8
GMU 239		Fall	10	3	7
GMU 242		Fall	15	4	11
GMU 243		Fall	16	4	12
GMU 244		Fall	6	1	5
GMU 245		Fall	14	1	13

GMU 246		Fall	3	0	3
GMU 247		Fall	13	1	12
GMU 248		Fall	0	0	0
GMU 249		Fall	9	5	4
GMU 250		Fall	14	1	13
GMU 251		Fall	25	11	14
GMU 254		Fall	1	1	0
GMU 260		Fall	0	0	0
GMU 262		Fall	0	0	0
GMU 266		Fall	0	0	0
GMU 269		Fall	0	0	0
GMU 272		Fall	0	0	0
GMU 278		Fall	0	0	0
GMU 284		Fall	0	0	0
GMU 328		Fall	9	5	4
GMU 329		Fall	8	4	4
GMU 334		Fall	0	0	0
GMU 335		Fall	20	8	12
GMU 336		Fall	11	4	7
GMU 340		Fall	11	4	7
GMU 342		Fall	0	0	0
GMU 346		Fall	4	0	4
GMU 352		Fall	2	1	1
GMU 356		Fall	0	0	0
GMU 360		Fall	2	1	1
GMU 364		Fall	1	0	1
GMU 368		Fall	5	1	4
GMU 372		Fall	0	0	0
GMU 373		Fall	0	0	0
GMU 381		Fall	0	0	0

GMU 382		Fall	10	1	9
GMU 388		Fall	14	9	5
GMU 407		Fall	29	9	20
GMU 410		Fall	0	0	0
GMU 418		Fall	28	9	19
GMU 418	30	Spring	1	1	0
GMU 418		Timber	5	2	3
GMU 426		Fall	2	1	1
GMU 437		Fall	29	9	20
GMU 437		Timber	1	0	1
GMU 448		Fall	44	13	31
GMU 448	25	Spring	4	2	2
GMU 448		Timber	2	1	1
GMU 450		Fall	8	3	5
GMU 454		Fall	32	19	13
GMU 460		Fall	29	16	13
GMU 460		Timber			
GMU 466		Fall	8	4	4
GMU 485		Fall	0	0	0
GMU 485		Timber	3	1	2
GMU 490		Fall	0	0	0
GMU 501		Fall	3	0	3
GMU 501		Timber			
GMU 503		Fall	1	0	1
GMU 503		Timber	2		2
GMU 504		Fall	0	0	0
GMU 505		Fall	9	1	8
GMU 505		Timber			
GMU 506		Fall	4	1	3
GMU 506		Timber			

GMU 510		Fall	4	0	4
GMU 510		Timber	4		4
GMU 513		Fall	6	5	1
GMU 516		Fall	15	8	7
GMU 516		Timber			
GMU 520		Fall	1	0	1
GMU 520		Timber	4	2	2
GMU 522		Fall	0	0	0
GMU 524		Fall	0	0	0
GMU 524		Timber			
GMU 530		Fall	8	3	5
GMU 530		Timber	2		2
GMU 550		Fall	4	3	1
GMU 550		Timber	1	1	
GMU 554		Fall	0	0	0
GMU 556		Fall	1	0	1
GMU 556		Timber	6	4	2
GMU 560		Fall	13	8	5
GMU 560		Timber	1	0	1
GMU 564		Fall	4	1	3
GMU 566		Timber			
GMU 568		Fall	20	7	13
GMU 568		Timber	1	0	1
GMU 572		Fall	3	3	0
GMU 572		Timber	5	3	2
GMU 574		Fall	15	7	8
GMU 578		Fall	23	10	13
GMU 601		Fall	0	0	0
GMU 601		Timber			
GMU 602		Fall	5	1	4

GMU 602		Timber	9	1	8
GMU 603		Fall	7	3	4
GMU 603		Timber	3	0	3
GMU 607		Fall	5	1	4
GMU 607		Timber			
GMU 612		Fall	4	3	1
GMU 615		Fall	13	1	12
GMU 618		Fall	6	5	1
GMU 621		Fall	15	3	12
GMU 621		Timber	1	0	1
GMU 624		Fall	11	4	7
GMU 627		Fall	12	5	7
GMU 627		Timber			
GMU 633		Fall	12	8	4
GMU 636		Fall	6	3	3
GMU 636		Timber	2	1	1
GMU 638		Fall	4	3	1
GMU 642		Fall	1	1	0
GMU 642	100	Spring	3	0	3
GMU 642		Timber			
GMU 648		Fall	11	4	7
GMU 648		Timber	5	0	5
GMU 651		Fall	5	1	4
GMU 651		Timber	2	0	2
GMU 652		Fall	8	4	4
GMU 653		Fall	11	3	8
GMU 654		Fall	24	13	11
GMU 654	150	Spring	4	2	2
GMU 654		Timber			
GMU 655		Fall	0	0	0

GMU 658		Fall	6	3	3
GMU 660		Fall	5	3	2
GMU 660		Timber			
GMU 663		Fall	4	3	1
GMU 663		Timber	2	1	1
GMU 666		Fall	8	3	5
GMU 667		Fall	16	4	12
GMU 667		Timber	23	3	20
GMU 672		Fall	1	0	1
GMU 672		Timber	3	1	2
GMU 673		Fall	4	0	4
GMU 673		Timber	2	0	2
GMU 681		Fall	12	5	7
GMU 684		Fall	5	0	5
GMU 699		Fall	4	0	4

2013

GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	56	20	36
GMU 101	25	Spring	6	0	6
GMU 105		Fall	27	9	18
GMU 105	25	Spring	9	3	6
GMU 108		Fall	10	5	5
GMU 108	20	Spring	5	2	3
GMU 111		Fall	10	6	4
GMU 111	25	Spring	4	2	2

GMU 113		Fall	18	3	15
GMU 117		Fall	32	11	21
GMU 117	50	Spring	7	3	4
GMU 121		Fall	29	5	24
GMU 121	50	Spring	11	2	9
GMU 124		Fall	6	3	3
GMU 127		Fall	10	4	6
GMU 130		Fall	0	0	0
GMU 133		Fall	9	1	8
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	2	1	1
GMU 154		Fall	33	4	29
GMU 154	15	Spring	7	3	4
GMU 157		Fall	0	0	0
GMU 162		Fall	25	5	20
GMU 162	15	Spring	2	1	1
GMU 163		Fall	0	0	0
GMU 166		Fall	5	3	2
GMU 166	5	Spring	0	0	0
GMU 169		Fall	7	3	4
GMU 169	45	Spring	8	4	4
GMU 172		Fall	4	3	1
GMU 172	15	Spring	2	0	2
GMU 175		Fall	4	1	3
GMU 175	15	Spring	3	1	2
GMU 178		Fall	2	1	1
GMU 181		Fall	4	3	1

GMU 181	4	Spring	0	0	0
GMU 186		Fall	0	0	0
GMU 186	5	Spring	0	0	0
GMU 203		Fall	4	0	4
GMU 204		Fall	42	10	32
GMU 209		Fall	6	1	5
GMU 215		Fall	25	8	17
GMU 218		Fall	14	1	13
GMU 224		Fall	13	4	9
GMU 231		Fall	5	1	4
GMU 233		Fall	5	1	4
GMU 239		Fall	5	0	5
GMU 242		Fall	16	7	9
GMU 243		Fall	12	4	8
GMU 244		Fall	2	1	1
GMU 245		Fall	15	6	9
GMU 246		Fall	2	1	1
GMU 247		Fall	7	4	3
GMU 248		Fall	2	1	1
GMU 249		Fall	4	1	3
GMU 250		Fall	19	3	16
GMU 251		Fall	22	9	13
GMU 254		Fall	0	0	0
GMU 260		Fall	0	0	0
GMU 262		Fall	0	0	0
GMU 266		Fall	1	0	1
GMU 272		Fall	1	1	0
GMU 328		Fall	12	4	8
GMU 329		Fall	3	0	3
GMU 334		Fall	1	0	1

GMU 335		Fall	23	11	12
GMU 336		Fall	6	1	5
GMU 340		Fall	8	0	8
GMU 342		Fall	1	1	0
GMU 346		Fall	1	0	1
GMU 352		Fall	1	1	0
GMU 356		Fall	6	1	5
GMU 360		Fall	0	0	0
GMU 364		Fall	4	3	1
GMU 368		Fall	6	1	5
GMU 371		Fall	0	0	0
GMU 372		Fall	0	0	0
GMU 381		Fall	0	0	0
GMU 382		Fall	6	1	5
GMU 388		Fall	13	0	13
GMU 407		Fall	19	9	10
GMU 407		Timber	0	0	0
GMU 410		Fall	0	0	0
GMU 415		Fall	0	0	0
GMU 417		Fall	0	0	0
GMU 417		Timber	0	0	0
GMU 418		Fall	41	13	28
GMU 418	30	Spring	10	3	7
GMU 418		Timber	2	0	2
GMU 420		Fall	0	0	0
GMU 426		Fall	1	0	1
GMU 437		Fall	8	4	4
GMU 437		Timber	1	1	0
GMU 448		Fall	33	14	19
GMU 448	25	Spring	4	3	1

GMU 448		Timber	4	0	4
GMU 450		Fall	3	0	3
GMU 454		Fall	14	5	9
GMU 454		Timber	2	0	2
GMU 460		Fall	26	7	19
GMU 460		Timber	0	0	0
GMU 466		Fall	1	0	1
GMU 485		Fall	0	0	0
GMU 485		Timber	0	0	0
GMU 490		Fall	0	0	0
GMU 501		Fall	8	3	5
GMU 501		Timber	0	0	0
GMU 503		Fall	0	0	0
GMU 503		Timber	1	0	1
GMU 504		Fall	1	0	1
GMU 505		Fall	10	4	6
GMU 505		Timber	0	0	0
GMU 506		Fall	11	5	6
GMU 506		Timber	0	0	0
GMU 510		Fall	0	0	0
GMU 510		Timber	11	3	8
GMU 513		Fall	1	1	0
GMU 513		Timber	0	0	0
GMU 516		Fall	2	1	1
GMU 516		Timber	2	0	2
GMU 520		Fall	4	3	1
GMU 520		Timber	2	0	2
GMU 522		Fall	0	0	0
GMU 522		Timber	0	0	0
GMU 524		Fall	3	0	3

GMU 524		Timber	1	1	0
GMU 530		Fall	15	1	14
GMU 530		Timber	1	0	1
GMU 550		Fall	1	0	1
GMU 550		Timber	11	4	7
GMU 554		Fall	1	0	1
GMU 554		Timber	0	0	0
GMU 556		Fall	1	0	1
GMU 556		Timber	4	1	3
GMU 558		Timber	0	0	0
GMU 560		Fall	12	4	8
GMU 560		Timber	0	0	0
GMU 564		Fall	5	3	2
GMU 564		Timber	0	0	0
GMU 566		Timber	0	0	0
GMU 568		Fall	20	4	16
GMU 568		Timber	1	0	1
GMU 572		Fall	10	0	10
GMU 572		Timber	5	2	3
GMU 574		Fall	12	6	6
GMU 578		Fall	22	4	18
GMU 600		Timber	0	0	0
GMU 601		Fall	4	1	3
GMU 601		Timber	4	2	2
GMU 602		Fall	17	4	13
GMU 602		Timber	2	1	1
GMU 603		Fall	14	3	11
GMU 603		Timber	6	2	4
GMU 607		Fall	5	1	4
GMU 607		Timber	0	0	0

GMU 612		Fall	6	1	5
GMU 612		Timber	0	0	0
GMU 615		Fall	6	1	5
GMU 615		Timber	0	0	0
GMU 618		Fall	2	1	1
GMU 621		Fall	13	4	9
GMU 621		Timber	3	1	2
GMU 624		Fall	10	4	6
GMU 624		Timber	0	0	0
GMU 627		Fall	23	10	13
GMU 633		Fall	8	4	4
GMU 636		Fall	11	3	8
GMU 636		Timber	6	2	4
GMU 638		Fall	6	0	6
GMU 638		Timber	0	0	0
GMU 642		Fall	6	1	5
GMU 642	100	Spring	1	0	1
GMU 642		Timber	2	2	0
GMU 646		Timber	0	0	0
GMU 648		Fall	11	3	8
GMU 648		Timber	2	1	1
GMU 651		Fall	5	1	4
GMU 651		Timber	0	0	0
GMU 652		Fall	9	1	8
GMU 653		Fall	5	1	4
GMU 653		Timber	0	0	0
GMU 654		Fall	14	4	10
GMU 654	150	Spring	6	2	4
GMU 654		Timber	0	0	0
GMU 658		Fall	17	8	9

GMU 658		Timber	0	0	0
GMU 660		Fall	19	6	13
GMU 660		Timber	3	2	1
GMU 663		Fall	6	0	6
GMU 663		Timber	1	0	1
GMU 666		Fall	2	1	1
GMU 667		Fall	14	4	10
GMU 667		Timber	34	18	16
GMU 672		Fall	8	4	4
GMU 672		Timber	6	2	4
GMU 673		Fall	8	4	4
GMU 673		Timber	0	0	0
GMU 681		Fall	7	4	3
GMU 684		Fall	7	6	1
GMU 699		Fall	0	0	0

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GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	84	26	58
GMU 101	25	Spring	6	1	5
GMU 105		Fall	48	14	34
GMU 105	25	Spring	7	2	5
GMU 108		Fall	26	12	14
GMU 108	20	Spring	3	2	1
GMU 111		Fall	35	15	20
GMU 111	25	Spring	5	1	4

GMU 113		Fall	40	18	22
GMU 117		Fall	55	12	43
GMU 117	25	Spring	2	1	1
GMU 121		Fall	51	15	36
GMU 121	25	Spring	7	3	4
GMU 124		Fall	19	4	15
GMU 127		Fall	5	1	4
GMU 130		Fall	0	0	0
GMU 133		Fall	3	3	0
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	1	0	1
GMU 145		Fall	0	0	0
GMU 149		Fall	0	0	0
GMU 154		Fall	34	8	26
GMU 154	15	Spring	1	0	1
GMU 157		Fall	0	0	0
GMU 162		Fall	30	16	14
GMU 162	15	Spring	5	0	5
GMU 163		Fall	0	0	0
GMU 166		Fall	7	2	5
GMU 166	5	Spring	0	0	0
GMU 169		Fall	1	1	0
GMU 169	45	Spring	3	0	3
GMU 172		Fall	11	4	7
GMU 172	15	Spring	4	2	2
GMU 175		Fall	8	5	3
GMU 175	15	Spring	2	1	1
GMU 178		Fall	2	0	2
GMU 181		Fall	2	1	1

GMU 181	4	Spring	1	0	1
GMU 186		Fall	1	0	1
GMU 186	5	Spring	1	1	0
GMU 203		Fall	11	3	8
GMU 204		Fall	55	18	37
GMU 209		Fall	6	1	5
GMU 215		Fall	19	3	16
GMU 218		Fall	14	6	8
GMU 224		Fall	8	4	4
GMU 231		Fall	8	3	5
GMU 233		Fall	5	3	2
GMU 239		Fall	6	2	4
GMU 242		Fall	24	12	12
GMU 243		Fall	20	5	15
GMU 244		Fall	12	5	7
GMU 245		Fall	30	5	25
GMU 246		Fall	0	0	0
GMU 247		Fall	11	3	8
GMU 248		Fall	4	0	4
GMU 249		Fall	14	6	8
GMU 250		Fall	11	1	10
GMU 251		Fall	25	4	21
GMU 254		Fall	1	1	0
GMU 260		Fall	0	0	0
GMU 266		Fall	0	0	0
GMU 269		Fall	0	0	0
GMU 272		Fall	1	1	0
GMU 284		Fall	0	0	0
GMU 290		Fall	0	0	0
GMU 328		Fall	5	1	4

GMU 329		Fall	1	1	0
GMU 330		Fall	0	0	0
GMU 334		Fall	0	0	0
GMU 335		Fall	24	10	14
GMU 336		Fall	15	1	14
GMU 340		Fall	2	1	1
GMU 342		Fall	1	0	1
GMU 346		Fall	8	4	4
GMU 352		Fall	7	0	7
GMU 356		Fall	1	0	1
GMU 360		Fall	1	0	1
GMU 364		Fall	6	3	3
GMU 368		Fall	8	1	7
GMU 373		Fall	0	0	0
GMU 379		Fall	0	0	0
GMU 381		Fall	0	0	0
GMU 382		Fall	1	1	0
GMU 388		Fall	9	4	5
GMU 407		Fall	34	12	22
GMU 407		Timber	2		2
GMU 410		Fall	0	0	0
GMU 417		Timber	0	0	0
GMU 418		Fall	52	21	31
GMU 418	20	Spring	10	3	7
GMU 418		Timber	0	0	0
GMU 426		Fall	4	3	1
GMU 437		Fall	36	12	24
GMU 437		Timber	4	3	1
GMU 448		Fall	52	12	40
GMU 448	25	Spring	2	1	1

GMU 448		Timber	1	1	0
GMU 450		Fall	16	6	10
GMU 454		Fall	30	13	17
GMU 454		Timber	0	0	0
GMU 460		Fall	30	13	17
GMU 460		Timber	0	0	0
GMU 466		Fall	8	4	4
GMU 485		Fall	4	3	1
GMU 485		Timber	2	1	1
GMU 490		Fall	0	0	0
GMU 501		Fall	4	0	4
GMU 501		Timber	2	0	2
GMU 503		Fall	0	0	0
GMU 503		Timber	2	0	2
GMU 504		Fall	5	1	4
GMU 505		Fall	2	1	1
GMU 505		Timber	0	0	0
GMU 506		Fall	10	4	6
GMU 506		Timber	0	0	0
GMU 510		Fall	3	0	3
GMU 510		Timber	10	6	4
GMU 513		Fall	11	4	7
GMU 513		Timber	0	0	0
GMU 516		Fall	11	3	8
GMU 516		Timber	4	0	4
GMU 520		Fall	4	1	3
GMU 520		Timber	6	3	3
GMU 522		Fall	0	0	0
GMU 522		Timber	0	0	0
GMU 524		Fall	1	0	1

GMU 524		Timber	7	1	6
GMU 530		Fall	11	6	5
GMU 530		Timber	0	0	0
GMU 550		Fall	8	3	5
GMU 550		Timber	14	3	11
GMU 554		Fall	0	0	0
GMU 554		Timber	0	0	0
GMU 556		Fall	0	0	0
GMU 556		Timber	2	0	2
GMU 558		Timber	0	0	0
GMU 560		Fall	11	3	8
GMU 560		Timber	3	0	3
GMU 564		Fall	9	4	5
GMU 564		Timber	0	0	0
GMU 566		Timber	0	0	0
GMU 568		Fall	26	6	20
GMU 568		Timber	7	5	2
GMU 572		Fall	8	3	5
GMU 572		Timber	2	0	2
GMU 574		Fall	9	1	8
GMU 578		Fall	37	12	25
GMU 600		Timber	0	0	0
GMU 601		Fall	1	1	0
GMU 601		Timber	5	0	5
GMU 602		Fall	8	1	7
GMU 602		Timber	4	2	2
GMU 603		Fall	11	3	8
GMU 603		Timber	4	2	2
GMU 607		Fall	8	1	7
GMU 607		Timber	0	0	0

GMU 612		Fall	8	0	8
GMU 612		Timber	0	0	0
GMU 615		Fall	17	4	13
GMU 615		Timber	0	0	0
GMU 618		Fall	1	1	0
GMU 621		Fall	26	14	12
GMU 621		Timber	5	1	4
GMU 624		Fall	14	6	8
GMU 624		Timber	0	0	0
GMU 627		Fall	18	4	14
GMU 633		Fall	13	1	12
GMU 636		Fall	17	5	12
GMU 636		Timber	9	3	6
GMU 638		Fall	4	1	3
GMU 638		Timber	0	0	0
GMU 642		Fall	4	1	3
GMU 642	100	Spring	4	2	2
GMU 642		Timber	3	2	1
GMU 646		Timber	0	0	0
GMU 648		Fall	25	5	20
GMU 648		Timber	3	0	3
GMU 651		Fall	1	1	0
GMU 651		Timber	4	2	2
GMU 652		Fall	7	3	4
GMU 653		Fall	18	6	12
GMU 653		Timber	0	0	0
GMU 654		Fall	5	0	5
GMU 654	150	Spring	8	3	5
GMU 654		Timber	1	0	1
GMU 658		Fall	16	6	10

GMU 658		Timber	0	0	0
GMU 660		Fall	16	4	12
GMU 660		Timber	0	0	0
GMU 663		Fall	7	0	7
GMU 663		Timber	3	2	1
GMU 666		Fall	1	1	0
GMU 667		Fall	9	3	6
GMU 667		Timber	23	14	9
GMU 672		Fall	10	3	7
GMU 672		Timber	3	2	1
GMU 673		Fall	4	1	3
GMU 673		Timber	0	0	0
GMU 681		Fall	6	1	5
GMU 684		Fall	5	1	4
GMU 699		Fall	0	0	0

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GMU	Permits Issued	Hunt Type	HarvestTotal	HarvestFemale	HarvestMale
GMU 101		Fall	53	Unk	Unk
GMU 101	19	Spring	3	0	3
GMU 105		Fall	30	Unk	Unk
GMU 105	13	Spring	5	0	5
GMU 108		Fall	16	Unk	Unk
GMU 108	7	Spring	1	0	1
GMU 111		Fall	19	Unk	Unk
GMU 111	13	Spring	4	0	4
GMU 113		Fall	44	Unk	Unk
GMU 117		Fall	39	Unk	Unk
GMU 117	19	Spring	2	0	2
GMU 121		Fall	54	Unk	Unk
GMU 121	19	Spring	2	2	0
GMU 124		Fall	25	Unk	Unk
GMU 127		Fall	4	Unk	Unk
GMU 130		Fall	0	Unk	Unk
GMU 133		Fall	1	Unk	Unk
GMU 136		Fall	0	0	0
GMU 139		Fall	0	0	0
GMU 142		Fall	0	0	0
GMU 145		Fall	0	0	0
GMU 149		Fall	0	0	0
GMU 154		Fall	25	Unk	Unk
GMU 154	15	Spring	2	0	2
GMU 157		Fall	0	Unk	Unk
GMU 162		Fall	16	Unk	Unk
GMU 162	15	Spring	4	0	4
GMU 163		Fall	0	0	0
GMU 166		Fall	10	Unk	Unk

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GMU 166	5	Spring	1	1	0
GMU 169		Fall	5	Unk	Unk
GMU 169	45	Spring	3	0	3
GMU 172		Fall	2	Unk	Unk
GMU 172	15	Spring	3	2	1
GMU 175		Fall	4	Unk	Unk
GMU 175	15	Spring	2	1	1
GMU 178		Fall	2	Unk	Unk
GMU 181		Fall	0	0	0
GMU 181	4	Spring	0	0	0
GMU 186		Fall	2	Unk	Unk
GMU 186	5	Spring	1	1	0
GMU 203		Fall	6	Unk	Unk
GMU 204		Fall	39	Unk	Unk
GMU 209		Fall	7	Unk	Unk
GMU 215		Fall	12	Unk	Unk
GMU 218		Fall	11	Unk	Unk
GMU 224		Fall	5	Unk	Unk
GMU 231		Fall	5	Unk	Unk
GMU 233		Fall	11	Unk	Unk
GMU 239		Fall	6	Unk	Unk
GMU 242		Fall	14	Unk	Unk
GMU 243		Fall	14	Unk	Unk
GMU 244		Fall	1	Unk	Unk
GMU 245		Fall	19	Unk	Unk
GMU 246		Fall	2	Unk	Unk
GMU 247		Fall	6	Unk	Unk
GMU 248		Fall	4	Unk	Unk
GMU 249		Fall	2	Unk	Unk
GMU 250		Fall	6	Unk	Unk

GMU 251		Fall	27	Unk	Unk
GMU 254		Fall	0	Unk	Unk
GMU 260		Fall	1	Unk	Unk
GMU 262		Fall	1	Unk	Unk
GMU 266		Fall	1	Unk	Unk
GMU 272		Fall	0	0	0
GMU 284		Fall	0	0	0
GMU 328		Fall	10	Unk	Unk
GMU 329		Fall	2	Unk	Unk
GMU 334		Fall	0	Unk	Unk
GMU 335		Fall	24	Unk	Unk
GMU 336		Fall	14	Unk	Unk
GMU 340		Fall	5	Unk	Unk
GMU 342		Fall	1	Unk	Unk
GMU 346		Fall	14	Unk	Unk
GMU 352		Fall	4	Unk	Unk
GMU 356		Fall	2	Unk	Unk
GMU 360		Fall	5	Unk	Unk
GMU 364		Fall	6	Unk	Unk
GMU 368		Fall	5	Unk	Unk
GMU 372		Fall	0	Unk	Unk
GMU 373		Fall	0	Unk	Unk
GMU 381		Fall	0	Unk	Unk
GMU 382		Fall	6	Unk	Unk
GMU 388		Fall	16	Unk	Unk
GMU 407		Fall	25	Unk	Unk
GMU 407		Timber	3	1	2
GMU 410		Fall	1	Unk	Unk
GMU 417		Timber	1	0	1
GMU 418		Fall	59	Unk	Unk

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GMU 418	20	Spring	1	0	1
GMU 418		Timber	0	0	0
GMU 426		Fall	1	Unk	Unk
GMU 437		Fall	52	Unk	Unk
GMU 437		Timber	3	1	2
GMU 448		Fall	59	Unk	Unk
GMU 448	25	Spring	1	0	1
GMU 448		Timber	14	4	10
GMU 450		Fall	6	Unk	Unk
GMU 454		Fall	30	Unk	Unk
GMU 454		Timber	2	1	1
GMU 460		Fall	34	Unk	Unk
GMU 460		Timber	0	0	0
GMU 466		Fall	5	Unk	Unk
GMU 485		Fall	0	0	0
GMU 485		Timber	3	2	1
GMU 490		Fall	0	0	0
GMU 501		Fall	11	Unk	Unk
GMU 501	75	Spring	10	4	6
GMU 501		Timber	7	4	3
GMU 503		Fall	1	Unk	Unk
GMU 503		Timber	0	0	0
GMU 504		Fall	1	Unk	Unk
GMU 505		Fall	4	Unk	Unk
GMU 505		Timber	8	3	5
GMU 506		Fall	15	Unk	Unk
GMU 506		Timber	1	0	1
GMU 510		Fall	5	Unk	Unk
GMU 510		Timber	13	5	8
GMU 513		Fall	5	Unk	Unk

GMU 513		Timber	0	0	0
GMU 516		Fall	11	Unk	Unk
GMU 516		Timber	0	0	0
GMU 520		Fall	4	Unk	Unk
GMU 520		Timber	19	7	12
GMU 522		Fall	0	0	0
GMU 522		Timber	0	0	0
GMU 524		Fall	1	Unk	Unk
GMU 524		Timber	1	1	0
GMU 530		Fall	30	Unk	Unk
GMU 530		Timber	8	4	4
GMU 550		Fall	14	Unk	Unk
GMU 550		Timber	10	2	8
GMU 554		Fall	0	0	0
GMU 554		Timber	0	0	0
GMU 556		Fall	2	Unk	Unk
GMU 556		Timber	4	2	2
GMU 558		Timber	0	0	0
GMU 560		Fall	26	Unk	Unk
GMU 560		Timber	7	4	3
GMU 564		Fall	5	Unk	Unk
GMU 564		Timber	0	0	0
GMU 566		Timber	0	0	0
GMU 568		Fall	24	Unk	Unk
GMU 568		Timber	2	0	2
GMU 572		Fall	17	Unk	Unk
GMU 572		Timber	4	1	3
GMU 574		Fall	7	Unk	Unk
GMU 578		Fall	26	Unk	Unk
GMU 600		Timber	0	0	0

2011

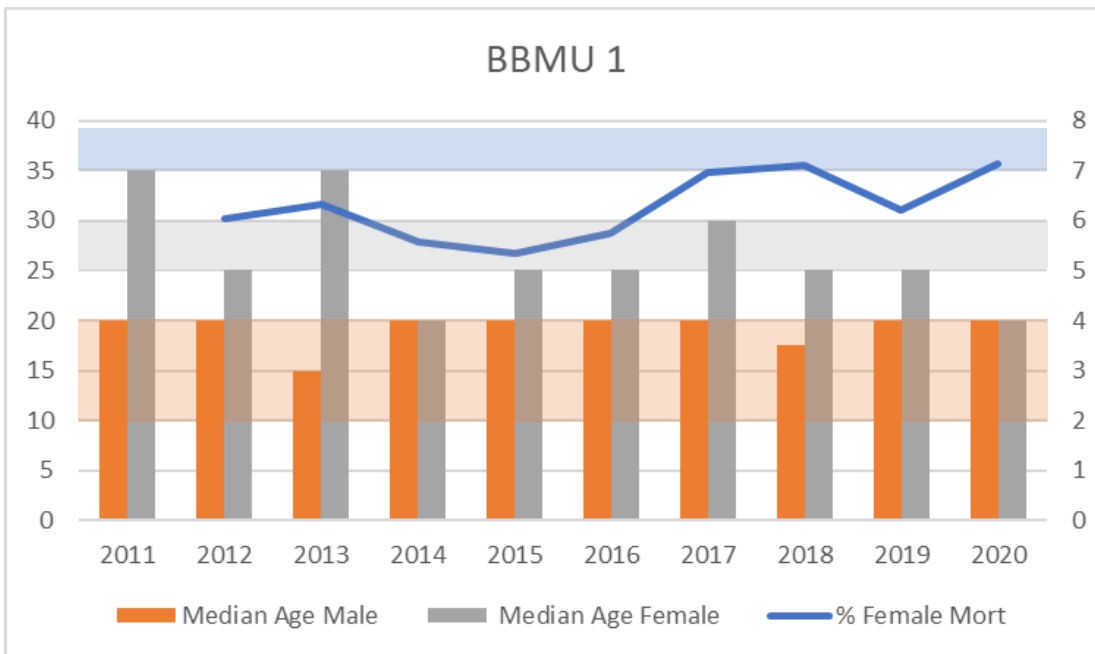
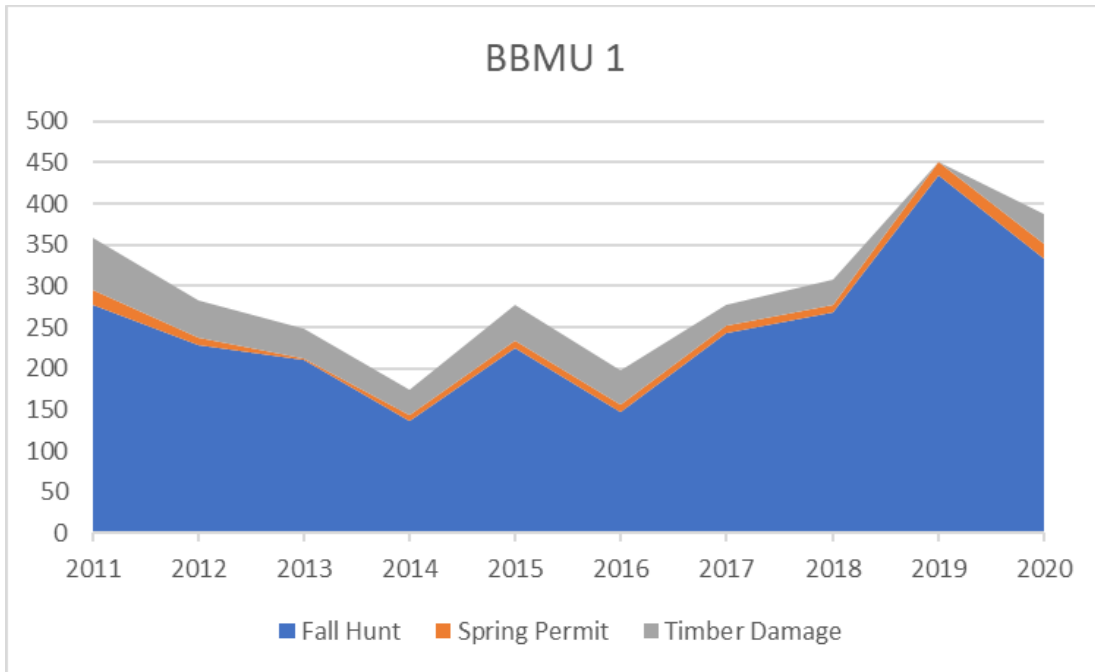
GMU 601		Fall	5	Unk	Unk
GMU 601		Timber	10	3	7
GMU 602		Fall	4	Unk	Unk
GMU 602		Timber	6	1	5
GMU 603		Fall	14	Unk	Unk
GMU 603		Timber	8	1	7
GMU 607		Fall	10	Unk	Unk
GMU 607		Timber	0	0	0
GMU 612		Fall	6	Unk	Unk
GMU 612		Timber	0	0	0
GMU 615		Fall	12	Unk	Unk
GMU 615		Timber	0	0	0
GMU 618		Fall	1	Unk	Unk
GMU 621		Fall	50	Unk	Unk
GMU 621		Timber	2	1	1
GMU 624		Fall	20	Unk	Unk
GMU 624		Timber	0	0	0
GMU 627		Fall	20	Unk	Unk
GMU 633		Fall	7	Unk	Unk
GMU 636		Fall	16	Unk	Unk
GMU 636		Timber	5	2	3
GMU 638		Fall	5	Unk	Unk
GMU 638		Timber	0	0	0
GMU 642		Fall	10	Unk	Unk
GMU 642	100	Spring	8	3	5
GMU 642		Timber	3	2	1
GMU 646		Timber	0	0	0
GMU 648		Fall	16	Unk	Unk
GMU 648		Timber	5	0	5
GMU 651		Fall	4	Unk	Unk

2011

GMU 651		Timber	2	2	0
GMU 652		Fall	13	Unk	Unk
GMU 653		Fall	17	Unk	Unk
GMU 653		Timber	0	0	0
GMU 654		Fall	33	Unk	Unk
GMU 654	150	Spring	8	5	3
GMU 654		Timber	0	0	0
GMU 658		Fall	13	Unk	Unk
GMU 658		Timber	0	0	0
GMU 660		Fall	15	Unk	Unk
GMU 660		Timber	2	1	1
GMU 663		Fall	9	Unk	Unk
GMU 663		Timber	0	0	0
GMU 666		Fall	4	Unk	Unk
GMU 667		Fall	16	Unk	Unk
GMU 667		Timber	25	9	16
GMU 672		Fall	11	Unk	Unk
GMU 672		Timber	4	2	2
GMU 673		Fall	6	Unk	Unk
GMU 673		Timber	0	0	0
GMU 681		Fall	7	Unk	Unk
GMU 684		Fall	2	Unk	Unk
GMU 699		Fall	1	Unk	Unk

Black Bear Harvest by Black Bear Management Unit 2011-2020

Black Bear Management Unit 1: Spring special permits offered, Fall harvest offered

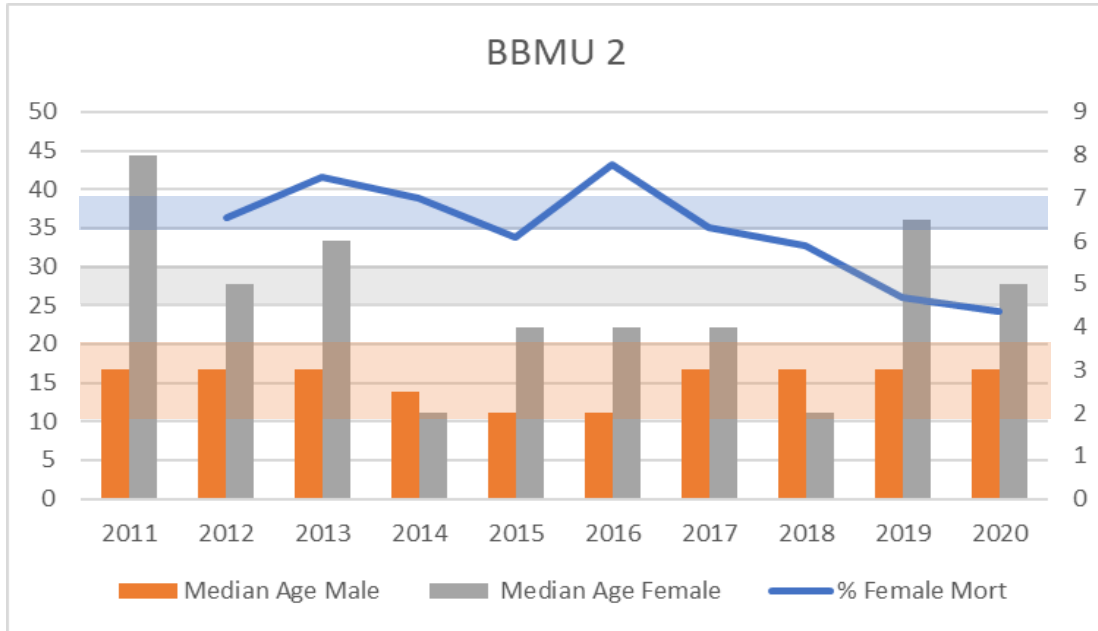
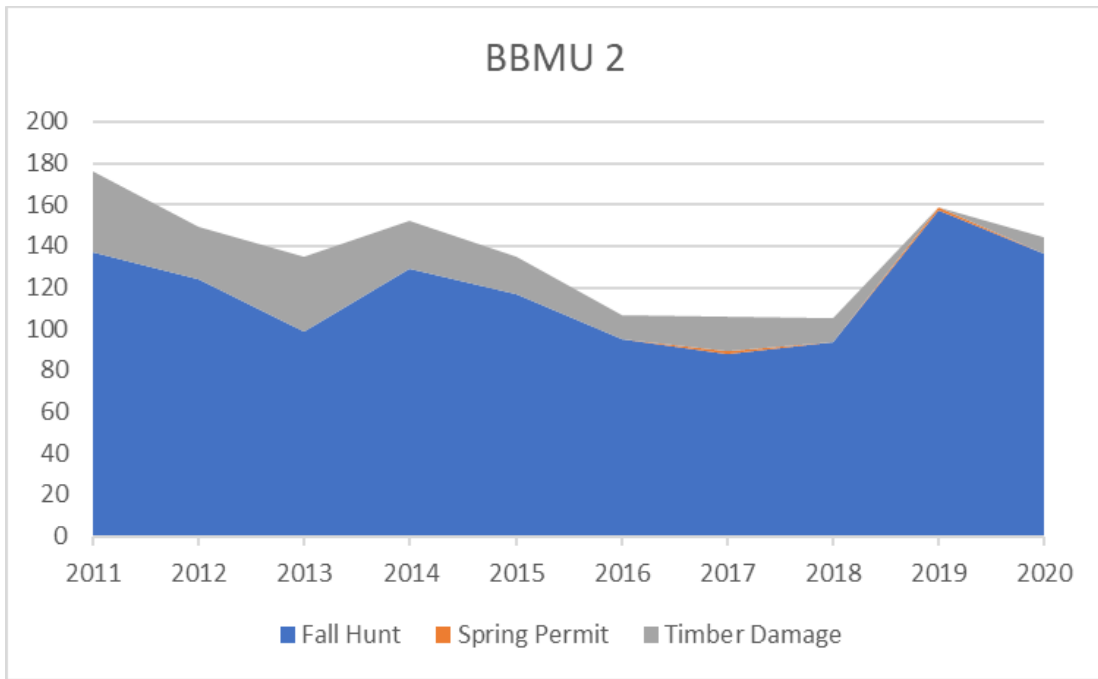


% Female in Harvest threshold

Median age threshold for males

Median age threshold for females

Black Bear Management Unit 2: Fall harvest offered

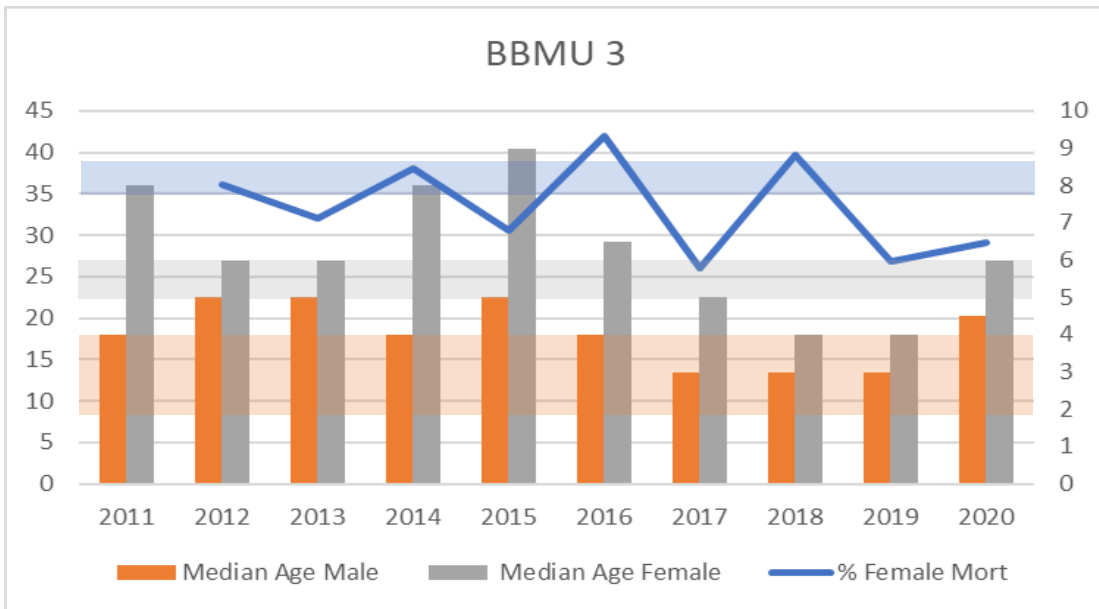
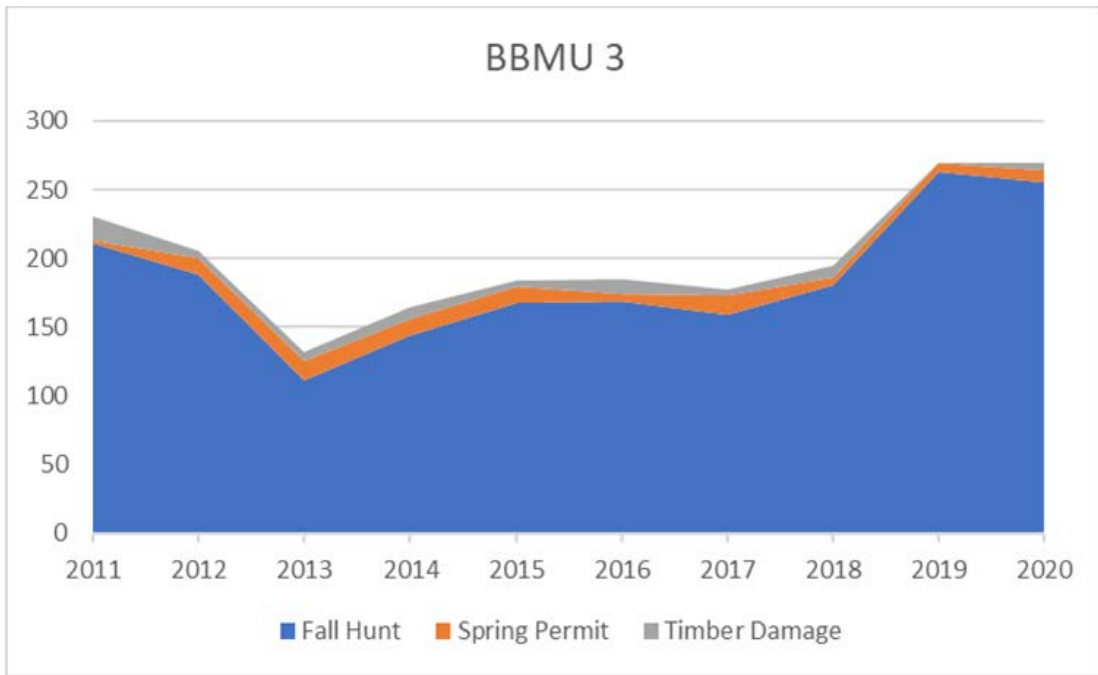


% Female in harvest threshold

Median age threshold for males

Median age threshold for females

Black Bear Management Unit 3: Spring special permits offered, Fall harvest offered

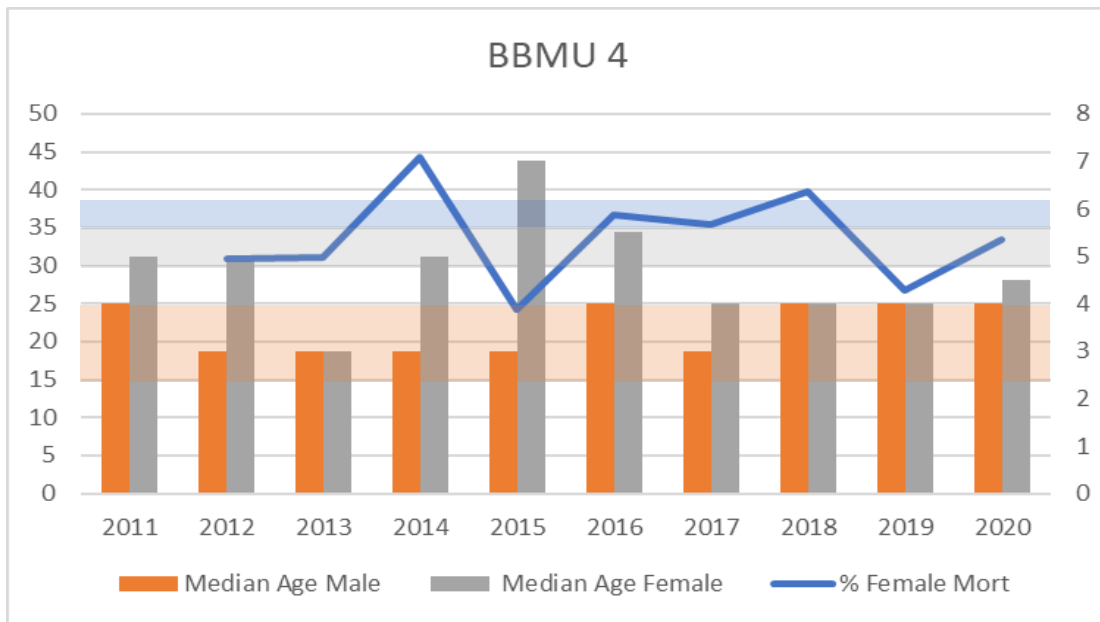
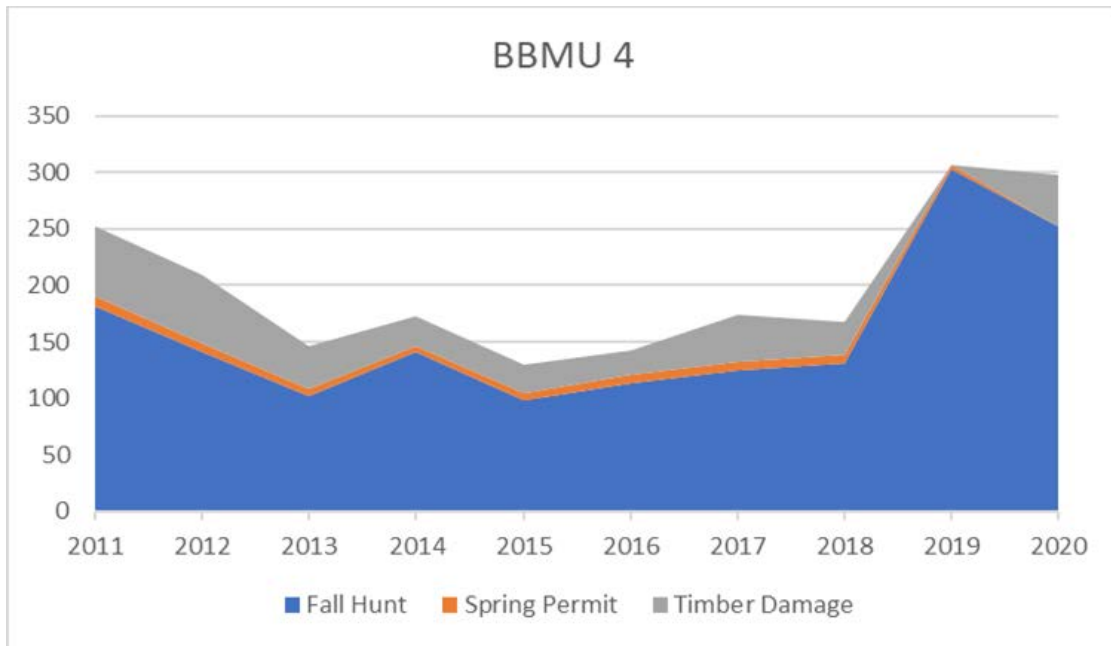


% Female in harvest threshold

Median age threshold for males

Median age threshold for females

Black Bear Management Unit 4: Spring special permits offered, Fall harvest offered

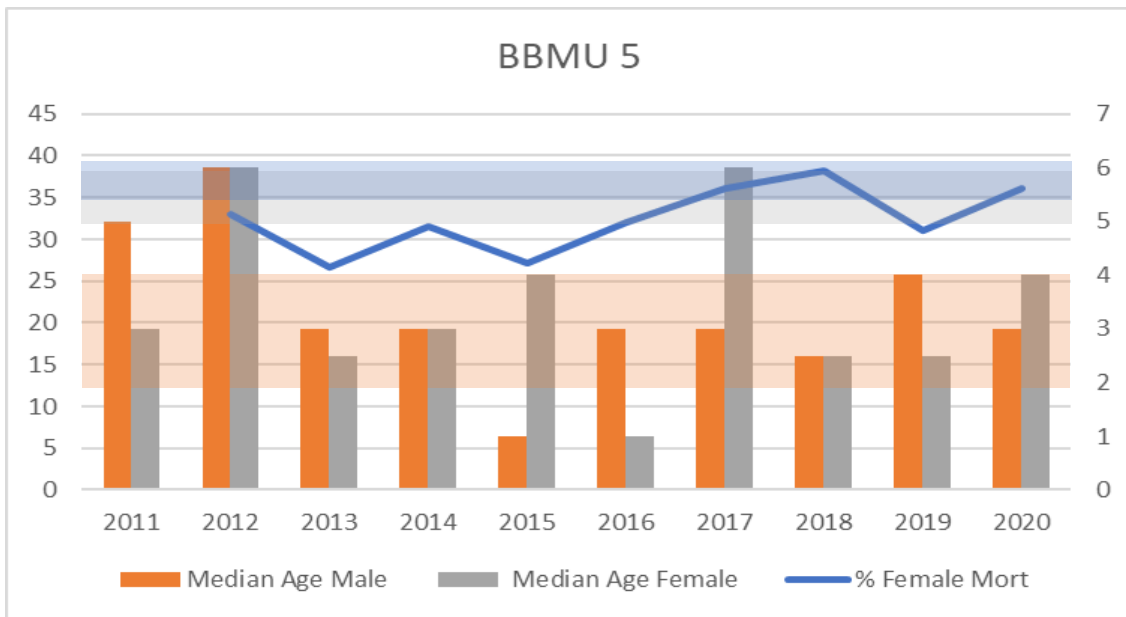
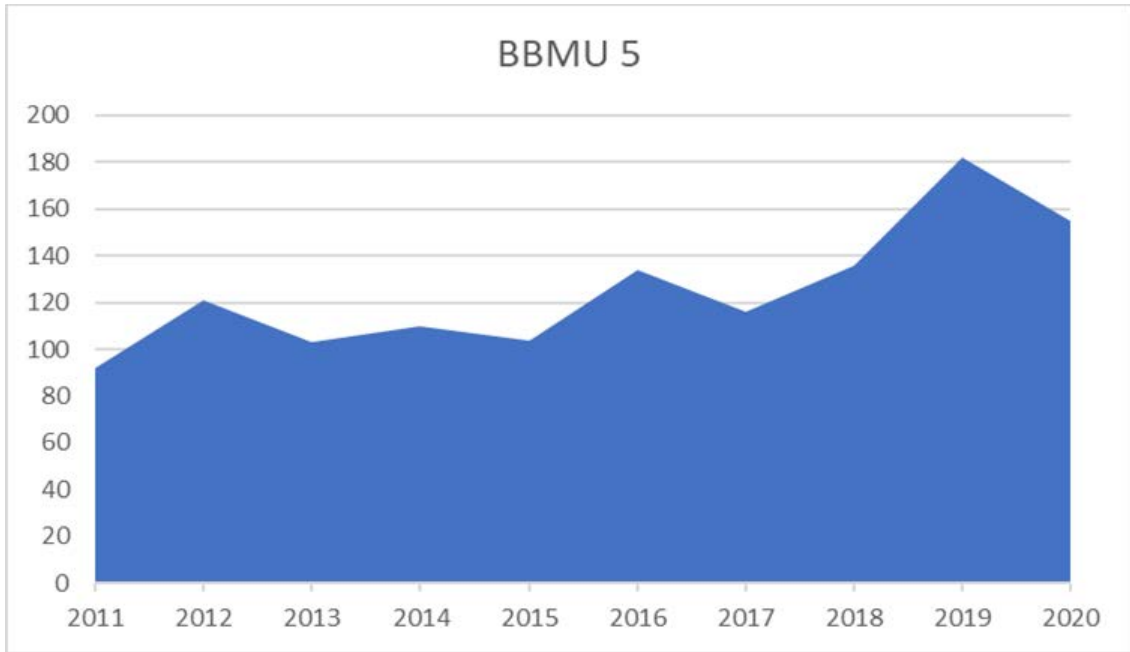


% Female in harvest threshold

Median age threshold for males

Median age threshold for females

Black Bear Management Unit 5: Fall harvest offered

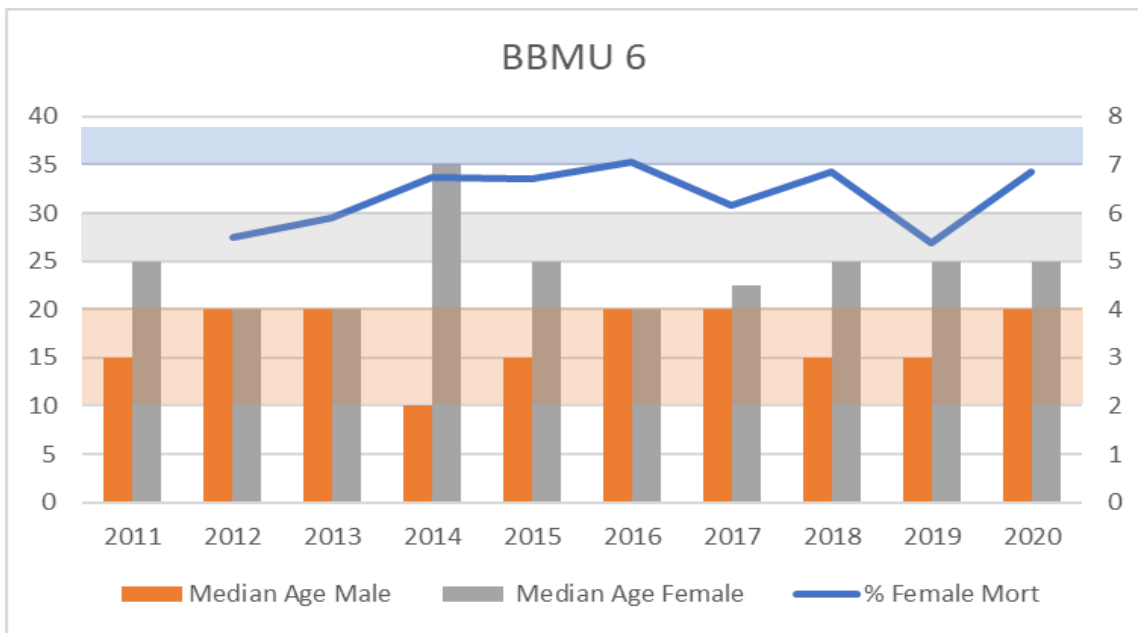
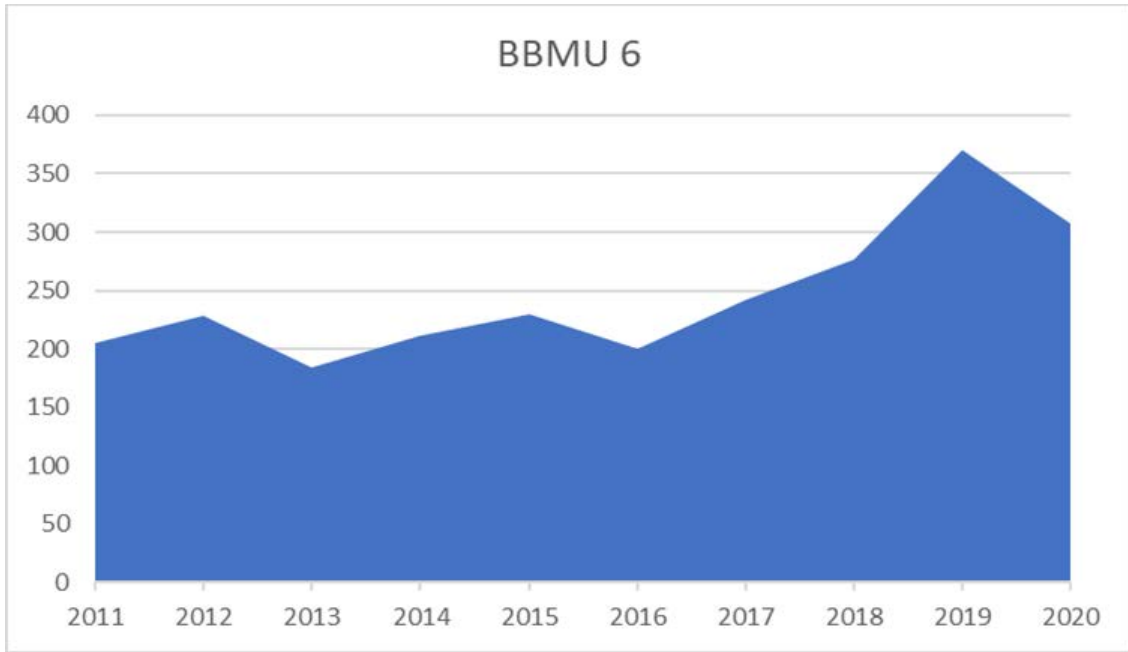


% Female in harvest threshold

Median age threshold for males

Median age threshold for females

Black Bear Management Unit 6: Fall harvest offered

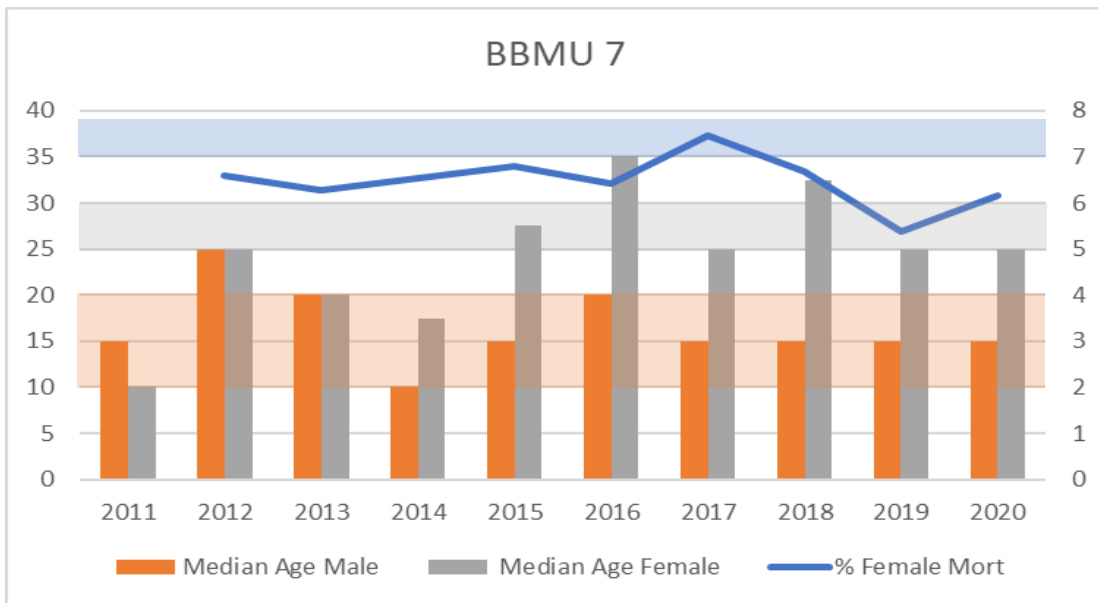
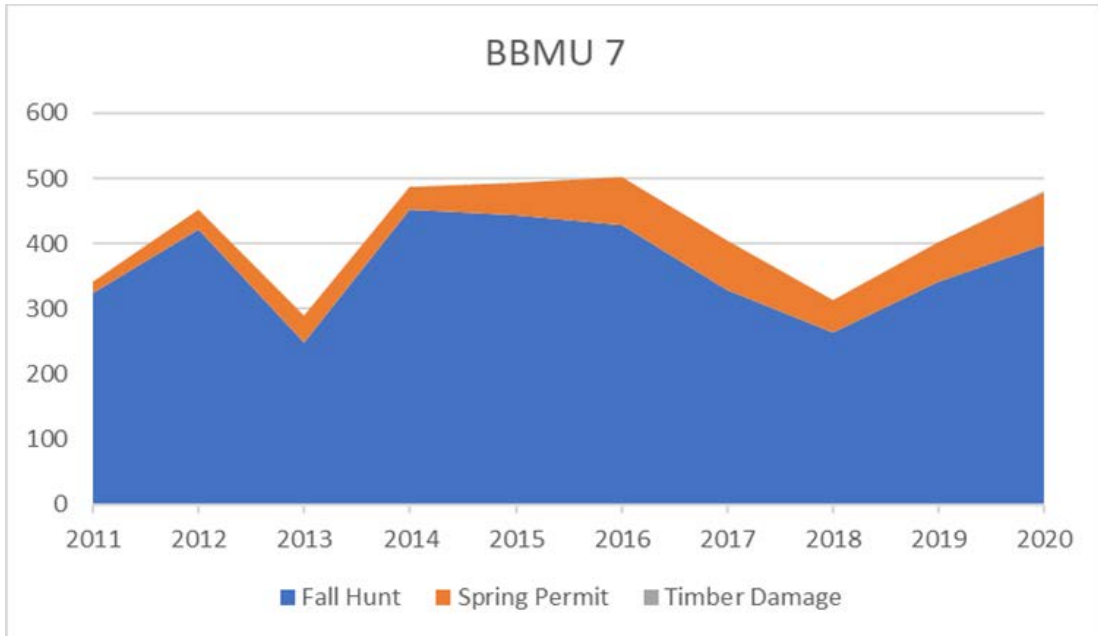


% Female in harvest threshold

Median age threshold for males

Median age threshold for females

Black Bear Management Unit 7: Spring special permits offered, Fall harvest offered

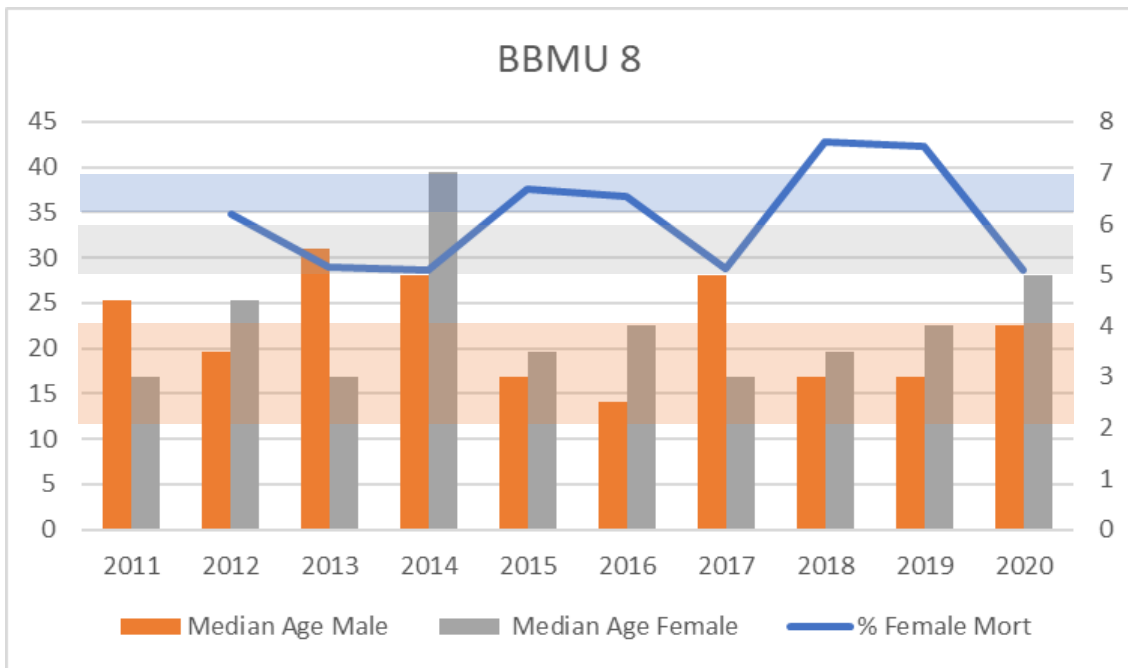
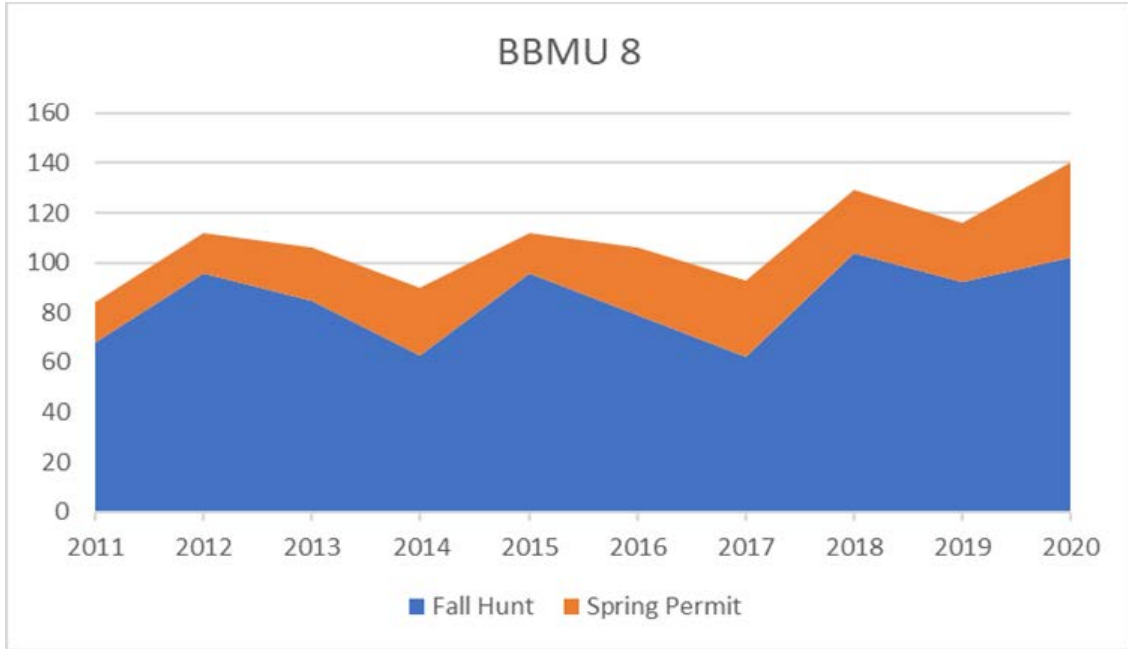


% Female in harvest threshold

Median age threshold for males

Median age threshold for females

Black Bear Management Unit 8: Spring special permits offered, Fall harvest offered



% Female in harvest threshold

Median age threshold for males

Median age threshold for females