

Fish and Wildlife Board Meeting Minutes

Wednesday, October 18, 2023

The Vermont Fish and Wildlife Board held an in-person meeting at 5:00 pm on Wednesday, October 18, 2023, in Conference Room #135, Dill Building, 2178 Airport Rd, Berlin, VT 05641. A recording of the meeting is available on the department's YouTube channel.

Agenda

1. Approval of Previous Meeting Minutes (September 20, 2023)
2. Public Comments (Limited to 2-minutes per speaker)
3. Petition from Andrew Phelan Re Prohibiting Taking of Sow with Cubs – Potential Vote
4. Commissioner's Update
5. Executive Session (at the beginning of the meeting the Board added the Executive Session to the meeting)

Board Members Present: Michael Bancroft, Nicholas Burnham, Jamie Dragon, Brad Ferland (Chair), Allison Frazier, Paul Noel, Robert Patterson, Martin Van Buren

Virtual: Brian Bailey, David Deen, Michael Kolsun, Bryan McCarthy, Jay Sweeny

Absent: Neal Hogan

Department Staff Present: Commissioner Christopher Herrick, Counsel Catherine Gjessing, Game Warden Colonel Justin Stedman, Game Warden Major Sean Fowler, Wildlife Management Program Manager David Sausville, Director of Outreach Alison Thomas, Principal Assistant Abigail Connolly

Virtual: Wildlife Biologist/Black Bear Project Leader Jaclyn Comeau, Furbearer Program Technician MaryBeth Adler

Members of the Public Present: Rod Coronado, Andy Phelan, Bob Galvin, Gaelan Chutter-Ames, Medora Plimpton

Virtual: Karen E. Rose, Barbara Felitti, Sarah Gorsline, David Bahrenburg, Brian, Claudia Mucklow, Katie Nolan

The meeting was called to order at 5:00 pm

APPROVAL OF PREVIOUS MEETING MINUTES

Board Member Frazier moved to approve the minutes from September 20, 2023. The Board voted to approve the minutes (13-0).

PUBLIC COMMENT PERIOD

Andy Phelan, regarding his petition on killing sows with cubs

Rod Coronado, Orange, regarding the petition on killing sows with cubs
Bob Galvin, Richmond, regarding the sale of black bear body parts and the petition on killing sows with cubs
Sarah Gorsline, Grand Isle, regarding the petition on killing sows with cubs
Brian, regarding the petition on killing sows with cubs

[The recording of the public comments and the meeting can be viewed here.](#)

Petition from Andrew Phelan Re Prohibiting Taking of Sow with Cubs – Potential Vote

Chair Ferland explained that the Board asked the department to come back to the Board with a recommendation regarding the petition. The department recommendation is included below. Commissioner Herrick spoke about the process for petitions. The Board Members asked David Sausville, Jaclyn Comeau, Major Fowler, and Colonel Stedman questions about what other states have done, how a potential regulation could be enforced, how to identify sows with cubs, implications to the black bear population, the penalties for a potential regulation, the behavior of sows and cubs, and how hunters are used as citizen scientists. Commissioner Herrick discussed the importance of education and its effectiveness at influencing behavior.

The Board recessed at 6:07 pm and resumed at 6:15 pm.

Board Member Bancroft moved to deny the petition and task the department with increasing its education about identifying sows with cubs to avoid hunting them. Board Member McCarthy seconded the motion. The Board discussed the motion. The Board voted by roll call (13-0) to approve the motion. Chair Ferland thanked the petitioner for bringing this to the Board and explained that the Board agrees with the intent of the petition but is choosing an alternative route to achieve the same goal of protecting sows with cubs. Chair Ferland asked the department to update the Board on the development of the additional education.

COMMISSIONER’S UPDATE

Commissioner Herrick announced that the department is in the process of developing the FY25 budget. The department is presenting at LCAR on Thursday, October 19, 2023 for the second time regarding the proposed furbearer rule. The department held interviews this past week for the vacant Director of Wildlife position. The Board Members asked Commissioner Herrick questions about the timing with LCAR.

Executive Session

General Counsel Gjessing explained that under Title 1 Section 313 a of the Vermont statutes, Boards can go into executive session for specific reasons, including confidential attorney-client communications made for the purpose of providing professional legal services. The department received a letter from legislative council about the furbearing species rule and the Board could vote to go into executive session to receive legal advice about the statutory authority of LCAR, legal constraints, and the legal consequences of any actions the Board might take if LCAR objects to a rule. No other matter can be discussed and no decisions can be made in the executive session.

The Board found that premature general public knowledge would clearly place the public body or a person involved at a substantial disadvantage.

Board Member Bancroft moved to enter into executive session to receive legal advice per 1 V.S.A. § 313(a)(1)(F), including the Board and department staff. Board Member Bailey seconded the motion. The Board voted (13-0) to go into executive session.

The Board recessed at 6:40 pm and resumed at 7:05 pm.

The Board voted to exit the executive session at 7:58 pm.

Motion To Adjourn:

The Board voted to adjourn the meeting at approximately 8:00 pm.

Recommendation Related to a Petition to Outlaw the Intentionally Shooting of Sows with Cubs

to the

Vermont Fish and Wildlife Board



Vermont Fish and Wildlife Department
Agency of Natural Resources
1 National Life Drive, Davis 2
Montpelier, VT 05620-3208
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October 18, 2023

Petition to Not Intentionally Shoot Black Bear Sows with Cubs

Recommendation

Summary of Issues for Consideration:

March 8, 2023, Andrew C. Phelan Petitioned for the Department to:

- (1) Pass a regulation that prohibits the deliberate killing of black bear sows with cubs
- (2) Require bear education for hunters as a condition to obtain a bear hunting license.

Department Recommendation:

The Department recommends that the Board not produce a regulation that outlaws the shooting of sows with cubs. We do not believe the law would accomplish the intent of the petition.

The Department proposes that it increases its educational efforts to reduce the taking of sows with cubs through the following measures.

- Increase information within hunter education classes on bear biology
- Continue to include articles within the hunting guide rule book and emphasize the cub's life cycle
- Add an information sheet with every early season bear tag purchased, similar to what we do with the youth deer and turkey season tags
- Posting of educational videos online, like the one New Hampshire is currently working on
- Continue and expand outreach activities to minimize the taking of sows with cubs during programing that targets hunters, (Yankee Classic presentations, meetings with bear hunters association, general presentations to the public, etc.).

We believe the educational route is the best approach, this will maintain the hunters as a resource for the future. This approach is similar to techniques used successfully to increase hunters' use of blazed orange clothing and knowledge of the benefits of harvesting antlerless deer.

Department Response to the Fourteen Questions within the Proposal:

1. **Comment/Question: A regulation that bars deliberately killing mother bears with cubs, together with mandatory bear education that includes cub dependence and other salient bear/cub information would, every year: (1) spare dozens of helpless cubs the cruelty and pain the cub here suffered; (2) require no substantial expenditure of money or time; and (3) likely have broad support across Vermont, from both hunters and non-hunters alike.**

Response: 1) We and the petitioner currently have no data on how many cubs are orphaned by the killing of sows during the bear hunting season and no reasonable way to acquire those numbers. Sows can also die during the fall from vehicle collisions and conflict situations. The petition makes many assumptions on the number of cubs affected each year. 2) The time spent on this issue would require the Department to open the rule and go through the rule making process, 9-12 months minimum and the time of wardens to investigate persons accused of killing a sow with cubs, which is in their defined responsibilities of wildlife law enforcement. All educational processes require money and time annually. 3) A public survey has not been completed on this subject to determine public support for a law change.

2. **Comment/Question: The Department’s “recommendation” against killing mothers with cubs does not protect vulnerable cubs.**

Response: The Department’s recommendation against killing sows accompanied by cubs is shared through press releases, social media, and documents describing the requirements and standards of Vermont’s black bear hunting seasons. The intent is to increase hunter selectivity against harvesting sows with dependent young. As stated earlier we do not have a reasonable way to collect data to assess the extent to which sows with dependent young are being avoided by hunters.

However, more can be done to better educate Vermont’s bear hunters as to why and how to be more selective. The Department will create content that describes the life history of bears with an emphasis on when and why juveniles are dependent. This content will also include techniques to help hunters better identify bear family groups and techniques to improve their ability to avoid harvesting sows with dependent young. This content will be integrated into hunter education courses and will be created in a variety of formats so that it can be shared across diverse platforms. The Department will communicate with counterparts at New Hampshire Fish and Game who are already in the process of improving hunter education on this topic.

Based on communications with jurisdictions that use regulation to prevent the harvest of sows with dependent young the regulations are not 100% effective. Those states still document the harvest of sows with cubs. One reason for this is because bear family groups are not always within visual distance of each other. Conscientious, law-abiding hunters still run the risk of inadvertently harvesting a sow with cubs. A regulation won’t prevent this from happening. Education about techniques to better identify bear family groups and encourage increased selectivity can help minimize the chance of this happening.

3. **Comment/Question: The Department is responsible for humanely managing Vermont’s wildlife for all Vermonters. It should not cede this key responsibility by leaving the killing of mother bears to the discretion of hunters. Passing this regulation would also correct an omission necessary to ensure compliance with Vermont’s bear quota.**

Response: The Department recognizes that orphaned bear cubs are at increased risk to premature death. Therefore, the Department advises against harvesting sows with cubs. The Department works towards reducing the harvest of sows with cubs through education. We strive to educate the hunting community, and all Vermonters, on methods to reduce the deaths of sows with dependent young.

Vermont does not use a quota for the management of black bear hunting. The hunting pressure under the current hunting seasons and use of a one bear per year bag limit has thus far maintained sustainable harvest levels and a viable population. The bear population has remained stable over the past decade, with a recent increase in the short term. The loss of cubs after a sow is harvested is not considered a direct take against a season bag limit. The Department has not ceded any responsibility for the management of Vermont’s wildlife species population. There is no omission of responsibility.

4. **Comment/Question: The proposed regulation would have immediate effect and require no significant resources or time. It may even save resources spent rescuing even the few cubs that Vermonters find orphaned after their mothers were shot. The regulation would also save resources of rehabilitators like the Kilham Bear Center, which are already swamped by too many orphaned cubs. All those cubs, left to be raised by their mothers, will enhance the diversity and health of the Vermont bear population by learning how to survive in the wild from their wild mothers and be less likely to become nuisance bears.**

Response: Adopting this regulation would take approximately 9-12 months. Regulation enforcement and education will require resources and time from Department staff. Education coupled with regulation can be effective solutions to achieve desired outcomes and therefore worth the effort. In this case there are reasons to question the effectiveness of a regulation in reducing hunter harvest of sows with cubs. Morphological overlap between sexes and age classes of bears can make it difficult for hunters to reasonably avoid violating such a regulation. As stated earlier, bear family groups are not always in visual distance of each other further complicating compliance with this type of regulation. Enforcement of the regulation would create additional challenges of proving deliberate take of the sow. Enforcement, as with any law, would depend on the investigation of the case and evidence available.

Vermont Fish and Wildlife staff dedicate resources to capture orphaned cubs, transport them to the Kilham Bear Center (KBC), recapture them, and release them into remote public lands throughout Vermont. We know vehicle collisions, conflicts, and hunter harvest all contribute to sow mortality, but don’t have data to definitively identify the proportion each plays in orphaning bear cubs and therefore don’t have a sense of how much staff time dedicated to these efforts is related to hunter harvest.

Reports of orphaned cubs vary widely from year to year and the number of orphaned cubs Vermont brings to the Kilham Bear Center has ranged from 0 to 28. In 2022, the KBC received a record number of cubs – cubs came from New Hampshire, Vermont, Massachusetts, and Connecticut. Despite the

higher than usual number of cubs in 2022 the KBC had the space and resources to accommodate this volume.

We have not seen a correlation of rehabilitated orphaned cubs engaging in higher rates of nuisance behaviors compared to wild raised bears. Monitoring efforts and research in New Hampshire has confirmed that orphaned cubs rehabilitated at the KBC do not engage in nuisance behaviors more than wild raised bears. Research from other locations has confirmed this relationship. Research has also found that the survival of rehabilitated orphaned bears is comparable to wild raised bears. An important component of success is holding bears until they reach a biologically appropriate age to be independent, which is approximately 15-18 months of age.

Cubs do learn feeding strategies from the sow and these foraging behaviors can vary widely depending on the sow and her level of anthropogenic food conditioning and habituation to human dominated spaces. All bears learn strategies to successfully forage for locally available wild foods, in some cases, wild raised cubs learn to forage for anthropogenic foods which can contribute to the cycle of nuisance behaviors seen in Vermont's bears. Despite this it is preferable for cubs to remain with their mothers.

5. **Comment/Question: By passing the regulation, Vermont will join numerous other states, likely even a majority, that ban this practice.**

Response:

Of the North American jurisdictions with bear hunting seasons, 73% have regulations restricting the harvest of sows accompanied by cubs. However, in the northeastern U.S. this drops to 50% of states with bear hunting have this type of regulation. None of the New England states have this regulation.

As part of the Department's assessment of this petition, we reached out to jurisdictions with this type of regulation to better understand the specific language they use and how it is enforced. Like this petition the language used by most jurisdictions was designed to prohibit the intentional harvest of sows with dependent young. The intent in most jurisdictions was not to penalize hunters who harvested a sow when cubs were not known to be present. One state reported written violations related to this regulation were often from self-reporting by hunters who didn't see cubs until after the bear was harvested. Another state reported that all harvested bears are physically inspected by trained Department staff, but even when staff observe evidence of lactation, they often can't write a violation because there is a lack of evidence to prove that cubs were present when the sow was harvested. Although it is mandatory to report harvested bears in Vermont, Department staff do not routinely inspect bears.

Because no one can perfectly track the extent to which sows with dependent young are harvested we looked at the overall component of females in a harvest as a course way to assess if Vermont's harvest differed substantially from those jurisdictions with this type of regulation. We reached out to bear biologists across northeastern North America and received information from three states and one province that have this regulation. Across this area there is a wide diversity in hunting season structure, habitat, and social influences which all contributed to variation in harvests. Overall, females on average

make up approximately 42% of their harvests with an approximate range of 23% to 60%. It's important to note that 23% comes from Ontario's spring harvest when yearling bears are still traveling closely with the sow and sows with cubs of the year are not as active on the landscape limiting their overall vulnerability to the harvest. As a comparison females make up on average 42% of the harvest in Vermont. Overall female harvest is not a perfect way to evaluate the effectiveness of this regulation, but it is encouraging to see that female harvest remains conservative in Vermont.

- List of U.S. states that prohibit the harvest of black bear sows accompanied by cubs: Alaska, Arizona, California, Colorado, Georgia, Idaho, Kentucky, Michigan, Missouri, Montana, North Carolina, New Jersey, New Mexico, Nevada, sections of New York (in some areas), Oklahoma, Oregon, South Carolina, Tennessee, Utah, Virginia, Wisconsin, West Virginia, Wyoming
 - For context,
 - List of U.S. states with black bear hunting but no restrictions: Arkansas, Maine, Maryland, Massachusetts, Minnesota, New Hampshire, Pennsylvania, Vermont, Washington
 - List of U.S. states currently with no bear hunting season: Alabama, Connecticut, Florida, Delaware, Hawaii, Iowa, Illinois, Indiana, Kansas, Louisiana, Mississippi, North Dakota, Nebraska, Ohio, Rhode Island, South Dakota, Texas.
- List of Canadian Provinces prohibiting the harvest of black bear sows accompanied by cubs: Alberta, British Columbia, Manitoba, Newfoundland/Labrador, Northwest Territories, Nova Scotia, Ontario (spring season only), Saskatchewan, Yukon
 - For context,
 - List of Canadian Provinces with black bear hunting and no such restrictions: Nunavut and Quebec

6. Comment/Question: Most Vermonters, hunters, and non-hunters, likely would support this regulation.

Response: We have no scientific survey data to support or refute this claim. Anecdotal conversations with Vermont hunters indicate support for not intentionally harvesting sows accompanied by cubs, but public surveys would be necessary to confirm support for this regulation. Correspondence with Fish and Wildlife agency staff from jurisdictions with this type of regulation anecdotally report broad public support.

7. Comments/Questions: In tandem with the regulation, the Department should require bear-specific education in order to obtain any license that would allow targeted or opportunistic hunting of bears.

Response: Vermont's hunter education course which is required of all individuals that wish to hunt covers bear hunting as a general hunting topic within the classroom time. A portion of the curriculum could be enhanced to cover additional portions of bear biology specifically as it relates to importance of maintaining family groups and teaching techniques to identifying family groups and avoiding the harvest of sows with dependent young. We could also create this content in a variety of formats that could be shared through our website, social media, publications and point of sales.

8. **Comments/Questions: Available facts, studies, expertise, and common sense indicate that most orphaned first-year cubs will die without their mothers. The notion that most orphaned first-year black bear cubs can survive without their mothers is based on flawed articles from decades ago that continue to be cited today, often inaccurately.**

Response: A literature review on this topic was part of Fish & Wildlife's process for evaluating the petition. Research and data on this topic are limited. Collecting data on cub survival during their first year of life is challenging due to limited devices that can safely monitor small, rapidly growing animals that are prone to rough physical interactions. The standard approach used by most researchers is to instead monitor the sow. By visiting her winter den cubs can be counted and their survival can be determined at the following year's winter den visit. Cubs are fit with ear tags, but if the sow is killed there are very limited opportunities to track the fate of her cubs.

The dependence of cubs on sows for the first 15-18 months of life comes from data collected on wild bears and is a well-established fact regarding black bear biology. Successful black bear rehabilitation facilities use the known needs of wild bears to guide their husbandry techniques. Vermont Fish and Wildlife, New Hampshire Fish and Game, and the Kilham Bear Center work together to release rehabilitated orphaned bears when they are approximately 15-18 months old because this is biologically when these animals are most capable to be successful on their own.

The studies described by the petitioner are very limited in scope and therefore should not be used to justify that bear cubs orphaned in the fall will likely survive in Vermont. Again, we have limited data directly from Vermont, but the orphaned cubs captured by Fish & Wildlife staff typically show clear evidence of starvation which indicates at least some orphaned bears struggle to survive in Vermont.

9. **Comments/Questions: We need to control the number of bears, there are too many. If the bear population is a problem, the solution is to adjust some other aspect of adult bear hunting, not to visit on helpless cubs prolonged and inhumane suffering and death from starvation, the elements, or predation.**

Response: Black bear hunting is an important tool to influence the size of Vermont's bear population. Although hunting bears does not have a direct influence on the amount or severity of human-bear conflicts it can be an effective tool to stabilize or reduce the overall size of Vermont's bear population. As is the case with all wildlife population management activities, it is the female portion of the population that has the most effect on growth or reduction of the population. However, it is important to deploy techniques to minimize the chance of harvesting females with dependent young. Vermont Fish & Wildlife has annually recommended hunters avoid shooting sows with dependent young and has shared this message through a variety of platforms.

- Vermont has seen historically high black bear harvests in recent years. With an average harvest of 867 bears over the past 3 years (2020-2022) compared to an average of 685 bears over the previous 3 years (2017-2019).

- Currently, VFWD believes additional hunting opportunities are not necessary, but instead our focus needs to be on limiting bear access to human foods and educating the human population of Vermont.

10. **Comments/Questions: Education alone is not enough. The current law makes it legal to kill a mother with cubs. No amount of education will prevent unethical hunters from deliberately killing sows with cubs where that killing is legal and therefore permitted by the Department.**

Response: Education is an important component of wildlife management issues. Education efforts have worked historically to improve hunting safety and population management of deer through harvesting of antlerless deer. Education is a central component of reducing human-bear conflicts throughout North America. Understanding the various factors of an issue can help motivate people to change their behaviors. Education coupled with regulation can be an important strategy when education is not enough to overcome the desire to engage in an activity. However, there are reasons that support education as the more effective approach when it comes to minimizing the chance of hunters harvesting sows with cubs.

Due to the morphological and behavioral diversity of bears it is not possible for hunters to correctly identify sows with dependent young 100% of the time. Hunters will occasionally make mistakes when it comes to this issue. In these cases, a regulation will penalize well-intentioned hunters. Jurisdictions with this type of regulation report the harvest of sows with cubs still occurs.

Further the challenges associated with enforcing this proposed regulation bring into doubt its effectiveness. The evidence necessary to prove that a sow with cubs was deliberately harvested will rarely be available as was confirmed by jurisdictions with this regulation. Additionally, trained Department staff do not inspect harvested bears and therefore there is no reliable way to determine reproductive status of harvested sows.

Education regarding the importance of maintaining family groups and techniques to identify sows with dependent young can help improve hunters' understanding of this issue and improve their ability to selectively avoid sows with cubs.

Unfortunately, education and/or regulations are never 100% effective. Some people will disregard both in pursuit of their own interests. Based on thorough consideration it is the Department's professional opinion that improved education is a more effective approach to increase hunter selectivity against harvesting sows with dependent young.

11. **Comments/Questions: It is said that most hunters would not kill a mother with cubs, so there is no need for a law prohibiting killing a sow. There are several responses to this. First, there is no data to support this assertion. The Department does not know, and cannot know, the number of mothers who are killed or the number of their cubs that starve or die from starvation, exposure, or predators. Second, if killing a mother with cubs is wrong for all the reasons stated in the body of the petition, then there is no legitimate reason why such killings should not be illegal. If the Department continues to permit the deliberate killing of mothers, hunters will kill them.**

Response: The Department does not have data to indicate how many sows harvested each year had dependent cubs, the fate of cubs orphaned, nor the number of hunters who knowingly or unknowingly

harvest sows with cubs. We can assess the number of likely reproductively successful sows in the harvest by looking at the age composition. Based on past research conducted by the Department we know that although sows can begin reproducing at 3 and 4 years of age those litters typically don't survive beyond the summer. Sows become more consistently successful at keeping cubs alive through their first year once they reach 5-7 years of age. Over the past 5 years (since mandatory tooth submission) Vermont's harvest averages approximately 120 female bears 5 years and older annually. An unknown portion of those are independent of offspring. The Department currently has no way to evaluate the amount of hunter selectivity that occurs to avoid sows with cubs. It is safe to assume that at least some of those sows have dependent young. As stated earlier, the Department has no direct evidence as to the fate of orphaned cubs, but there is reasonable evidence that supports they have a reduced chance of survival compared to unorphaned cubs. Also as stated earlier, the Department does acknowledge that orphaning cubs has negative ramifications for the orphaned cubs and therefore is interested in exploring ways to minimize the chance of this happening. Again, we believe improved education is the most effective strategy currently.

12. Comments/Questions: **The Department does not get reports of such killings so it is not a problem. First, all such killings – even if it were just a few each year – should be prohibited because they are cruel and unethical and cause the cubs painful suffering and death. Second, the Department does not know how often this happens. Of the 814 sows taken by hunters in 2020 and 2021 combined, the Department has no idea how many were mothers or how many cubs were orphaned and died as a result. By the same token I have no data to prove exactly how often it happens or how many cubs suffered and died. We delude ourselves, however, if we say it is not a problem. With hundreds of sows harvested every year in Vermont coupled with the fact that hunters through the present know it is perfectly legal to kill mother bears, it is baseless, even reckless, to turn a blind eye and deny that it happens far more frequently than we all would like. The killings are most often hidden from view off in the woods with no witnesses. The chance of again capturing such a killing on video, as we did here, and followed quickly by the discovery of the dead, starved cub is remote at best. But we have it now and that video, hopefully, has highlighted for all of us a blind spot in our hunting laws and management that we should now correct.**

Response: The Department acknowledges that we don't have an estimate of how many bear cubs are orphaned during the bear hunting seasons. However, we know this isn't currently happening at a rate that has an overall impact on the viability of Vermont's bear population. The Department acknowledges this is an issue for the cubs orphaned and advises hunters to avoid harvesting sows with cubs. As stated earlier, the Department agrees that more can be done through increased education to help minimize the chance of this happening. We believe education is the most effective strategy to achieve this desired outcome.

13. Comments/Questions: **The cubs were big enough to survive, they were yearlings, they were all adults even though they were together. The no-kill prohibition needs to be black and white. It cannot leave gray areas for some hunters, who are about to take the shot, to rationalize the killing and kill the sow based on their own actual or feigned conception of cub survivability. A blurry and weak prohibition that leaves open the decision to shoot the sow based on one or another "exception" would substantially reduce the effectiveness of the regulation in protecting vulnerable cubs.**

Response: This statement highlights the need for improved education. It is important for hunters to understand that both small and large juvenile bears still traveling with the sow have an increased risk of premature death if orphaned. We can address the misinformation of bear biology within our hunter education classes, a form added to the early season bear tag, our website, social media, and other relevant publications designed for the hunting community.

- 14. Comments/Questions: It could be too hard to enforce in individual cases, so it is not worth it. As explained at the start of the petition, the focus of the requested regulation is not enforcement in individual cases. It is much more far-reaching and important than the much narrower enforcement focus. The principal focus is to save cubs by the immediate impact the regulation will have on the thousands of Vermont hunters who come across mother bears with cubs. They will not take that shot because they are law-abiding and know that such killing is unlawful. The enforcement of that regulation will be no more difficult or different than the situation presented to game wardens and law enforcement every day as they enforce countless other laws. Exercising their discretion based on their investigation and the facts presented is what they are trained to do. Allowing such a cruel, unethical, and painful practice to continue against vulnerable cubs just because enforcing it might at times be inconvenient or difficult fails to pursue ethical and humane wildlife management.**

Response: If outlawing the shooting of sows with cubs becomes law it will be enforced as any other wildlife law. Enforcement as with any law would have to depend on the investigation of the case and evidence available. The actual impact on the orphaning rate of cubs will be undeterminable. If the intent is not individual cases, our approach of various educational methods is the path to pursue to have a true impact on reducing sows shot with dependent cubs.

Other Information to Consider:

- The petition only relates to the hunting of bears, not the management of human-bear conflict situations. But it should be known that the Department always tries to work with the individuals that are experiencing bear conflict issues to use non-lethal options first. Actions taken when human safety is not an issue include use of electric fence, removal of attractants, negative reinforcements such as paint balls and rubber bullets, and chasing with dogs. Fish and Wildlife already takes precautions to avoid euthanizing sows with dependent young. However, in situations where a sow with cubs engages in behaviors that are deemed a significant threat to human safety, efforts are made to capture the cubs and transport them to the Kilham Bear Center. This is also true when sows with cubs are killed by the public via conflicts or vehicle collisions. There are safe live trapping options for the cubs, but they are not 100% successful.
- Common mortality causes for cubs. We don't have this data for Vermont and as stated above there are challenges collecting this type of data, but our understanding based on personal observations and the experience of other professionals is that predation, starvation, physical injury, and to some extent diseases are all relatively common causes of mortality for cubs.
- Vermont's bear population increased throughout the 1970s, 1980s, and the early part of the 1990s. Since the mid-1990s the population has been relatively stable, fluctuating from approximately 4,500-6,500

bears statewide. Traditionally our population estimation models have been based solely on age reconstruction methods using harvested bears. However, there has been a noticeable and sustained increase in the number of non-hunting bear mortalities in recent years. We are currently exploring ways to integrate this data into the model. Initial estimates indicate the population may be increasing but these results won't be finalized until winter.

- Habitat quality and natural food availability play a significant role in human-bear interactions. Hard mast (beechnut and acorns) availability is a significant driver of this relationship – both food sources are more abundant in older mature forests. However, soft mast also plays an important role and the young forest habitats that typically support these plants are less abundant in many regions of Vermont. There are many mid-aged forests throughout Vermont that offer limited hard and soft mast options for bears.
- Vermont Fish and Wildlife's data shows that bear access to garbage is the largest cause of human-bear conflicts in our state. This is followed by access to birdseed and then backyard chickens. Of course, unsecured compost/food scraps are another contributing factor driving human-bear conflicts in Vermont.
- Research has shown that when natural foods are available most bears will select those foods over human-caused foods. However, foraging for human-caused foods is a learned behavior and with enough exposure bears can become food conditioned and shift their behavior towards spending more time foraging in populated areas.