

## Appendix A

### Agencies and Organizations Invited to Participate in the Development of the 2020-2030 Big Game Plan

*Note: Not all could or chose to participate*

#### Hunting Organizations

Backcountry Hunters and Anglers  
Hunters, Anglers and Trappers of Vermont  
Lake Champlain Longbeards  
Lamoille Valley Longbeards  
National Wild Turkey Federation  
North Country Longspurs  
Northeast Kingdom Longbeards  
Ruffed Grouse Society  
Southern Vermont Limbhangers  
Turkey and Young Guns  
Upper Valley Longbeards  
Vermont Bear Houndsmen Association  
Vermont Bowhunters  
Vermont Federation of Sportsmen's Clubs  
Vermont Hunters/QDMA  
Vermont Traditions Coalition  
Vermont Trapper Association  
Vermont Whitetails Unlimited

#### Fish and Game Clubs

Barre Fish & Game Club  
Caledonia Forest & Stream  
Chittenden County Fish and Game Club  
Lamoille Valley Fish and Game Club  
Manchester Rod & Gun Club  
Mendon Fish and Game Club  
Poultney Fish and Game Club  
Precision Valley Fish and Game Club  
Randolph Fish and Game Club  
Sportsman's Club of Franklin County  
Sportsmen Inc  
Vermont Fish and Wildlife Conservation Group  
Williamstown Fish and Game

#### Retailers

R&L Archery  
Wright's Sport Shop

#### Agencies

Agency of Agriculture, Food, and Markets  
Vermont Forests, Parks and Recreation  
VTrans  
United State Fish & Wildlife Service: Mississquoi Refuge  
United State Fish & Wildlife Service: Silvio O. Conte National Wildlife Refuge - Nulhegan Unit  
United State Fish & Wildlife Service  
United States Forest Service: Green Mountain National Forest  
Natural Resources Conservation Service  
USDA APHIS - Wildlife Services  
Vermont Department of Health  
Vermont Natural Resources Board  
Vermont Department of Tourism & Marketing

#### Organizations

Associated Industries of Vermont  
Audubon Vermont  
Consulting Forester Association  
Green Mountain Animal Defenders  
Green Mountain Club  
Humane Society of United States Vermont  
Northeast Deer & Elk Farmers. Inc - Vermont  
Northeast Organic Farming Association of Vermont  
Protect Our Wildlife  
Society of American Foresters - Vermont Chapter  
The Nature Conservancy - Vermont  
Vermont Alliance of Independent Country Stores  
Vermont Association of Planning & Development Agencies  
Vermont Beekeepers Association  
Vermont Coverts  
Vermont Farm Bureau  
Vermont Forest Products Association  
Vermont Horse Council  
Vermont Insurance Agents Associations  
Vermont Land Trust  
Vermont Natural Resource Council  
Vermont Outdoor Guide Association  
Vermont Retail and Grocers Association  
Vermont Sugar Makers' Association  
Vermont Woodlands Association  
VT Wildlife Coalition

### 2020 – 2030 DRAFT Big Game Plan Public Comment Meeting - August 5, 2020

#### Public Comments and Questions and Department Responses

*Note: Some questions and comments have been edited for clarity and length.*

#### General Questions/Comments

**Public Comment:** The department says the plan is not just about hunting but, in the over-arching issues, six of the nine strategies involve hunting. How can the public have input in a plan that is driven for hunting? How can the department trust that public studies aren't being skewed for hunting driven agenda?

**Fish & Wildlife Response:** Habitat is, and will always be, the primary focus of the department. Moreover, the department is statutorily required to manage fish and wildlife species. Deer, bear, moose and wild turkey are, by legal definition, game, and hunting is, without question, the most effective tool ensuring their population management goals are met. Many of the overarching issues reflect a serious concern about hunting participation over the next decade. In contrast, the individual species plans focus more on habitat, conflict and disease. A high majority of Vermonters support (86% in 2018) hunting, but without a sufficient number of hunters, human-wildlife conflicts will increase. Public support for bear, deer, moose, and turkeys could erode, and, in the case of deer, this will also come with ecological and economic cost to Vermont. You might disagree with the right of a person to choose to hunt or the plan's population goals but it's imperative that the department retains hunting effectiveness as a management tool.

It is important to note that the two-year planning process included input from a large number of 'non-hunting' stakeholders. The list of participants included environmental and conservation organizations, representatives from agriculture and forestry, and also animal rights and welfare groups. At no point during stakeholder meetings, did any these groups raise any objections to the overarching issues or general theme of the draft plan.

The large public survey that informed the 2020-2030 Big Game Plan was conducted by Responsive Management Inc., a highly respected firm specializing in public surveys on natural resources. Besides state and federal agencies, their list of clients includes the Wildlife Conservation Society, Ocean Conservancy, Sierra Club, TRAFFIC and the Environmental Defense Fund. All questions were pre-tested to ensure comprehension and impartiality, and the survey was conducted independently of the department. In addition, many of the questions were repeats from two previous surveys to detect trends.

**Public Comment:** You say continuing outreach to landowners [in the over-arching issues]. Have you asked why landowners post their land? Plenty of my friends post because of poor hunting behavior, all-year coyote hunting and unrestricted bearhounds.

**Fish & Wildlife Response:** Over the last few years, the department has partnered with Vermont Land Trust and Vermont Coverts to conduct hunting access seminars to landowners who are either new to Vermont or have no background in hunting. These seminars include an honest, open discussion about past problems and reasons why they may currently post. While poor hunter behavior is sometimes cited, unauthorized off-road vehicle use is, without question, their number one concern and the primary reason they post or are considering it, even though Vermont law always requires landowner permission. The department did commission a landowner survey in 2004 that among many issues, looked at the reasons for posting. At the time, it found the main reasons for posting were not wanting others hunting on their land (i.e. competition), privacy and liability issues.

**Public Comment:** Zoom worked a lot better. I am fairly tech savvy but Teams didn't work well.

**Fish & Wildlife Response:** Thank you for the comment and we will consider Zoom, if allowed by State guidelines, for subsequent public meetings.

**Public Comment:** Vermont has a huge hunting tradition. Despite what people are saying, most sportsmen follow the rules and are ethical people. Unfortunately, there is more suburbanization and folks coming from out-of-state. I have no problem with this, but we need to educate suburbanites on the long-term benefit of hunting and wildlife. Access is also going down with suburbanization. We need more incentives to leave land open for hunting.

## Deer-Related Questions/Comments

**Public Comment** (*Read during meeting and subsequently emailed afterwards*): My name is Steve Weber and I live in Panton. In way of an introduction I have a Master's Degree in wildlife management from UNH where I worked on Deer yards in the WMNF. I was deer project leader for 7 years in New Hampshire, I then supervised all game management programs for 6 years before becoming the Chief of Wildlife for 13 years before I retired. I've held a hunting license in VT every year for the last 35 years, and call me crazy but I moved from tax free New Hampshire to Vermont 2 years ago, obviously I love this state.

I'd like to focus my comments on the population management section of the deer chapter, but would like to start with my concern over the opening statements in that chapter. In the lead sentence the draft plan states that "It is difficult to overstate the importance of white-tailed deer to Vermont." Yet, in the very next paragraph it states "there's no longer anything unique about them here or anywhere else." Well, there's never been anything unique about the species white-tailed deer here in Vermont, but to me that statement implies the department thinks there's nothing special about deer in Vermont, and I don't believe that's an appropriate perspective for the agency charged with managing the deer resource. And hearing Mark Scott refer to them as pests in the beginning of this meeting reinforces that belief. Regardless of localized over-populations they remain an iconic species in Vermont and should be thought of and referred to in that light. Dealing with localized over-populations is always a struggle, but managing down the population in the entire WMU is definitely not the right approach.

Relative to the Population Objectives section, the plan acknowledges that twice as many VT residents would like to see more deer rather than fewer deer based on a scientific survey of the public, yet there is no recommendation to move the deer herd in that direction anywhere in the state. It then states that in many areas deer have exceeded the ecological carrying capacity. There is no definition of what that is or how it's measured, it states the department depends on anecdotal observations to make that assessment, and then makes lots of recommendations to reduce the deer population based on that concern. If ecological carrying capacity is a major driver in developing population objectives, there needs to be data to support those concerns, there needs to be specific goals you are trying to achieve, and there needs to be data to support that lower deer densities will positively influence ecological health and move you towards achieving those goals. Otherwise, you're implementing a strategy in search of an objective looking for a goal that can't be realistically attained!

I'm concerned that the Current Status section is misleading. The draft plan states that "many of Vermont's forests are of similar age." It then goes on to state that "Currently, these forests are in the second growth (pole-timber) stage, which provides little forage for deer. While it is true many of Vermont's forest are in the pole stage, it implies that pole-timber is the predominant age class, when in fact only about 23% of Vermont forestland is in pole-timber age classes (age 21 – 60). That coupled with more than 74% being in sawtimber and over-mature age classes, only leaves about 2.5% in young forest (Table 1.). My main point here is that with the age structure of Vermont's forests, trying to reduce deer densities to the point where impacts on understory forest ecology are minimal, would mean those densities would very likely be socially unacceptable. My recommendation is that the department focus on special zones, seasons and programs like DMAP in areas of high deer density, rather than reducing populations across entire WMU's in an effort to increase forest health, which, depending on what the goal is, may not be feasible, or even possible. The department should be working aggressively with your partnering agencies and NGO's to increase the young forest age class across the state.

The second thing that is misleading is the general impression given that deer health in Vermont is poor or declining. Declining of course is a relative term, but I disagree that deer herd health is poor, or even of concern in any general sense. The best measure of herd health is yearling antler beam diameter (YABD). Measurement of that attribute is somewhat compromised here in Vermont because of the spike-horn restriction and past management, but even so, YABD's in the 16mm range are widely thought of as targets for management to achieve Maximum Sustained Yield, a concept present in the previous plan but is somehow missing from this one, in northern forested ecosystems. It is not on as thresholds of poor health as they are used in this plan.

Finally, I don't believe the tracking metric used by the department is particularly accurate or WMU sensitive. I am far from and expert on population models, but my understanding is that they require huge amounts of data annually to be

reliable. They use multiple inputs, all of which can have significant sampling errors. In a phrase they are data hogs. Given the amount of data available in each WMU each year here in Vermont, those sampling errors compound on one another significantly to the end result of unreliable estimates. The fact the department uses 5 different models to develop their antlerless recommendations and the fact they don't seem to have a defined system to incorporate the various inputs from those models compounds my concern. There are better, simpler, more WMU sensitive systems available that are not being used.

Thanks for the opportunity to provide input.

For anyone reading this input, I'd like you to know that I did not enjoy providing this input in a public forum. I have been trying for more than 2 years to discuss this in a substantive way with the department and have not been able to get your attention. I was asked not to become involved in the public process associated with this plan, but rather provide input through review of early drafts and private discussions. Well, those opportunities somehow were never afforded so I felt I had no choice but to speak up. I think your whole population management section ought to be re-thought and re-written with much more consideration given to deer, deer hunters, wildlife watchers and the general public, rather than this unquantified concept of ecological health. Don't get me wrong, I am sensitive to those issues, but you have not done your homework on that issue well enough to base a 10 year management plan off it.

Table 1. U.S. Forest Service Forest Inventory and Analysis data from the most recent 5-year period. Data is in acres.

Stand age 20 yr classes (0 to 100 plus)

State code	Total	0-20 years	21-40 years	41-60 years	61-80 years	81-100 years	100+ years
Total	4,523,089	116,518	281,672	761,306	1,737,281	1,306,977	319,336
50 Vermont	100%	2.6%	6.2%	16.8%	38.4%	28.9%	7.1%
			-----23.1%-----			-----36.0%-----	
						-----74.4%-----	

**Fish & Wildlife Response:** The department acknowledges the commenter's qualifications and experience in wildlife management in New England and appreciates his passion for deer, deer hunting, and a successful wildlife management program in Vermont. The commenter has highlighted a number of questions and concerns with the current draft Big Game Management Plan which will be addressed in the following sections.

**Comments regarding the opening statements of the deer population management section**

Some parts of the document will be reworded to better reflect the department's message with regards to deer densities and population management. Word changes will be made to better reflect our opinion that deer are as follows: 1) both socially and ecologically important; 2) are adaptable and ubiquitous in different habitats throughout Vermont; and, thus, 3) require management strategies that are complex and highly scrutinized. White-tailed deer are an iconic species in Vermont and are referred to accordingly. As such, a main goal of deer population management in Vermont is to ensure deer persists as an important big game species. To accomplish this, deer densities must be maintained at an appropriate level to safeguard the high public regard the species enjoys here in Vermont. Unfortunately, in some areas of the United States, deer densities have exceeded cultural and ecological carrying capacity to the point that the species is increasingly viewed in a negative light – a transition of public opinion which only further diminishes a state fish and wildlife agency's ability to implement appropriate and effective deer management strategies. Luckily, this has not yet occurred in Vermont due in part to deer management strategies that strive to maintain population at levels that are both culturally acceptable and ecologically sustainable.

**Comments regarding the Population Objectives section**

The department manages deer for the people of Vermont, which includes both current and future generations. With very few exceptions, there will usually be more hunters that want more deer than want fewer deer – that is true even in places with far more deer and deer conflicts than Vermont. However, that doesn't mean increasing deer numbers is a responsible, sustainable, appropriate, or even feasible, management decision. This question is asked on surveys primarily to gauge how people's opinion of deer has changed over time. The department does not want to get to a point where most people want fewer deer – that would be a management failure. If the deer population was allowed to increase today, future generations would pay for it. In some ways, in some areas, Vermont is still dealing with the consequences of overabundant deer decades ago. There are few areas in Vermont, and no entire WMUs, where the

habitat can sustainably support more healthy deer than currently exist. This isn't ideal, and certainly not the position the department would like to be managing from, but it is reality.

The term ecological carrying capacity can be better defined. As used in this plan, it refers to how most people intuitively understand carrying capacity. That is the population at which deer begin to negatively impact their ecosystem (i.e., habitat). Ecological carrying capacity should not be confused with biological carrying capacity, a more commonly used term in wildlife science, but not particularly meaningful in natural systems. For those familiar with density-dependent population dynamics, ecological carrying capacity is essentially the inflection point on the logistic growth curve – near what has traditionally been referred to as maximum sustained yield. The reason population growth begins to slow above this level is because deer have damaged their habitat to the point that each individual no longer has access to as much or as high quality food, thus their physical condition begins to decline, mortality increases, and they produce fewer young. Over time, the condition of the habitat is also degraded as preferred foods are over browsed and replaced by less desirable, less nutritious species. Deer are capable of persisting above ecological carrying capacity for many years, perhaps decades depending on the specific habitat conditions and available food sources, but eventually the bill comes due. The department believes that deer populations must be maintained at or below ecological carrying capacity to maximize long-term health and abundance.

Anecdotal observations by biologists, foresters, and other natural resources professionals of deer impacts on their habitat are very useful in assessing the relationship between deer and their habitat, but they are not the primary source of information the department uses. Rather, as stated in the plan, the department relies primarily on the physical condition of deer to determine when deer have exceeded ecological carrying capacity. The department uses biologic metrics, including yearling antler beam diameter (YABD), yearling and fawn body weights, and reproductive rates. Department data indicates a decline in these measures, providing solid evidence that the number of deer has exceeded what the habitat can support long-term.

**Comments regarding deer health in Vermont**

The department will consider the use of another word to replace the term “poor” to describe deer health in Vermont. That said, deer health metrics, including YABD, are lower than they have been in the past and much lower than other northeast states and provinces (see figure below). YABDs of 16mm may have been an acceptable target decades ago, or perhaps in more southerly states with smaller deer, but they are well below normal in the northeast today. The department’s objective is focused on maximizing health. When compared to past data from Vermont or to other northeast states, there is clearly room for improvement. The department does not want to pass these problems on to future generations of hunters.

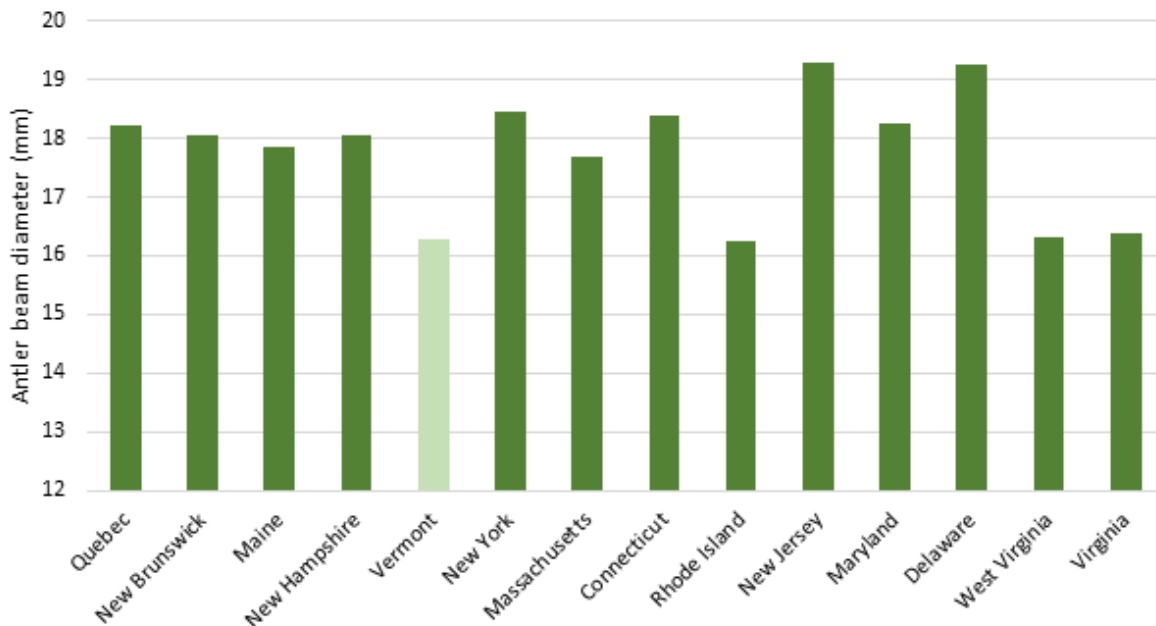


Figure1. Mean yearling antler beam diameter in northeast states and provinces, 2011-2018.

### ***Comments regarding the age structure of Vermont's forest relative to deer management***

Statements about forest age structure can be clearer. The point of emphasis, as noted, is that there is little young forest in Vermont and this age class provides a lot of forage for deer and has significant influence on how many deer an area can support. It is important to remember that the current condition of Vermont's forestland is a direct result of trends, both past and present, in the agricultural and forest products industry – trends which the department has little ability to influence. To further complicate the issue, the vast majority (>80%) of forestland in Vermont is privately owned making it even more difficult for the department to change the trajectory of forest maturation over time. These challenges aside, the department continues to focus much of its resources on supporting and championing active forest management in the state including the creation of young forest habitat. The department is making progress in this respect influencing 1,000's of acres and 100's of landowners annually through its active involvement in the management of state owned lands (e.g. wildlife management areas, state forest, state parks, etc.) to its various technical assistance, outreach and cost share programs on private lands (e.g. EQIP, Habitat Stamp, UVA, CWP, etc.), and active work with the Green Mountain National Forest.. Despite this progress, the department must manage deer for the habitat present today, not the habitat that Vermont hopes to have in the future.

To be clear, the department has no intention of attempting to reduce deer densities to levels that would eliminate deer browsing in forests. Deer and Vermont forests have co-evolved together. Deer will have varying effects on forests health. Importantly, there are no WMUs that require such significant deer reductions. There are, however, some urban areas, where the department would like to see a significant reduction in deer numbers. The proposed reductions in this big game plan are relatively minor in most cases and may not even be detectable to most people. The department will continue to rely primarily on the aforementioned health metrics and allow for population increases when those metrics are improved to levels indicative of healthier populations. As mentioned in the plan, the department will be working toward more targeted management on smaller scales during the next 10 years to better address locally overabundant deer and deer conflicts. However, it is important to note that overabundance is not always limited to small local areas or individual properties and population reductions at the WMU level are warranted in all cases where they are recommended.

### ***Comments regarding deer population modeling***

Issues with the department's deer population modeling and management system appear to stem from disagreement between the department and the commenter's overall management approach. The department's population models were developed in consultation with statistical experts in multiple states, who the department continues to communicate and coordinate with on population assessment strategies. The department is very interested in any new approaches that can help refine deer management in Vermont; however, the department is not aware of any better options at this time.

As the commenter mentions, the department utilizes several population models to develop deer management recommendations. The reason the department utilizes multiple models is to verify current population models ; if one population model yields a suspect population estimate, the department can rely on the other models to study the data more before making management recommendations.

Perhaps more importantly, Vermont's deer population objectives and general management recommendations (decrease, stabilize, increase) are based primarily on physical health condition metrics, with a couple exceptions in areas with abundant agriculture. Even if a new population model suggests fewer deer are present compared to current models, this does not change the declining and/or already low physical condition and habitat impacts observed. While the department does occasionally struggle to obtain adequate physical condition data in some WMUs with low deer numbers, these data can be pooled across years and, in most cases, these aren't the areas where the department has major concerns with deer health. Importantly, these data are not significant inputs into any population model, most of which rely primarily on harvest data (e.g., number and age of deer killed, hunting effort, etc.) which is more than adequate in all areas. As such, the department will continue to make management recommendations utilizing the best available science to successfully manage Vermont's deer population.

### ***Comments regarding the opportunity to provide public input***

The commenter asserts that their ability to provide public input on deer management and the big game plan has been hindered. The department disagrees with this statement as the commenter has had multiple conversations with department staff through phone calls, written correspondence, and has also provided public comment in other

public meetings such as the deer public hearings that were conducted in May 2020. It appears that the commenter has not been limited in their ability to provide feedback on the department's approach to deer management but rather that this feedback has not resulted in the outcome they desired. Regardless, the department appreciates the feedback, concern, and input on this important document, and respectfully disagrees with some of the comments provided. Some of the commentators comments were helpful and incorporated in the final plan draft.

**Public Comment:** I am a lifelong hunter. Turkeys and coyotes are everywhere. Turkeys clean out all the acorns. Do you account for that with the deer population estimates?

**Fish & Wildlife Response:** Yes, competition with other species is accounted for in deer population objectives and management recommendations. Deer in Vermont are primarily limited by the availability of winter cover and food. The availability of mast crops in the fall, while certainly beneficial to deer, is not a major factor limiting the size of deer populations in Vermont. Oak and other mast trees are relatively uncommon in much of Vermont, including areas with high numbers of deer and turkey.

## Bear-Related Questions/Comments

**Public Question:** The plan states that the majority of Vermonters supported actions that could prevent or reduce problems, ranging from increased monetary fines for people caught feeding bears to local ordinances on garbage and bird feeding. What are the actions that have been taken or proposed in the plan to more actively engage legal intervention in case of conflicts where people have been fined but there has been little-to-no follow-up, especially in the case of repeat offenders?

**Fish & Wildlife Response:** Experience has been that changing human behavior is much more difficult than working with the bears themselves. After the big game public survey indicated the public is willing to support actions to prevent and reduce bear-human conflicts, the department began working with fish and wildlife law enforcement officers to issue more written warnings and citations to people who are intentionally and unintentionally feeding. The department is also working with towns to assist with the development of local ordinances that address intentional bear feeding, securing garbage and prohibiting bird feeding during the time periods when bears are active. Ordinances have more success of being passed and effectively implemented when initiated by locals, so to that end, the department has been communicating with groups in towns to actively engage and empower them in legal interventions.

**Public Question:** The plan states the department is considering regional bear management. Is no bear hunting in some areas being considered? Does is ever consider no hunting?

**Fish & Wildlife Response:** Although a regional bear management model would consider no hunting for bears, at this time bear hunting would likely occur in every region because every region encompasses large areas of bear habitat and has a bear population and volume of human bear conflicts that warrants bear hunting at this time. The department has prohibitions on hunting some game species, for example moose, in areas where population estimates indicate their populations are not large enough to sustain additional mortality. This is not, however, the case for Vermont's bear population. A regional bear management approach would allow the department to fine-tune harvest management strategies more locally to address the factors driving population trends and conflicts, including range expansions, human development and habitat disturbance, and increased competition among individual bears.

**Public Question:** Connecticut is actually smaller in land mass and has more people and more bears but no hunting season. Why do you allowing hunting and other state's that don't do fine without it?

**Fish & Wildlife Response:** This is incorrect. While the Connecticut DEEP Wildlife Division received approximately 7,300 bear sightings in 2019, multiple sightings can represent one bear as it moves through a landscape, particularly in suburban areas. In 2019, the Connecticut DEEP biologists estimated there were approximately 800 bears in their state. In contrast, department's bear population model estimated a range of 4,286 and 5,575 bears in Vermont in 2019. Looking at it from a density perspective, it can be calculated that Connecticut has roughly 25-30% of the density of bears that Vermont has. Simply put, the statement outlined in the question is incorrect and Vermont has a

higher density of bears than Connecticut regardless of the difference in land mass between both states and hunting is a necessary management tool in Vermont for bears.

Connecticut wildlife officials spend an inordinate amount of time and other resources responding to bear-human conflicts. They are concerned that the number of human-bear conflicts and public safety issues will only increase because they have no way of slowing the growth of their bear population. For instance, in 2018 and 2019, bears entered more than two dozen homes in Connecticut. In 2020, that number was already up to 25 by June, with the number on track to be triple the average of 2018 and 2019.

Changing human behavior is one component of reducing bear conflicts, but so is having fewer bears in densely human populated areas and ensuring bears retain their fear of humans. Bear hunting accomplishes this. It is effective, reduces conflicts, increases public tolerance, and provides meat for hunters and others.

**Public Question:** You state that only 12-14% of the Vermont population hunts. The majority don't hunt. I have a small herd of rescue equines that look like bears. I live down the road from bearhounds. They have gotten out before and terrorized others' animals and attacked hikers. I post my land and am concerned about my rights as a landowner. How do I protect my animals from hounds? You say that hounds can't read posted signs.

**Fish & Wildlife Response:** To the department's knowledge, Vermont has never had a case of a bear hunter mistaking a horses, burros, or rescue equine for a bear, but receives many reports of bears injuring livestock and pets each year. You have a far greater chance of your rescue equines being injured by bears than by bear hounds. While unsettling, the recent incident in Ripton that involved hounds, a pet dog and one of the pet's owners is the only such case the department has documented. The owner of the hounds was charged by the department for not having their hounds under control.

**Public Comment:** I am a conservation biologist. I feel bear hound hunting is unethical and toxic to the ecosystem. It drives bears into urban and suburban areas and causes more conflict.

**Fish & Wildlife Response:** Although we respect your training as a conservation biologist, hunting with the use of hounds is viewed as ethical and valid in wildlife management. Bear hound and other hunters play an important role in Vermont. They provide tens of thousands of meals of game meat each year, help keep the bear population within levels desired by the general public, and reduce the number of bear-human conflicts, particularly by keeping bears out of farmers' corn fields. Damage complaints often occur outside of the hunting season and the use of hounds to scare bears actually leads to fewer bears being killed by landowners legally protecting their crops and property.

Bears have been hunted with hounds since before Vermont became a state and there is no indication that the activity has anything to do with the recent increase in the number of bear-human conflicts nor that it is responsible for bears living now in closer proximity to humans. Instead, management efforts have allowed the bear population to gradually increase and occupy habitat into lower elevation forests where there is a higher density of people and development. The current bear population lives in closer proximity to people than ever before with a resulting increase in bear-human interactions that has nothing to do with the hunting of bears with hounds.

**Public Comment:** My land is unposted and I welcome houndsmen anytime. It's an honorable tradition and the department is doing a great job.

**Public Question:** Why does the department allow training on June 1st when animal babies are being born? Why don't you wait until later in the year? You say trained animals aren't a threat, but these are untrained dogs.

**Fish & Wildlife Response:** The training season is well-regulated, legal, and requires permits with many restrictions. Any violations from hunters pursuing bears during the training season are enforced. Additionally, bear hound hunters invest a substantial amount of time and money into acquiring, training, and using their dogs. Bearhound hunters are typically the last people who want to lose their permit and most care greatly for bears and certainly do not want their dogs to cause harm to bear cubs or pursue other non-target animals. The success of their hunting experience depends on a healthy population of bears, including bear cubs that can grow up to be adults.

It should also be noted that the act of training bearhounds typically occurs by having a younger, inexperienced



hound accompanying experienced ones. By following this type of training, inexperienced hounds are learning from experienced ones the proper scents, trails, and techniques to track bears. This minimizes issues with hounds pursuing non-target animals.

The department has worked with the owners of bear hounds for over fifty years to live capture bears for many important studies. They are vital for research and the department knows firsthand, as have wildlife researchers throughout North America, that the bearhounds do not harm cubs or other wildlife during the chases. Bears especially cubs, have an amazing ability to climb trees, and do so when threatened by any other animal or human.

**Public Question:** I didn't see anything about baiting. I know it's not popular with the antis, but it's an effective management tool. Can you look at baiting?

**Fish & Wildlife Response:** Vermont prohibited baiting in 1972. At the time, this was done to limit the number of bears taken in any one year as the department focused on increasing the population. Hunting over bait is a very effective hunting method. Maine allows baiting for bear hunting to harvest more bears, but they are so concerned with high population that they are even considering a spring bear hunting season. Vermont hunters, on the other hand, are currently taking enough bears, and even if an increase in the bear harvest was needed, the department would likely consider other options. Most states that allow baiting have to implement a permit system to limit the number of people and enact other controls to ensure spacing between baits. This essentially causes conflicts between hunter groups (e.g. hunters who would hunt over bait and hunters who would not) regarding the access of bear hunting to all. In addition, some bait items such as chocolate are toxic to the bears. In short, although an effective management tool to reduce bear numbers, bear baiting is not being considered in Vermont at this time as harvest objectives are being met with the current management strategies in place.

**Public Comment:** The bear population is a good record and you are doing a good job.

**Public Comment:** Hounds change bear behavior. This is good for apiaries and getting bears out of corn.

## Moose-Related Questions/Comments

**Public Question:** The plan states that the majority of the public supports moose hunting if it reduces the number of moose that die each year of winter ticks. What will the department's response to the public be when the herd is depleted to a population below 1 per square mile but the tick population is not correspondingly reduced?

**Fish & Wildlife Response:** Extensive research has clearly demonstrated a density dependent relationship between moose and winter ticks. The studies listed below indicate that at densities above 1 moose per square mile, moose occupying the southern edges of their range (such Vermont) experience frequent epizootic events where more than 50% of calves die during the winter whereas populations at lower densities in the same range do not. The department acknowledges that there is a degree of uncertainty in the department's moose population estimates, as with any wildlife population estimates, and that the relationship between moose and ticks may be affected by climatic fluctuations. Thus, the department is taking a conservative approach and will be closely monitoring moose population density, health, and tick loads. The department will adapt our management approach accordingly as new information becomes available.

Furthermore, the Big Game Plan establishes population thresholds below which the department will not issue hunting permits. Most of Vermont is currently below these thresholds, which is why there are no hunting permits in those areas. It is important to emphasize that the moose density in wildlife management units E1 and E2 (basically Essex county) is much higher than anywhere else in Vermont. The following scientific literature provides more detailed information about moose and winter ticks.

- DelGuidice, G.D., R.O. Peterson, and W.M. Samuel. 1997. *Trends of winter nutritional restrictions, ticks, and numbers of moose on Isle Royale*. Journal of Wildlife Management. 61:895-903.
- Samuel, W.M. 2004. *White as a ghost: winter ticks and moose*. Natural History Series, Volume 1. Federation of Alberta Naturalists, Edmonton, Alberta, Canada.
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- Kantar, L.E., and R.E. Cumberland. 2013. *Using a double-count aerial survey to estimate moose abundance in Maine*. *Alces* 49: 29-37.
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**Public Question:** The plans says Vermont’s climate continues to warm and the state predicts that winter ticks may persist, and the state’s own research predicts a continued warming trend. I am sure hunting can’t be your only tool and you are finally mentioning other strategies, like biopesticides, why are you allowing this moose density theory to continue and allowing moose hunting in 2020.

**Fish & Wildlife Response:** The studies listed above clearly demonstrated a density dependent relationship between moose and winter ticks. No scientific research studies, in contrast, have documented frequent tick epizootics at low moose densities. This is clear in southern Vermont and New England, where the climate is warmer than more traditional moose range in the region. The moose density is lower and, as a result, they carry fewer winter ticks and experience little impacts from them. Furthermore, while winter ticks may benefit from shorter winters, numerous climatic factors can negatively affect winter tick populations. Changes in wind patterns and speed, humidity, precipitation, amount and density of snowpack, snowmelt, and temperature all affect winter tick populations differently. Thus, a warming trend may not, in and of itself, cause an increase in winter tick populations, particularly if that trend includes more frequent dry periods that reduce the survival of tick eggs and larvae. However, research does suggest climate change will likely cause an increase in the frequency of winter tick epizootics for higher density moose populations across New England.

Moose are not pets or livestock; they are wild animals. Reducing winter tick populations directly, either by treating moose or the landscape with some form of acaricide (a pesticide specifically for ticks) or fungal pathogen (there are some naturally occurring fungi that can kill ticks), is not currently a viable option. The department is collaborating with University of Vermont researchers working on this and continues to communicate with other researchers looking at these approaches. While there is some promise in small, controlled settings, the realities of treating an entire landscape or a sufficient portion of the moose population make it unlikely that this will be a practical option soon. Furthermore, treating ticks will fail to kill all of them and could promote adaptation and resistance to treatment. As long as there is a high density of moose on the landscape, tick numbers will simply increase again when treatments stop or when the ticks become immune to them.

## Wild Turkey-Related Questions/Comments

None

# 2020 – 2030 Big Game Plan Public Comment Emails Comments and Questions and Department Responses Guidance Document

## General Comments/Questions

### Overall

**Public Comment:** I would like to see more equitable representation with respect to how the department operates. Move towards an inclusive model, taking all stakeholders into account, not a hunter-centric model as evidenced in your Plan.

**Fish & Wildlife Response:** Habitat is, and will always be, the highest priority of the department. Moreover, the department is statutorily required to manage fish and wildlife species. Deer, bear, moose, and wild turkey are, by legal definition, game, and hunting is, without question, the most effective tool ensuring their population management goals are met. Many of the overarching issues in this plan reflect a serious concern about hunter numbers over the next decade. While the actual participation rate is not expected to change significantly, the state is getting older and so are Vermont's hunters.

Without enough hunters, the department's ability to manage these species will be compromised. Public support for bear, deer and turkeys could erode, as has been in the case in many more urbanized states, and, in the case of deer, this would also come with costs to both their health and the landscape. It is imperative that the department retains hunting effectiveness as a management tool. Also, if members of the public review the individual species plans, they will know they focused more on habitat, conflict, and disease.

Some people might disagree with right of a person to choose to hunt, but a very high majority of Vermonters support (86% in 2018) hunting. It is also important to note that the two-year planning process included input from a large number of 'non-hunting' stakeholders. The list of participants included environmental and conservation organizations, representatives from agriculture and forestry and animal rights and welfare groups, such as POW and Green Mountain Animal Defenders. At no point during this process, did any of these groups raise any objections to the overarching issues or general theme of the draft plan.

**CORRECTION (4/19/2021):** *The department did not fully acknowledge some of the feedback from Protect Our Wildlife and Green Mountain Animal Defenders in our initial summary of responses. These groups submitted written responses after the near final draft was issued in opposition to various types of legal regulated hunting.*

**Public Comment:** The department is relying on biased studies to achieve a predetermined goal to liberalize hunting seasons and increase bag limits based on studies funded by organizations who want their members to have unsustainable unfettered opportunities to exterminate our wildlife, such as Safari Club International. This is a major conflict of interest.

**Fish & Wildlife Response:** Liberalizing hunting seasons and increasing bag limits are not goals of the 2020 – 2030 Big Game Plan. Rather they are listed as strategies that may be needed in the next decade to achieve population goals. These population goals are, first and foremost, focused on promoting healthy, abundant wildlife populations within ecological limits and the bounds of public tolerance. Furthermore, the strategies that include liberalized season and bags limits are almost entirely related to deer. Deer are benefiting from climate change, have a high potential for impacting their habitat and that of other wildlife species and plants, and are most likely to cause conflicts with Vermonters, including public health and safety. You might disagree with right of a person to choose to hunt or the plan's population goals, but it is imperative that the department retains the effectiveness of hunting as a management tool.

Note also that the two-year planning process included input from many 'non-hunting' stakeholders. The list of participants included environmental and conservation organizations, representatives from agriculture and forestry, and animal groups, such as POW and Green Mountain Animal Defenders. At no point, did anyone object to

strategies that included liberalizing seasons and bag limits. On the contrary, deer management is a primary concern for conservation and forestry groups.

The department's funding contract for the moose research project did not have anything to do with "unfettered opportunities to exterminate our wildlife." Rather, the agreement with Safari Club International clearly states that the objective was to estimate moose survival and fecundity and study the factors that influence them to better understand the effects of winter ticks on moose in Vermont. Furthermore, the club's contribution represented only 25% of the cost of the study. It was match for the remaining 75% of the funding came from U.S. Fish and Wildlife Service. As a result, the proposal and results were vetted through their USFWS scientists. The actual research was coordinated through the University of Vermont, conducted by their students, and overseen by their faculty. Identical projects also occurred in New Hampshire, Maine, and New York. All the results have been peer-reviewed by moose experts and papers are being prepared for publication in scientific journals. In the end, this was vital research to ensure the long-term survival of moose and the department could not have afforded it without assistance.

**Public Comment:** My primary concern with the big game plan is the lack of peer reviewed research and science that was used to develop it. Steve Weber, on the call last night, went through several, very specific concerns he had with the method used for white tailed deer and it was disappointing that there was no discussion of his points. There were at least 3 wildlife biologists (not associated with VFWD) on the call and not one of their questions were answered so that everyone on the call could hear the response.

**Fish & Wildlife Response:** The department strongly disagrees with your assertion that the plan is not based on peer-reviewed research. In the interest of simplicity and readability, most citations involving long-or well accepted wildlife management principles were omitted. department biologists work in close collaboration with regional, national, provincial, and federal biologists to ensure jurisdictions are operating with the best and latest science. Data is shared, regional studies are conducted, and individual management goals, objectives and strategies are reviewed. The department's science is further supported by an in-house biometrician with a doctorate in statistics. Furthermore, as stated at the beginning of the meeting and previous announcements, it was made clear that department staff would only be taking comments on the plan, not responding to them. The department's response to Mr. Weber is attached. The department only responded during the public meeting when they felt a response could be short, simple, and help move the public input of the process along smoothly.

**Public Comment:** The lack of discussion and science around the impact of climate change was also concerning. Its directly impacting every species in the plan and there is no recommended method for addressing it or adapting your recommendations as climate change continues to decimate the landscape and food sources, increasing parasites and diseases. All of which wildlife is struggling to handle in addition to hunting, hounding, and trapping. Where is your science? Hunter surveys are qualitative and so can't be considered scientific.

**Fish & Wildlife Response:** Climate change is listed as an overarching concern and referenced continually throughout the draft plan. As the plan clearly notes: 1) deer and turkey populations will (and already are) benefit from milder winters and this will likely require additional management strategies, 2) black bears occur as far south as Florida and Mexico, but extreme weather will likely cause food disruptions and lead to more conflicts with people, and 3) moose will continue to suffer from high parasite loads unless moose densities are lowered to reflect the reality of a changing climate. The plan also states many times that protecting and enhancing high-quality habitat and travel corridors is most essential. In addition, deer, bear, and turkey populations remain abundant and above historic levels. The department is, however, extremely concerned with the long-term viability of a number of boreal plants and wildlife species and the threat posed by invasive species that previously could not gain a foothold due to Vermont's climate. In addition, data derived from hunter surveys and harvest has long been documented by peer-reviewed research as valuable, quantitative data to support population modeling.

**Public Comment:** In the short term, the plan should be revisited with input from experts who do not have a financial interest in promoting hunting. There are also systemic changes required in order to reflect the will of the population of Vermont. The Fish and Wildlife Board should include a majority of non-hunters reflecting the approximate 80/20 split of interests in preserving wildlife. The board should represent the majority view, not the special interests of a minority. Board

members should include experts in wildlife biology. No research should be considered as credible that is funded by special interest groups. A commissioner should be appointed who will facilitate policy that, again, reflects the majority view.

**Fish & Wildlife Response:** The two-year planning process included input from many ‘non-hunting’ stakeholders. The list of participants included environmental and conservation organizations, representatives from agriculture and forestry, and animal rights groups, such as POW and Green Mountain Animal Defenders.

The 2020-2030 Big Game Plan does not address the Fish and Wildlife Board. The Board’s creation and purview is state statute. However, it is worth noting that the Board only has authority over the regulations regarding the take of certain fish and wildlife species. Outside of setting regulations on fishing, hunting and trapping, the Board has no influence on department operations including habitat work, natural heritage inventory, land acquisition and endangered species. Please visit the department’s website at [www.vtfishandwildlife.com](http://www.vtfishandwildlife.com) to learn about the full breadth of all the Fish & Wildlife Department’s work. The department also disagrees with your assertion that the Board does not reflect the interest of Vermonters. A very high majority of Vermonters support legal, regulated hunting; a number that has changed little in the last 30 years. In addition, surveys have repeatedly shown that a high majority of residents also support the department and its work. Finally, the percentage of Vermonters who hunt and fish is far larger than license sales in any one year would suggest. Many people are not required to purchase a license and work and family obligations can make yearly participation difficult.

**Public Comment:** Having studied the proposed plan, I find it very disappointing that rather than” managing” wildlife this plan is about harvesting wildlife. There are no provisions for studying and discovering strategies to sustain healthy wildlife populations. In a rapidly changing world of climate and population stressors I feel Vermont should take some responsibility for improving rather than decimating its valuable wildlife resource.

**Fish & Wildlife Response:** Your statement is incorrect. The plan clearly states, from the beginning, that its sole purpose is to ensure the long-term health and sustainability of Vermont’s deer, bear, moose, and turkey populations. This does involve hunting, which remains a Vermonter’s constitutional right and a choice in Vermont and the primary tool for meeting population objections. However, if all the hunting-related content were removed, Vermonters would still be left with a considerable document that emphasizes habitat, outlines research needs and calls for enhanced public outreach.

## Comments Against Hunting

**Public Comment:** It is time to reevaluate our relationship to wildlife in general and learn to live with them instead of exterminating them at will.

**Fish & Wildlife Response:** The department has not, and will not, ever advocate for the extermination of native wildlife species. The plan clearly states, from the beginning, that its purpose is to ensure the long-term health and sustainability of Vermont’s deer, bear, moose, and turkey populations. Accomplishing this goal requires hunting but also includes habitat conservation, research, and public outreach.

**Public Comment:** Wildlife belongs to all the residents of the state, not just those who think killing them is a lot of fun. They are killing the wildlife the rest of us value highly. In the face of climate change, wildlife is under increasing stress to begin with, and does not need people killing them for frivolous reasons.

**Fish & Wildlife Response:** Hunting is the most effective management tool that the department has to ensure big game species populations meet population goals. You might disagree with those goals or even the concept of wildlife management through the use of hunting, but the department is mandated to ensure the health and sustainability of big game populations.

Surveys have repeatedly shown all Vermonters highly value wildlife. This includes hunters, despite your assertion. Nor does high value for wildlife translate into opposition for hunting. The vast majority of Vermonters support legal, regulated hunting. However, attitudes towards wildlife is closely linked with tolerance. The high value that Vermonters place on wildlife is directly related to population goals that take conflicts, such property and agricultural losses and car collisions, into consideration.

**Public Comment:** I have to say that it is quite disappointing to see the overly heavy emphasis on hunting as a means of “managing” wildlife and as outdoor “recreation.” While hunters will defend their tradition with their dying breaths, it is, in fact, a dying tradition. It was certainly necessary in its time, but that’s not where we are today. So campaigning to shovel as many people into that pursuit as you possibly can looks, frankly, a little desperate. Furthermore, hunting is not science. The use of “data” from the observations of hunters who, let’s face it, are focused on other things is not a substitute for the data that should be coming from a raft of wildlife specialists with a range of expertise, experience, and knowledge.

**Fish & Wildlife Response:** Hunting is not a dying tradition; participation rates are stable across most age groups. Instead its being impacted by the same aging demographics that also threatens Vermont’s educational system and economy. The median hunter age (44 years-old) is nearly identical to Vermont’s general population and there is both a declining number of young hunters and young people across the state. As older hunters become eligible for permanent licenses and then age-out completely, there are fewer people to take their place.

Hunting is the most effective management tool that the department has to ensure big game species populations meet population goals. You might disagree with those goals or even the concept of wildlife management through regulated hunting, but the department is mandated to ensure the health and sustainability of big game populations for all Vermonters. In addition, data derived from hunter surveys and harvest has long been documented by peer-reviewed research as valuable, quantitative data to support population modeling.

**Public Comment:** As a veterinarian, I condemn the hunting of any animal other than for the purpose of obtaining food. It is abundantly clear that much of the hunting occurring in Vermont is for non-food purposes. Hunters comprise a small minority of the Vermont population. It is high time the Fish and Wildlife department allowed non-hunters onto its board so that the views of Vermonters could be represented fairly.

**Fish & Wildlife Response:** You provide no evidence to support your claim that much of the hunting occurring in Vermont is not related to food. National studies have shown meat is in the primary motivation for hunting and deer, bear, moose, and wild turkey are all known for being exceptional and sustainable table fare. If this were not the case, the department would receive numerous reports of dumped or abandoned carcasses that had previously been checked-in at reporting stations.

The 2020-2030 Big Game Plan does not address the Fish and Wildlife Board. The Board’s creation and purview is state statute. However, it is worth noting that the Board only has authority over the regulations regarding the take of certain fish and wildlife species. The Board has no influence on most department operations including habitat work, land acquisition and endangered species. If you are unfamiliar with this work, consider reviewing our Website or request our annual report to legislature. The department also disagrees with your assertion that the Board does not reflect the interest of Vermonters. A very high majority of Vermonters support legal, regulated hunting; a number that has changed little in the last 30 years. In addition, surveys have repeatedly shown that a high majority of residents also support the department and its work.

**Public Comment:** Setting up Vermont’s wildlands and wildlife only for hunters is wrong as we pay taxes also.

**Fish & Wildlife Response:** With exception of some seasonally closed parcels on a handful of state and federal properties, there is no land in Vermont that is open to hunters that is not also open to all Vermonters. Conversely, there are number of lands, both public and private, that are closed to hunting while being open to other uses even though the lack of hunting on those lands can contribute to ecosystem problems resulting from big game species overabundance (i.e. overbrowse of vegetation from deer).

**Public Comment:** I should not have to be afraid of being shot on own land or anywhere else for that matter.

**Fish & Wildlife Response:** Hunting is very safe. There have only been two shooting incidents involving non-hunters in the past 40 years. Neither of these incidents occurred on private property, neither occurred in the past decade, and one was minor. To put your risk in perspective, since 1985, nineteen people have died in Vermont from vehicle collision with moose. Statistically speaking, you are nearly 10 times more likely to DIE from a collision with a moose in Vermont than you are to be injured by a shooting incident from hunting.

**Public Comment:** I do not oppose hunting in a humane way, but only if the hunters use the meat. I do not believe that an animal should die merely to allow a hunter to have a trophy for their wall. That is a glorification of killing and a waste of a beautiful creature's life.

**Fish & Wildlife Response:** National studies have shown meat is in the primary motivation for hunting and deer, bear, moose, and wild turkey are all known for being exceptional and sustainable table fare. If this were not the case, the department would receive numerous reports of dumped or abandoned carcasses that had previously been checked-in at reporting stations.

**Public Comment:** We have seriously encroached on their habitat! Let's re-think our position and take responsibility for them now as we have basically caused this problem. They were here before any of us and we have a duty to protect and preserve wilderness and the creatures that live in it not kill them.

**Fish & Wildlife Response:** The department agrees that habitat is vital. If the department removed all the hunting-related content from the plan, it would still be a sizeable document that emphasizes habitat, outlines research needs and calls for enhanced public outreach. In addition, Hunting is the most effective management tool that the department has to ensure big game species populations meet population goals and promote ecosystem health for all wildlife. You might disagree with those goals or even the concept of wildlife management through regulated hunting, but the department is mandated to ensure the health and sustainability of big game populations.

**Public Comment:** I would like to see hunting and trapping eliminated/prohibited and restrict human access to wild lands. Also designate 3/4ths of land to wildlife and 1/4th to human development. Wetland and old growth forests should be prohibited from development and if roads are to be built wildlife corridors should be built for every two miles of road.

**Fish & Wildlife Response:** Public opinion surveys routinely show that Vermont residents strongly support conservation and highly value wildlife, the state's rural character and working forests and farms. Habitat loss and fragmentation, non-native species, and a rapidly changing climate all pose grave threats to our environment and wildlife. As a result, the department pursues conservation in all its forms, including acquiring valuable habitat and working with partners to ensure vital travel corridors are protected. Rather than restricting access, the department maintains the opportunity for all Vermonters to connect with the land, including hunting, to maintain the support for conservation that will be needed to overcome looming challenges.

## Posting

**Public Comment:** Respect landowners' rights to post their property. Also, it is important for the department to understand why people are choosing to post their land: open season on coyotes, bear and coyote hounding, wildlife killing contests, and other unethical practices.

**Fish & Wildlife Response:** The department fully respects landowners' rights to post their property. However, the wildlife that use private property belong to all Vermonters, not just the landowners, and the department is responsible for management of those animals, just like animals on public land. Limited hunter access to private property greatly limits the department's ability to manage some species, particularly white-tailed deer. This often results in overabundance and damage to habitat and other species, including habitat on neighboring land.

The department has no interest or intention of preventing landowners from posting or otherwise restricting access to their property. Rather, the department is interested in programs and incentives that might encourage landowners to allow access to their land.

There are countless reasons why landowners choose to post their property, and while poor hunter behavior is a factor for some landowners, it is certainly not the primary reason. A 2006 survey of Vermont landowners found the most common reason landowners post is because they hunt the property and want to limit the number of other hunters. This was followed by privacy and liability concerns. More recently, the department has partnered with the Vermont Land Trust and Vermont Coverts to conduct a number of seminars across the state on hunting access to landowners who are new to state, unfamiliar with hunting or are having access issues. While some cited poor hunting behavior, the primary concern, without question, was illegal off-road vehicle use.

Finally, for clarification, please be aware that contests that involved coyote hunting were banned several years ago.

## Nonlead Ammunition

**Public Comment:** Ban lead ammunition for hunting in Vermont. Lead shatters upon impact with the target animal and gut piles threaten by many species of wildlife. A fragment of lead the size of a grain of rice is enough to kill bald eagles in a horrifically painful and cruel death. Children in hunting families have blood lead levels much higher than children from non-hunting families. Hunters are harming the health of their children by refusing to use alternatives to lead bullets, which are widely available in places including stores such as Walmart.

**Fish & Wildlife Response:** This topic is addressed in the Big Game Plan. While there are scientific studies that examine the impacts of commonly used, lead-based big game hunting ammunition on the potential for exposure and poisoning of wildlife and its potential effects on human health, the department is unaware of any that show population level effects on wildlife species in Vermont or that have found strong links with human health impacts anywhere in United States. Lead based big game hunting ammunition has certainly been shown to impact populations of scavenging bird species, such as California condors, in the southwest. However this has not been observed in Vermont's scavenging birds, likely due to differences in environmental conditions (i.e. forested vs open desert) and bird behavior. On the contrary, Vermont's population of bald eagles, a scavenging bird species known to be affected by lead poisoning in other states, has grown considerably over the last decade, to the point that it most likely will be removed soon from the state's endangered species list. It is also important to note that when population impacts with hunting ammunition are demonstrated, the department will act. Such was the case in 1991, when lead waterfowl shot was banned.

It has been well documented that lead based big game hunting ammunition is a clearly defined pathway linked to lead exposure in individual animals. While not rising to the category of a population level wildlife effect to necessitate a ban on lead-based hunting ammunition, the department acknowledges that there are non-lead alternatives to lead-based hunting ammunition. Big game hunters consider a number of factors when choosing what ammunition to use. Some key considerations include the cost, availability, and its overall efficacy to deliver a clean, ethical kill in addition to the impact to other animals. As such, the department is working with other fish and wildlife agencies and partners to develop and implement outreach materials and events to educate hunters on the benefits of voluntarily switching to non-lead ammunition. Previous work on voluntary efforts from other agencies in areas like Arizona's Kaibab Plateau and Oregon's Zumwalt Wildlife Preserve, have shown that measures and incentives promoting the use of nonlead hunting ammunition are effective in empowering hunters to switch to nonlead alternatives as opposed to an all-out ban on lead based big game hunting ammunition.

Simply put, the department does not support a ban on commonly used, lead-based hunting ammunition for a variety of reasons but rather feels that outreach to hunters to voluntarily switch will prove a far more effective tool.

**Public Comment:** ...this makes it all the more disappointing to see the department heading toward support for non-lead bullets when traditional ammunition arguably outperforms non-lead in terms of expansion and energy transfer. The fervor against lead bullets, while not entirely hyperbole, is certainly heavily overstated. To see such things in an official document seems no more than a soft nod to the anti-hunting crowd. The reality is that these folks do not have a bottom. For them the end will come at the end of hunting, trapping, and quite frankly fishing. While this is not a regulation setting document, it is a policy setting document and any acquiescence to the positions of these agenda driven folks are poorly thought out at best. We know that access can sometimes be a barrier to recruitment, let's ensure that cost and or disappointing experiences do not become a further barrier.

**Fish & Wildlife Response:** Hunters, anglers, and trappers have been the primary supporters of wildlife conservation in North America since the early 1900's. Collaboration with hunters, industry, conservation organizations, and shooting-sports interests is therefore essential to the continued protection of wildlife resources and hunting's conservation heritage. State fish and wildlife agencies, including Vermont Fish and Wildlife Department have primary responsibility for managing fish and wildlife resources and using the best science available to implement focused wildlife manage policy. Educating the public about wildlife issues is part of the department's key objectives. Non-lead ammunition is becoming more widely available and reasonably priced. Using non-lead alternatives can prevent lead exposure to human and wildlife without a loss in harvest efficacy when used appropriately.

The department has not and does not support a ban on lead-based hunting ammunition for big game. Furthermore, scientific studies have shown that there is no significant performance advantage in the efficacy of conventional lead-core hunting ammunition over non-lead ammunition for harvesting big game (e.g. Gremse et al. 2014, Martin et



al. 2017, Trinogga et al. 2012). Many times, anecdotal experiences from hunters are noted. Like the use of steel shot compared to lead shot for waterfowl hunting, an educational learning curve is expected. Shooting #5 lead shot is not the same as shooting #5 steel shot at a flying target as is the same comparison between shooting a 150-grain lead bullet vs. a 150-grain non-lead bullet at a whitetail. All said, there are a number of personal choices and decisions a hunter must make to voluntarily switch to non-lead ammunition for big game hunting. As such, the department is working to provide hunters with the information, materials, and perspective so they can make an informed decision as to whether or not they would like to voluntarily switch to non-lead hunting ammunition for big game.

As mentioned in a previous response, traditional hunting ammunition has been well documented as a clearly defined pathway to individual animal health of some scavenging birds. While not rising to the classification of a population level wildlife effect to necessitate a ban on traditional hunting ammunition, the department acknowledges that there are non-lead alternatives to traditional hunting ammunition. There are a number of factors hunters consider when choosing what kind of ammunition to use for hunting big game. Some of those key considerations include the cost of the ammunition and its overall efficacy to deliver a clean, ethical kill in addition to the impact to other animals. As such, the department is working with other fish and wildlife agencies and partners to develop and implement outreach materials and events to educate hunters on the benefits to switching to non-lead ammunition. Previous work from other agencies in other areas have shown that measures to promote the use of nonlead hunting ammunition are effective in empowering hunters to switch to nonlead alternatives as opposed to an all-out ban on traditional hunting ammunition.

Although some special interest groups might have a desire for a ban on traditional hunting ammunition, the department does not and would not support that for the aforementioned reasons. The department believes that hunters should be aware of the potential unintended consequences to non-hunted species and should be able to choose whether to switch to non-lead ammunition. Hunters can weigh the factors and make an informed decision that is mutually beneficial for themselves, the species they pursue, and the wildlife that are impacted by them.

- Gremse F, Krone O, Thamm M, Kiessling F, Tolba RH, et al. (2014) *Performance of Lead-Free versus Lead-Based Hunting Ammunition in Ballistic Soap*. PLoS ONE 9(7): e102015. doi:10.1371/journal.pone.0102015
- Martin A, Gremse C, Selhorst T, Bandick N, Müller-Graf C, Greiner M, et al. (2017) *Hunting of roe deer and wild boar in Germany: Is non-lead ammunition suitable for hunting?* PLoS ONE 12(9):e0185029. <https://doi.org/10.1371/journal.pone.0185029>
- Trinogga A, Fritsch G, Hofer H, Krone, O. (2012) *Are lead-free hunting rifle bullets as effective at killing wildlife as conventional lead bullets? A comparison based on wound size and morphology*. Science of the Total Environment 443 (2013) 226-232.

## Miscellaneous Comments

**Public Comment:** Is there a plan or thought to create a F&W app for mobile phones? Something that is personalized to the hunter's conservation ID number. In it you can potentially report game harvests, report daily hunt observations such as how many deer you observed and in which WMA...or any other wildlife observations that Dept biologists would like to track. Tracking it on the mailed-out cards to hunters is antiquated and probably not that efficient and more people would be apt to complete observation sightings or fish data by phone app. It seems like the data would be able to be used more efficiently since it's already in digital format versus ball point pen comments on paper. Through the app you can also do license purchases. Hunters are on phones all the time utilizing mapping software and such. Myself I'd be more inclined to conduct business or surveys quickly by app than navigating through the website...even though the website also does not give options to report all that crucial data for biologists.

**Fish & Wildlife Response:** Yes, there is a plan and effort underway to develop a department app for mobile phones to modernize the many items you mention. If all goes well, it will be released later this fall / winter with subsequent releases into 2021.

**Public Comment:** What are the management guidelines for DWA's (deer wintering areas) specific to private land under the Use Value Appraisal (Current Use) program? Are snowmobile trails or cross-country ski trails allowed?

**Fish & Wildlife Response:** Deer wintering areas (DWA) must be considered in forest management plans that are required for land enrolled in the Use Value Appraisal program. Essentially, any forest management must be appropriate to maintain the function of the DWA. There are no restrictions on trails in DWAs under the Use Value Appraisal program; however, the department generally recommends minimizing any human activity in DWAs areas during the winter. Human activity will alter deer behavior and may cause them to lose their energy reserves making it more difficult to survive the winter.

**Public Comment:** I'm a Vermont resident and I'd like to comment on the section where Vermont F&W is requesting public access be allowed on residents' property in the Current Use Program. Why? What reason did the department come up with to rest yet another assault on property owners? For a department that is trying to gain access to residents' good side so they can hunt on the resident's property you are going about it the wrong way. The disrespect shown to residents that own property (that hunters utilize to bag the big buck), is pretty fierce from my end of it. We do not hunt, but we've allowed hunters to walk our property for the last 30 years. If the October season goes through, we will not allow hunters for that particular season. Just one more reason to add to our list to post our property. Not our scene. We'd rather not post.

**Fish & Wildlife Response:** The department fully respects landowners' rights to post their property. However, the wildlife which utilize private property belong to all Vermonters and the department is responsible for management of those animals just as animals on public land. Limited hunter access to private property greatly limits the department's ability to manage some species, particularly white-tailed deer, which often results in overabundance and damage to habitat, including habitat on neighboring land.

The department has no interest or intention of preventing landowners from posting or otherwise restricting access to their property. Rather, the department is interested in programs (including the Use Value Appraisal program) or other incentives that might encourage landowners to allow access to their land. Several other states' Use Value programs provide additional incentives (e.g., greater tax reduction) to landowners who keep their land open for recreation.

**Public Comment:** Very well written and informative document. Please let USDA, Wildlife Service - VT know if we can assist your department in any way carrying out your defined goals. Best of luck to you and your staff over the next ten years.

**Fish & Wildlife Response:** Thank you. The department appreciates the longstanding partnership with USDA, Wildlife Services to help protect and conserve Vermont's wildlife and their habitats for all Vermonters.

**Public Comment:** I do not believe wild animals "belong" to the people of Vermont. I believe that they are entrusted to us by nature for care and stewardship.

**Fish & Wildlife Response:** Vermont law entrusts the stewardship of the state's fish and wildlife to the department in accordance with the Public Trust Doctrine. The Public Trust Doctrine, based on Roman civil and English common law, and affirmed by the United States Supreme Court, is the principle that natural resources, including wildlife, are owned by the public and held in trust by the government for the benefit of current and future generations. Wildlife does not belong to private property owners or the government. Nor can individuals possess live wild animals as a commodity or as pets or farm animals. Instead, wildlife is a resource that must be conserved and protected for public benefit by state and federal management.

**Public Comment:** Please consider adding a ban to live action trail cameras during open big game hunting seasons.

**Fish & Wildlife Response:** Thank you for sharing your thoughts on this. The department decided not to include it in the 2020-2030 plan. However, the issue will be monitored, and if warranted to accomplish big game management objectives, the department would work with the state's hunting groups to consider guidelines regarding the use of live action trail cameras during big game hunting seasons.

## Deer-Related Comments/Questions

**Public Comment:** See NJ Save the Deer

## Bear-Related Comments/Questions

### General

**Public Comment:** Employ a science-based, not hunter-centric based, policy towards bear management. Other states that have less land mass and more bears have no hunting season at all, yet Vermont has one of the longest hunting seasons in the country.

**Fish & Wildlife Response:** Like the vast majority of states with healthy bear populations, Vermont's bear management is based on sound science that uses hunters as the means of controlling the size of the bear population. There is no one "best" management strategy for bears. Different jurisdictions employ different methods depending on several factors including the bear population size and desires of the hunting public. In Vermont, baiting for bears and spring hunting is prohibited. Instead, Vermont only allows fall hunting and the use of bear hounds; two methods that combined have a lower success rate for hunters. This allows for a longer hunting season and increased opportunities for all hunters to hunt for bears if they desire to do so.

**Public Comment:** Extending the bear season is disgusting. It was too long as it is. Once again - it's for hunters, period, the hell with science and the animal population.

**Fish & Wildlife Response:** The 2020-2030 Big Game Plan does not recommend extending the bear hunting season. Historically, Vermont has used the length of the hunting season to adjust the size of the bear harvest and has found this management technique to be the most efficient and widely accepted means of keeping the population within management objectives.

**Public Comment:** Based on the adverse effects of climate change, existing already and becoming vitally important in the next ten years, including warmer, shorter winters and drought-caused natural food scarcities, amend the Bear rules to:

1) More actively address enforcement of fines for people who continue to ignore the reality of leaving food such as bird feeders, compost, garbage, and outdoor pet food for the bears to find. Legal action is especially important in repeat-offender cases. Education on resolving human-bear conflicts was a consensus high-priority need derived from the break-out group on bears at last September's Plan meeting.

**Fish & Wildlife Response:** Current bear regulations already contain language for the enforcement of rules pertaining to the feeding of bears. The department fully expects to see more enforcement actions if the level of negative human-bear interactions continues to increase. Education and outreach to resolve human-bear conflicts was a high priority identified in the planning process and is the top priority in the bear section of the 2020 – 2030 Big Game Plan. It is already the department's number one bear management priority and the efforts in this area are expected to increase over the period of this Plan.

2) Shorten the bear hunting season and eliminate the training for and the hounding of bears by dog packs. Quite often, the almost-constant harassment of bears in the woods simply drives them into human-populated areas thereby exacerbating human-bear conflicts.

**Fish & Wildlife Response:** Most states with bears carry out monitoring and research projects and none of them have reported study animals switching their home ranges to more urban areas due to hunting. Instead, state bear biologists believe bears have expanded their range to include more urban habitats and that they have found easy sources of food in these areas due to the amount of bird seed and unsecured garbage that they encounter.

3) Bear populations in Vermont should be driven by the tolerance level of humans, in addition to the carrying capacity of their natural habitats. Their management should be based on science, rather than on the interests of the hunting community.

**Fish & Wildlife Response:** As stated in the Big Game Plan, the department's foremost bear management goal is to minimize the number of negative interactions occurring between bears and humans to ensure long-term public tolerance. The population objective of 3,500 to 5,500 bears is based on this, rather than number of bears desired by hunters. If the number of bears exceeds what the public as a whole will tolerate, there is a risk of people devaluing them as a species. This has already occurred with deer and resident Canada geese in more suburban states.

**Public Comment:** Increase the population limit on black bears. Vermont currently can support at least double the current population of black bears. We have more habitat than other New England states, such as Connecticut, that have far larger black bear populations than we do, without major human-bear conflicts. There is no reason why Fish and Wildlife should seek a reduction in black bear populations, when clearly there is broad popular support in Vermont for people to see more bears in the wild. The hunting season should be curtailed, not lengthened, in order to increase black bear populations.

**Fish & Wildlife Response:** The department is not seeking a reduction in the bear population. Instead, the population objective range is being fine-tuned to 1) reflect improvements in the science of population estimates, 2) account for natural fluctuations in the population; and 3) better include confidence intervals in the population model. The plan clearly states that the department sees no need to change management strategies to either increase or decrease the population because the current population is well within the population objectives. In addition, the comment on the bear population in the State of Connecticut is incorrect. In 2019, the Connecticut DEEP biologists estimated there were approximately 800 bears in their state. In contrast, the Vermont Fish and Wildlife department's bear population model estimated a range of 4,286 and 5,575 bears in Vermont in 2019. Looking at it from a density perspective, Connecticut has only 25-30% of the density of bears that Vermont has. Thus, the statement that Connecticut has a higher population or density of black bears compared to Vermont is incorrect.

## Hounding

**Public Comment:** Ban bear hounding

**Fish & Wildlife Response:** There is no need to ban bear hounding currently. The department views bear hunting as an important bear management tool and the use of hounds plays a large role in reducing human-bear conflicts, particularly related to agriculture. Hounds actually save the lives of many bears by chasing animals away from agricultural areas that would otherwise be shot legally by people defending their crops.

**Public Comment:** Contrary to the current justifications, it is viciously cruel to both the animals being hounded and the hounds themselves. And landowners should absolutely not have to put up with a terrorized bear or rabbit or coyote or raccoon or whatever running for its life across their property while being chased by a pack of crazed dogs with the hunter comfortably in a truck who knows how far away.

**Fish & Wildlife Response:** The department's experience, based on many decades of bear research, is that pursuing bears with hounds is neither cruel to the dogs nor the animals pursued. Besides hunting, hounds are used nationwide as tool to capture bears for a variety of scientific studies. There is absolutely no scientific evidence that suggests this method harms the bears, nor impacts their longevity.

**Public Comment:** You talk about bear hounding and how wonderful the dogs are in intimidating evil bears. I have nothing against dogs. I do have a problem with their owners sitting on their butts in air-conditioned trucks while their dogs chase and harass anything they sniff out for four months every summer. I could respect a hounder if he was in the woods, sans electronics, working his dogs. People scream at me about Vermont Tradition... 20 years ago there was no GPS - this is not a tradition. This would be like allowing hunters to hunt with armed drones! Hyperbole aside, you must change the hound training season, so it is not a harassment for mother animals and their young. I expect you to clean up this unsportsmanlike activity.

**Fish & Wildlife Response:** Prior to the general use of GPS collars, bear hounds could be lost for days and sometimes struck by cars on highways. Thus GPS collars actually improve hound safety by allowing rapid retrieval. They also reduce the chance of dogs chasing an animal other than the target bear by allowing a hunter to quickly identify and retrieve a dog that is pursuing a non-target animal. Additionally, the ability of hunters to control their hounds better likely cuts down on the number of negative interactions with landowners. The department's general observations of bear hunters that utilize hounds has been that there is a significant amount of field time and physical work that goes into hunting bears with hounds and the statement regarding physical ease of bear hunting with hounds is inaccurate.

**Public Comment:** Obviously, bear hounds cannot read posted signs, so there is simply no way for this specific form of hunting to comply with the law. Currently, Fish and Wildlife dept. simply tells landowners to deal with trespassing

bearhounds as these violations occur, but these violations SHOULD NOT OCCUR in the first place! This is the expectation for all other forms of hunting.

**Fish & Wildlife Response:** The department encourages hound owners to reduce the chance of their hounds entering lands posted against hunting by only releasing their dogs on public land or on large tracts of private lands that is open to hunting.

**Public Comment:** Bearhounds violate local leash laws, and, in addition, bearhound hunters are allowed an especially long hunting season, as their “training” season (which is effectively the same as hunting activity) runs from June to start of hunting season in September. Either Fish and Wildlife should require these hounds to be leashed, or the activity should not be licensed at all. If Fish and Wildlife refuses to regulate this activity, it will be subject to legal challenge in the courts.

**Fish & Wildlife Response:** Vermont does not have a statewide leash law for dogs. “Leash laws” are ordinances enacted at the municipal level per 24 V.S.A. §2295. The assertion that the department does not regulate the use of bear hounds is incorrect. The use of hounds for hunting bears is heavily regulated under 10 App. V.S.A. §7 to ensure that bearhound hunters have their dogs under control while pursuing bears.

## Baiting

**Public Comment:** Other states and Provençe’s that have healthy black bear populations allow for baited hunts. Currently, the only reliable method of hunting Black Bear in VT is hounds, which have recently caused much controversy as bears and hounds do not respect property lines, and further, very few hunters have bear hounds. I propose VT allow hunters to purchase a bear baiting permit (see Maine) to control bear population, allow much more successful hunting opportunities, raise funds for the department, and control the population.

**Fish & Wildlife Response:** Any form of hunting that increases hunter success comes with additional issues. Baiting is no exception, and it would entail additional regulations, costs, and controversy, including trying to separate the practice from our current regulations against the feeding of bears. Vermont prohibited baiting in 1972. At the time, this was done to limit the number of bears taken in any one year as the department focused on increasing the population. Hunting with hounds and baiting are, separately, very effective hunting methods. As a result, most states do not allow both methods due to the potential of over harvest. In the east, Maine and New Hampshire are the only exceptions. Maine has a high bear population and need every possible method to take enough bears, to the point that they are even considering a spring bear hunting season in addition to what is already being done. New Hampshire, on the other hand, must closely monitor their harvest throughout the season. Vermont hunters are currently taking enough bears, and even if an increase the bear harvest was needed, the department would likely not consider it. Most states that allow baiting must implement a permit system to limit the number of people and enact other controls to ensure spacing between baits. This can cause conflicts between hunter groups (e.g. hunters who would hunt over bait and hunters who would not) regarding the access of bear hunting to all. In addition, some bait items such as chocolate are toxic to the bears. In short, although an effective management tool, bear baiting is not being considered at this time as harvest objectives are being met with the current management strategies in place.

## Moose-Related Comments/Questions

**Public Comment:** Rather than killing moose to save moose, invest in reducing winter tick populations directly, either by treating moose or the landscape with some form of acaricide or fungal pathogen.

**Fish & Wildlife Response:** This topic was addressed in a Frequently Asked Questions document about moose management and winter ticks that the department developed in spring 2020. In fact, this statement appears to be taken from that document:

### ***Can't moose or their habitat be treated to kill winter ticks?***

*This is a logical question that usually stems from us treating our pets for ticks. Moose are not pets or livestock, they are wild animals.*

*Reducing winter tick populations directly, either by treating moose or the landscape with some form of acaricide (a pesticide specifically for ticks) or fungal pathogen (there are some naturally occurring fungi that can kill ticks), is not currently a viable*

*option. Research in this area is ongoing, but the realities of treating an entire landscape or a sufficient portion of the moose population make it unlikely that this will be a practical option in the near future.*

*Further, treating ticks does not kill all of them and provides them an opportunity to adapt to the treatment and develop resistance. As long as there is a high density of moose on the landscape, tick numbers will simply increase again when treatments stop or when the ticks become immune to them.*

*Introducing animals that consume ticks (e.g., guinea fowl or opossums) is also not a viable option. Aside from the potential consequences from introducing a new animal into an area, and the fact that they could not survive the winter in that part of Vermont, they simply would not be effective at reducing winter tick numbers. The life cycle of winter ticks results in minimal opportunity for them to be predated. Adult ticks essentially only occur on the host, not on vegetation, and larval ticks are very small and either in the leaf litter or relatively high up on vegetation.*

*Lastly, people may dislike ticks because they find them unsightly or are concerned about diseases they may carry (remember, winter ticks do not carry those diseases), but people must remember that they are a native species just like moose. The appropriate balance between winter ticks and moose must be maintained.*

**Public Comment:** Hunting of moose should be sharply curtailed or temporarily suspended.

**Fish & Wildlife Response:** It has been. Moose hunting in Vermont has been significantly reduced in recent years and is now limited to a small number of permits in the northeastern corner of the state. Importantly, moose density in the area where hunting is currently allowed is much greater than anywhere else in Vermont, and high enough to support high numbers of winter ticks that are negatively effecting moose health.

Most of Vermont currently has moose densities that are below the hunting threshold established in this draft plan, and therefore no moose hunting permits have been issued in those areas.

**Public Comment:** Moose do not need to be shot to save them from ticks! This past winter shows that ticks can be reduced by weather and moose calves survived at a greater rate.

**Fish & Wildlife Response:** The department is not aware of any scientific evidence that suggests winter tick numbers were reduced or that calves survived at a higher rate during this past winter. The department's moose survival study concluded in 2019, and no calves were collared in 2020.

While winter tick populations are susceptible to variations in weather, including the timing of first snowfall in the fall, snowmelt in the spring, late summer drought, and other factors, the primary factor that allows winter tick population to reach levels that are harmful to moose is high moose density. Moose are the primary host of winter ticks, carrying far more ticks than any other species, and the abundance of winter ticks is directly related to the number of available hosts (moose). Reducing moose density is the only currently viable option to reduce the impact of winter ticks on the moose population.

## Wild Turkey-Related Comments/Questions

**Public Comment:** As you know spring wild turkey hunting has become a popular pastime and important part of VT Fish and Wildlife Big Game programs. Along with this popularity, this has evoked predictable hunter to hunter competition and conflict. What I suggest is a management tool what several states with many years of experience with healthy turkey populations impose: simply limiting hunters to a single bird harvested the first 7 days of the season. This both eases intense hunting pressure and allows more hunters to experience a successful hunt, given the harvest decreases significantly by day after the first week and the "easy" birds are taken -and often two at once,

**Fish & Wildlife Response:** No comments were received indicating problems with turkey hunter competition and conflict during the process of drafting the 2020-2030 Big Game Plan. On the contrary, a randomized telephone survey of 600 resident hunters conducted in 2018 found that 67% of hunters were very satisfied and 27% somewhat satisfied by their turkey hunting experiences in Vermont over the past five years. When compared to the results of a similar survey conducted in 2007 (57% very satisfied and 35% somewhat satisfied), it becomes readily apparent that turkey hunting satisfaction in Vermont has remained high for a long time. Given the lack of complaints received in this regard coupled with high and sustained hunter satisfaction, implementing the suggested measures to "ease intense hunting pressure and allow more hunters to experience a successful hunt" is unwarranted. However, the department

recognizes the merits and utility of this suggestion and would consider adopting such measures in the future should the need arise.

**Public Comment:** I think a phone in system is a horrible idea, ripe for abuse. I think the check in station is both useful (data collection) and an important way to keep people abiding by laws. I hunted in NY where they check in (or did then) by phone and heard stories of people taking advantage of it. I also personally love the tradition around it - I also think the public face of it is important to continue - VT's citizens should see the deer that people take home for the freezer!

**Fish & Wildlife Response:** In other jurisdictions where online reporting or other alternatives to in-person reporting have been considered or adopted, similar concerns for non-compliance and data quality have been expressed. After years of experience now with these alternative reporting techniques, though, evidence of increased non-compliance or diminished data quality has not been observed by these jurisdictions leading the department to conclude these concerns are unfounded. In fact, results from a 2017 Northeast Upland Game Bird Technical Committee survey of regional biologists indicated that reporting rates may have actually increased as a result of adopting such alternative reporting options and no significant declines in data quality were observed. At the time of this survey, Connecticut, Maryland, Massachusetts, New York, Pennsylvania and Virginia all allowed online reporting of big game and all survey respondents from these states expressed satisfaction with and confidence in the data these alternative harvest reporting systems provided. Nationwide, Vermont is only one of three states that only have an in-person option for reporting all big game species.

The department is committed to monitoring the quality and accuracy of the harvest data it collects using these reporting alternatives through the future. In this manner, the department can draw upon decades of previous experience and compiled data to assess these datasets and identify any potential data quality concerns resulting from erroneous data entry and/or non-compliance with reporting requirements. For example, a comparison of the daily harvest totals for the 2020 spring turkey season, during which all harvest data were collected via online reporting,

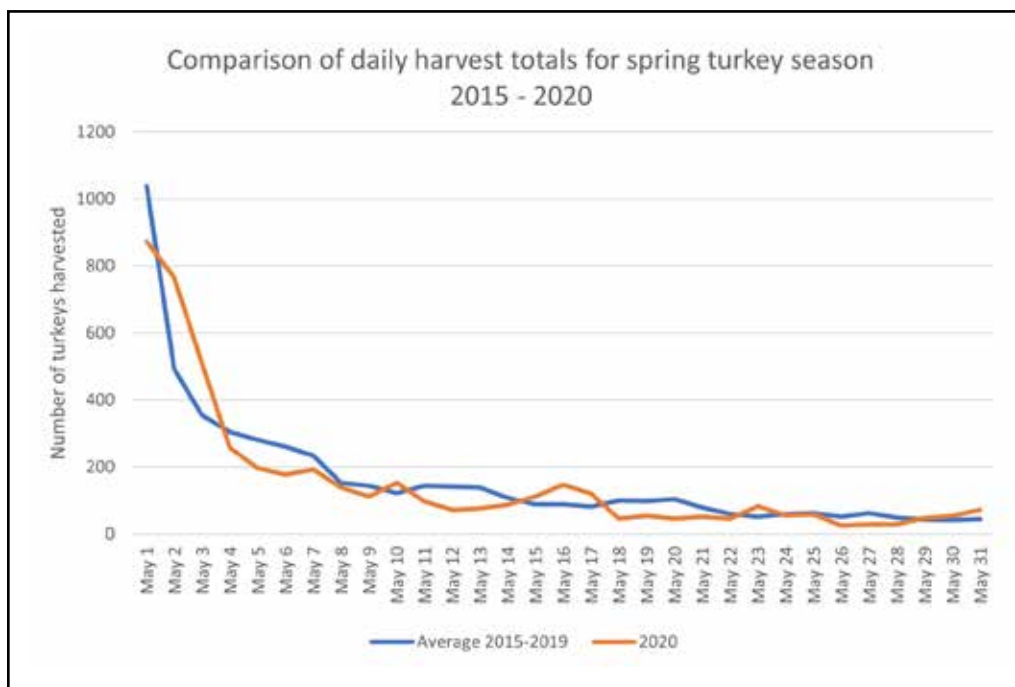


Figure 1. A comparison of the 2020 spring turkey season daily harvest totals to the average daily harvest totals for the previous five years.

to the average daily harvest totals for the previous five-year period (Figure 1) reveals daily harvest trends for this past spring season which reflect the normal distribution indicating accurate and complete harvest reporting. Furthermore, the data entry controls afforded by these well-developed, sophisticated online reporting tools allows the department to minimize the potential for inadvertent data entry mistakes that are inherent with all data collection processes. Data

controls such as value lookups, dropdown lists, validations, and range of value limitations can all be integrated into the data entry form to ensure data integrity. From limiting the Wildlife Management Units to the correct choices for the selected town of harvest to providing a drop down list of date choices for a particular hunting season, the use of this technology to collect harvest data in this way both increases hunter convenience and safeguards data integrity.

With respect to hunter compliance, it is also important to note that the department employs 36 specially trained and skilled Game Wardens who are highly motivated to safeguard the integrity of the department's data collection processes, to maintain high public regard for hunters and hunting by curtailing miscreant behavior, and to protect and conserve Vermont's shared wildlife resources. While the department recognize that the vast majority of hunters share these motivations and will continue to report their harvest with due diligence, there will always be a few who will not and it is these few who become the unenviable focus of department wardens. Indeed, it is these few who have always been the focus of the wardens as they have been just as unlikely to report their harvest in-person to a check station as we would expect them to be with online reporting. Beyond the fact that the increased conveniences gained through online harvest reporting are expected to actually improve reporting rates (i.e. reduce non-compliance), online reporting will also benefit wardens in their efforts to detect and root out criminal behavior by providing readily accessible, real-time data upon which to build their cases and act in a timely fashion.

**Public Comment:** A turkey novice season sounds great!

**Fish & Wildlife Response:** Thank you for your support.