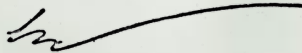


BIG GAME MANAGEMENT PLAN 2020-2030



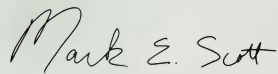
Maintaining abundant and healthy big game populations within their ecological and social carrying capacities for Vermonters.



Commissioner, Fish & Wildlife Department

2/17/2021

Date



Wildlife Director, Fish & Wildlife Department

2/16/2021

Date



Most of the programs described in this report are funded through the ***Federal Aid in Wildlife Restoration Program***. This program was initiated in 1937 as the Federal Aid in Wildlife Act and created a system whereby taxes are paid on firearms, ammunition and archery equipment by the public who hunts. Today this excise tax generates more than one hundred million dollars each year that are dedicated to state wildlife restoration and management projects across the United States. The State of Vermont uses these monies for acquiring land, and for restoring and managing wildlife. These excise tax dollars, coupled with state hunting license fees, have been the predominant source of money funding the successful restoration and management of Vermont's wildlife resources.

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Table of Contents

Executive Summary	3
Chapter 1: Introduction	9
<u>Introduction</u>	9
<u>Developing the Big Game Management Plan</u>	9
<u>Wildlife as a Public Trust</u>	9
<u>Overarching Management Issues of Significant Concern</u>	10
<u>The Full Values of Hunting</u>	12
<u>Hunting with Non-lead Ammunition</u>	13
<u>Overarching Management Objectives and Strategies</u>	15
Chapter 2: White-tailed Deer	16
<u>2010-2020 Plan Accomplishments</u>	16-17
<u>Introduction</u>	16
<u>Issue 1. Disease</u>	18
<u>Chronic Wasting Disease</u>	18
<u>Hemorrhagic Disease</u>	19
<u>Issue 2. Deer Wintering Areas</u>	19
<u>Issue 3. Population Objectives</u>	21
<u>Public Satisfaction</u>	21
<u>Ecologically Sustainable</u>	21
<u>Current Status</u>	22
<u>Achieving Population Objectives</u>	23
<u>Locally Overabundant Deer</u>	24
<u>Issue 4. Deer – Human Conflicts</u>	26
<u>Issue 5. Hunter Satisfaction</u>	27
<u>Evaluating Recent Changes</u>	28
Chapter 3: Black Bear	29
<u>2010 – 2020 Plan Accomplishments</u>	29
<u>Introduction</u>	29
<u>Issue 1. Bear – Human Conflicts</u>	30
<u>Issue 2. Bear Population Size and Distribution</u>	31
<u>Issue 3. Bear Habitat Conservation</u>	32
<u>Black Bears and Wind Energy</u>	33
<u>Issue 4. Bear Management Strategies and Season Structure</u>	33
<u>Regional Management</u>	33
<u>Hunting Bears with Hounds</u>	34
<u>Hunter Numbers</u>	35
<u>Bears as Predators of White-tailed Deer and Moose</u>	35

Chapter 4. Moose	36
<u>2010 – 2020 Plan Accomplishments</u>	36-37
<u>Introduction</u>	36
<u>Issue 1. Regional Population Goals</u>	38
<u>Issue 2. Hunting Permit Thresholds</u>	39
<u>Issue 3. Disease</u>	39
<u>Winter Tick</u>	39
<u>Brainworm</u>	40
<u>Issue 4. Moose – Human Conflicts</u>	41
<u>Issue 5. Moose Habitat and Carrying Capacity</u>	42
Chapter 5. Wild Turkey	43
<u>2010 – 2020 Plan Accomplishments</u>	43-44
<u>Introduction</u>	43
<u>Issue 1. Turkey Population Objectives</u>	44
<u>Issue 2. Turkey Management Strategies and Season Structure</u>	45
<u>Issue 3. Diseases</u>	47
<u>Issue 4. Conflicts with Humans</u>	48
<u>Issue 5. Habitat Changes and Conservation</u>	49
<u>Competition Between Turkeys and Deer</u>	49
References	50
Appendix A	
<u>Agencies & Organizations Invited to Participate in the Development of the Big Game Plan</u>	52
Appendix B	
<u>Public Comment Meeting - Public Comments/Questions and Department Responses</u>	53-61
Appendix C	
<u>Public Comment Emails - Public Comments/Questions and Department Responses</u>	62 -75

Executive Summary

Wild animals, by Vermont and Federal law, belong to the people of Vermont and thus conserving and managing Vermont's wildlife resources on behalf of the public are obligations of the Vermont Fish & Wildlife Department. The department has a long history of managing Vermont's big game species using the best available science that is informed by a robust public input process. For the past twenty years, the management of Vermont's four big game species – white-tailed deer, black bear, moose, and wild turkey -- has been coordinated by a comprehensive Big Game Management Plan. The plan, updated every decade, identifies issues that these species face, establishes sustainable population and management goals and then prescribes the strategies needed to achieve these goals. Combining wild turkey management with moose management may seem strange on the face of it, but a multi-species approach is appropriate and necessary because all four species face overlapping challenges and, as a group, they represent the backbone of Vermont's hunting and wildlife-viewing opportunities. In addition, the wild turkey's status as a big game species reflects the elevated focus it has received in wildlife restoration efforts in the last 50 years.

Overarching Goal

Maintain abundant and healthy big game populations within their ecological and social carrying capacities for Vermonters.

Overarching Issues of Significant Management Concern

- Habitat Loss
- Declining Hunter Numbers
- Human – Wildlife Conflicts
- Access to Land
- Impacts of Suburbanization on Public Attitudes
- Climate Change
- Collection of Biological Data
- Promoting Utilization

Overarching Management Objectives and Strategies

1. Recruit new hunters with the primary purpose of introducing new, diverse audiences to, and maintaining support for, hunting.
2. Use Vermont Conservation Design to identify priority big game habitat for conservation, such as young forests and habitat connectivity.
3. Advocate for public hunting access for lands enrolled in the Use Value Appraisal Program (UVA; Current Use) and conserved lands.
4. Maximize opportunity for big game hunters, including liberalizing season length and bag limits, where possible, while still maintaining big game population objectives.
5. Continue outreach to private landowners, municipalities, non-profits, and other landowners on the value of allowing hunting access.
6. Develop a single, comprehensive database to track and record human-wildlife conflicts, including those involving big game species, to more efficiently address conflicts at a district level.
7. Maintain mandatory big game reporting but investigate ways to make it easier for hunters to check the game they harvest, particularly with the use of technology.
8. Continue to provide outreach on the impacts of climate change on big game species.
9. Encourage the responsible utilization of big game species with a primary purpose of increasing support for, and promoting an understanding of, hunting. This could include increasing the amount of utilization-related content on the website and reviewing the current statutory window to sell big game carcasses during the open season and 20 days thereafter to connect the public to hunting and wild game.

2020 – 2030 Big Game Species-specific Management Goals, Objectives, and Strategies

WHITE-TAILED DEER

ISSUE 1. Disease

GOAL: To maintain an abundant and healthy deer population

Management Objectives and Strategies

- 1.1 Enhance the department's disease surveillance, particularly for Chronic Wasting Disease (CWD).
- 1.2 Continue to emphasize, improve, and monitor CWD prevention efforts.
- 1.3 Consider improving restrictions on importation of cervids.
- 1.4 Develop a CWD response plan, including all necessary approvals and authorities.
- 1.5 Increase public outreach regarding CWD.
- 1.6 Continue monitoring other diseases with potential to impact the deer population.

ISSUE 2. Deer Wintering Areas

GOAL: To maintain adequate quantity and quality of deer wintering areas (DWA) to sustain the population at regionally established population objectives.

Management Objectives and Strategies

- 2.1 Continue to protect DWAs through regulatory review.
- 2.2 Continue to update the department's inventory of DWAs opportunistically.
- 2.3 Develop a remote sensing approach to aid in identification of unknown or unmapped DWAs.
- 2.4 Conduct outreach to landowners, land managers, and partner state and federal agencies / organizations about the importance of DWA conservation.
- 2.5 Continue to work with the Vermont Department of Forest Parks and Recreation (FPR) and foresters to ensure that habitat is adequately managed under the UVA program.
- 2.6 Work with FPR to develop guidelines for the management of hemlock DWAs given the potential impacts of hemlock wooly adelgid.
- 2.7 Continue to work with conservation partners that own or manage conserved land to ensure that DWAs and other habitats are properly managed.

ISSUE 3. Population Objectives

GOAL: Maintain the deer population at levels that are socially acceptable and ecologically sustainable.

Management Objectives and Strategies

- 3.1 Manage deer densities using Wildlife Management Unit (WMU)-specific density and physical condition objectives.
- 3.2 Monitor characteristics of deer and habitat that can change in response to deer abundance.
- 3.3 Continue to collect physical condition data including yearling antler beam diameter, fawn and yearling body weight and reproductive data.
 - Consider collecting data on fawn recruitment to better inform population models.
 - Work with foresters to monitor deer impacts to forest health.
- 3.4 Work with landowners and land managers to encourage hunting and inform them about the need to manage deer abundance.
- 3.5 Adjust antlerless deer harvests as necessary to achieve density and physical condition objectives.
 - Monitor the effects of recent changes to deer hunting regulations on the antlerless harvest.
 - Consider additional liberalization of antlerless harvest, where necessary, to achieve annual harvest objectives.

ISSUE 4. Deer-Human Conflicts

GOAL: Minimize the number of deer-human conflicts.

Management Objectives and Strategies

- 4.1 Maintain the deer population to meet hunter satisfaction and minimize landowner and human complaints.
- 4.2 Demonstrate the effectiveness of archery hunting to reduce locally overabundant deer in developed areas.

- 4.3 Work with communities to address locally overabundant deer in developed areas, including establishment of expanded archery zones.
- 4.4 Encourage communication and cooperation between antlerless deer hunters and landowners seeking relief from deer damage.

ISSUE 5. Hunter Satisfaction

GOAL: Provide a quality deer hunting experience for as many hunters as possible.

Management Objectives and Strategies

- 5.1 Maximize hunting opportunity by providing longer hunting seasons and opportunities to hunt multiple seasons.
- 5.2 Maximize opportunity to harvest a deer.
- 5.3 Ensure there are enough older bucks on the landscape to provide hunters a reasonable chance of seeing one.
- 5.4 Ensure that the proportion of yearlings in the total buck harvest not exceed 50% in any WMU.
- 5.5 Continue to regularly survey hunters and involve them in the rule-making process.
- 5.6 Maximize the accessibility of hunting to recruit, retain, and reactivate new and existing hunters.

BLACK BEAR

ISSUE 1. Bear–Human Conflicts

GOAL: Minimize the total number of negative interactions occurring between bears and humans to achieve acceptable levels of human safety.

Management Objectives and Strategies

- 1.1 Continue to work with partners to increase public awareness of the factors that lead to human-bear conflicts and the legal and appropriate actions to take to avoid negative interactions.
- 1.2 Continue outreach and education efforts that include improving the bear section of the department’s web page and creating additional “how to” videos to help reach a larger segment of the public.
- 1.3 Better define and clarify existing bear feeding regulations; provide clear guidelines on the appropriate actions to take when encountering a bear; reinforce the department’s position on relocating bears; and, specify when it is appropriate to euthanize a bear that has caused extensive property damage or is a threat to human safety.
- 1.4 “Raise the bar” on getting the public to take more responsibility for addressing local bear-human conflicts rather than depending on department staff to address all problems.
- 1.5 Assist communities experiencing the greatest number of conflicts with creative ways in addressing bear-human conflicts.
- 1.6 Continue to work with the Vermont Department of Environmental Conservation (DEC) to improve their outreach on universal recycling of food scraps to reduce conflicts with bear.

ISSUE 2. Bear Population Size and Distribution

GOAL: Maintain the bear population at ecologically sustainable levels, while minimizing human conflicts.

Management Objectives and Strategies

- 2.1 Maintain a bear population of between 3,500 and 5,500 allowing for wider fluctuations in annual population estimates and confidence intervals resulting from improvements to the population model.
- 2.2 Continue to use season length, especially during the overlap with the November deer season, as the primary method of adjusting the size of the bear population.
- 2.3 Consider managing bears regionally rather than statewide to address conflict and more specifically manage bears in areas where they are expanding their range beyond forested habitat.

ISSUE 3. Bear Habitat Conservation

GOAL: Maintain no-net-loss of function and value of existing bear habitat.

Management Objectives and Strategies

- 3.1 Continue to work with Vermont’s regulatory process to maintain functional bear habitat and reduce human-bear conflicts arising from new commercial and residential developments.

- 3.2 Update the Black Bear Habitat Mitigation Guidelines reflecting advances in habitat mitigation strategies as a result of recent research.
- 3.3 Work with Vermont Conservation Design to prioritize the protection of bear travel corridors and linkage habitat while also working to increase the amount of young forest habitat throughout the state.

ISSUE 4. Bear Management Strategies and Season Structure

GOAL: Optimize public hunting opportunity for the utilization of bears for food and other uses, ensure hunter satisfaction within biologically sustainable regulations and continue to use public hunting to meet black bear population objectives.

Management Objectives and Strategies

- 4.1 Use hunter effort surveys and harvest data collected at a regional scale to inform regional population management.
- 4.2 Continue to promote the hunting of bears for food and increase outreach efforts to improve accessibility of bear hunting to a wider audience.
- 4.3 Continue to work with the Vermont Bear Hound Association to address issues that could possibly restrict bear hunting with hounds in Vermont.
- 4.4 Begin outreach that stresses declining hunter participations will likely necessitate changes in bear season structure and overall bear management.
- 4.5 Evaluate and monitor impacts the new deer season structure may have on the bear harvest and population size.

MOOSE

ISSUE 1. Regional Population Goals

GOAL: Maintain a healthy moose population in Vermont's moose management regions.

Management Objectives and Strategies

- 1.1 Maintain the moose population within density targets in North Central, East Central and Green Mountain moose management regions.
- 1.2 Provide quality hunting opportunity in all WMUs when appropriate.
- 1.3 Improve current and explore new population monitoring methods. They may include expanding annual deer hunter effort surveys, developing a camera trap network, and monitoring snow urine (urea nitrogen/creatinine ratio) to gauge the impact of winter ticks on moose health.

ISSUE 2. Hunting Permit Thresholds

GOAL: Establish moose density thresholds in Wildlife Management Units that would dictate hunting closures or re-openings.

Management Objectives and Strategies

- 2.1 Hunting Permit thresholds
 - No permits if less than 75% of target density for 2 consecutive years.
 - Resume permits if within 25% of target density for 2 consecutive years.

ISSUE 3. Disease

GOAL: Better understand and address the impacts of parasites and disease on the long-term viability of moose in Vermont

Management Objectives and Strategies

- 3.1 Implement a density goal of 1.0 moose/square mile, or lower, for any WMU where winter ticks persist at epizootic levels or are driving population decline by lowering calf survival to an unsustainable level.
- 3.3 Explore the use of snow urine to monitor nutritional status.
- 3.4 Monitor tick load and hair loss on all incidental or legally killed moose, when available, and consider other options, such as hair loss via salt-lick camera traps, when appropriate.
- 3.5 Evaluate methods to supplement and improve population model estimates. These could include using camera

traps to compare trends in deer hunter moose sighting rates, calf-cow ratios, using genetic information to estimate population trends, and considering various trend estimation time frames (i.e. yearly, every 3 years, etc.).

- 3.6 Submit blood serum from euthanized sick-acting moose for ELISA test, and consider the same for all incidental moose mortalities and harvested moose for brainworm screening.
- 3.8 Evaluate the need and feasibility of field necropsies of all incidental moose mortalities.
- 3.9 Maintain WMU E1 and E2 deer density at 10 per square mile or fewer.

ISSUE 4. Moose–Human Conflicts

GOAL: Minimize motor vehicle - moose collisions and other forms of damage caused by moose.

Management Objectives and Strategies

- 4.1 Continue to improve the protocol for moose/human conflicts.
- 4.2 Consider revising the moose doing damage rule in light of the declining moose population (i.e. sap tubing damage only during sugaring season).
- 4.3 Continue to work with the Vermont Agency of Transportation (VTRANS) to erect and maintain warning signs at traditional moose highway crossings.
- 4.4 Continue to work with VTRANS in implementing roadside brush-clearing projects to improve visibility at the most dangerous moose crossings, when feasible.
- 4.5 Cooperate with VTRANS to investigate the use of new technology that may help reduce moose/vehicle collisions.
- 4.6 Cooperate with VTRANS on the installation of wildlife crossing culverts or travel lanes during interstate and Vermont highway bridge replacements, when feasible.
- 4.7 Issue annual press releases to remind motorists of moose hazards during seasons of increased moose movement.

ISSUE 5. Moose Habitat and Carrying Capacity

GOAL: Maintain necessary habitat to support regional moose density objectives.

Management Objectives and Strategies

- 5.1 Enhance moose habitat on state and federal lands, especially in regions where young forest comprises less than 10% of forestland.
- 5.2 Support and monitor research into moose and parasite dynamics.

WILD TURKEY

ISSUE 1. Turkey Population Objectives

GOAL: Maintain a healthy, sustainable wild turkey population in Vermont.

Management Objectives and Strategies

- 1.1 Annually collect and assess turkey harvest data to monitor disease, health and population trends.
- 1.2 Continue conducting turkey brood surveys to assess annual poult production using regionally accepted protocols.
- 1.3 Evaluate and implement new population monitoring and modeling practices (i.e. winter flock surveys, hunter sighting surveys, population models, hunter effort surveys to effectively detect trends in the turkey population and manage it accordingly).
- 1.4 Improve the regional approach to managing turkeys using appropriate population thresholds and indices (i.e. spring toms harvested per square mile of habitat, turkeys harvested per unit of hunter effort, turkeys harvested per number of licensed hunters per WMU, etc.) evaluated at the WMU scale.

ISSUE 2. Turkey Management Strategies and Season Structure

GOAL: Maximize the ecological and social benefits derived from Vermont's wild turkey population by administering biologically appropriate and sustainable harvest regulations.

Management Objectives and Strategies

- 2.1 Continue prioritizing quality spring hunting over fall hunting.
- 2.2 Consider liberalizing fall hunting opportunities when it is sustainable and in accordance with public preference.

- 2.3 Evaluate and implement methods for using turkey hunting to recruit new hunters such as, but not limited to, the creation of a “novice season” for turkeys like the recently adopted deer novice season.
- 2.4 Liberalize and simplify shot size regulations including the use of non-lead, tungsten shot.

ISSUE 3. Diseases

GOAL: Safeguard the health of Vermont’s wild turkey population through the effective surveillance of and response to disease outbreaks.

Management Objectives and Strategies

- 3.1 Participate in regional studies designed to facilitate the understanding of wild turkey disease distribution and significance.
- 3.2 Implement a disease reporting system (i.e. online report form) designed to facilitate the effective monitoring of and response to disease outbreaks in wild turkeys.

ISSUE 4. Turkey–Humans Conflicts

GOAL: Maintain public support for wild turkey conservation by providing technical assistance when conflicts arise and by maintaining the turkey population within its cultural carrying capacity limits.

Management Objectives and Strategies

- 4.1 Develop standardized protocols for guiding staff response to conflicts caused by wild turkeys.
- 4.2 Develop and disseminate educational materials designed to inform citizens/farmers about techniques for minimizing conflicts.
- 4.3 Strengthen outreach efforts aimed at increasing the public’s awareness of the importance of reporting conflicts with turkeys
 - Develop and implement an online turkey conflict reporting database designed to facilitate the collection, assessment and archiving of conflict data.
 - Annually compile and evaluate conflict reports to document problems and inform management decisions.
- 4.4 Pursue a regional harvest management strategy that strives to minimize conflicts caused by wild turkeys.

ISSUE 5. Habitat Changes and Conservation

GOAL: Maintain the productivity of Vermont’s landscape for wild turkeys by working to identify, protect, and enhance key habitats.

Management Objectives and Strategies

- 5.1 Develop and maintain habitat demonstration sites designed to promote beneficial commercial and non-commercial land management practices.
- 5.2 Provide information and technical assistance to private landowners and other land managers regarding turkey habitat management.
- 5.3 Collaborate with key partners (i.e. NWTF, GMNF, etc.) to promote turkey habitat management and conservation.