

## WILD TURKEY

### I. Management History

Records from the late 1700s and early 1800s indicate wild turkeys were present in southern Vermont. Most turkeys in the state seem to have existed along the Taconic Mountain Range in the southwest and along the Connecticut River Valley in the southeast. Massive loss of forestland and unregulated market hunting in the early nineteenth century led to the disappearance of Vermont's wild turkeys by the mid-1800s.

A number of private fish and game clubs attempted to re-establish the birds during the late 1950s at various locations around the state by releasing turkeys raised on game farms. This effort failed, however, because these birds lacked the inherent hardiness and survival skills of wild turkeys. These stocking attempts convinced the Department that successful reintroduction of turkeys into Vermont would require live-trapping of the hardier wild birds from another state.

In the late 1960s, the Department made arrangements with the New York Department of Environmental Conservation to permit Vermont biologists to live-trap wild turkeys and relocate them. Vermont first released 17 wild New York birds in Pawlet, Vermont, in 1969. A second release of 14 wild birds was made in Hubbardton in 1970. Today's wild turkey population of more than 50,000 birds directly descends from this original stock of 31 New York wild turkeys. The Department initially expected the expansion of the wild turkey population to be limited to the part of the state reported to be historical wild turkey range, south of US Route 4. Only 30 years after introduction, turkeys ranged across the entire state. These hardy birds have far exceeded expectations and have successfully exploited Vermont's mosaic of forestland and dairy farms.

The Department began efforts to expand wild turkey range within the state soon after their initial introduction. Over a ten-year period ending in mid-1980s, live-trap and transfer techniques were employed to capture and move wild birds from the original release area in Rutland County to other parts of the state. Birds were released in Bennington, Brattleboro, Bristol, Dummerston, Grand Isle, Halifax, Jericho, Milton, Norwich, Pownal,



Rockingham, Shaftsbury, Springfield, Strafford, and Weybridge. Birds were also restocked in Alburg, Fairfax, Georgia, Grand Isle, and Swanton in the mid-1990s to augment a struggling local population perhaps limited by overharvesting in the fall.

Vermont's first, modern wild turkey hunting season was held in parts of Addison, Bennington, and Rutland Counties in the spring of 1973. A season was held for 12 days (May 9-20) with a limit of one bearded turkey. Twenty-three turkeys were harvested by 579 permitted hunters. The first fall hunt, held in 1975, occurred in a limited area of southwestern Vermont.

Over the past 30 years, wild turkeys have thrived in Vermont and public participation in turkey hunting has continued to increase. Reduction in fall harvest opportunities imposed following the disastrous and extremely severe winter of 1993-94 helped stimulate rapid turkey population growth and expansion. The population is estimated to have increased from approximately 12,000 to 45,000 birds in the period from 1995 through 2001. The increase in spring turkey harvest mirrors the species' population growth (Fig. 5.1).

Turkey hunting opportunities have been expanded to new areas of the state as the population has grown. The entire state of Vermont was opened for the first time to spring turkey hunting in 2004. In addition, relatively liberal fall turkey hunting opportunities, compared to those in other states, are now offered

in most areas of the state. Average annual combined spring and fall harvest of turkeys now totals about 5,800 birds per year. Viewing opportunities have also expanded tremendously for thousands of Vermonters who delight in simply viewing wild turkeys in their natural setting. As a result of the Department's turkey management initiatives, the wild turkey population has risen to the highest level in Vermont history. The wild turkey population is currently estimated to exceed 50,000 birds statewide.

Wild turkey research has found that short-term turkey population fluctuations result from combinations of random environmental conditions such as rainfall and temperature events that affect nesting hatching success, survival of poults and winter survival. Long-term population trends, however, are primarily influenced by changes in the quantity and quality of suitable habitat across the landscape.

Forests now dominate close to 75% of Vermont's land area with only about 15% in an open, nonforested condition. Although the eastern wild turkey is primarily regarded as a forest-dwelling bird, ideal turkey habitat includes a diverse mix of habitat types, forest succession stages and open land, which provides the greatest opportunity for feeding, nesting, and brood rearing. Research shows that turkey nesting rates are consistently higher and turkey populations more stable in habitats consisting of a mosaic of forests and fields than in those areas composed mainly of either mostly forest or mostly open land. The highest densities of turkeys in Vermont follow this pattern, occurring in areas where the available habitat is closer to the ideal mosaic mix of conditions.

Forests are an important habitat component for turkeys especially when forests consist of oak, beech, and pine stands that produce abundant hard mast crops (acorns, bechnuts, and other seeds) that are consumed by the birds in the fall and winter months. Forests also provide the large, dominant trees used by turkeys for roosting. These types of forests are relatively common in Vermont, especially in the

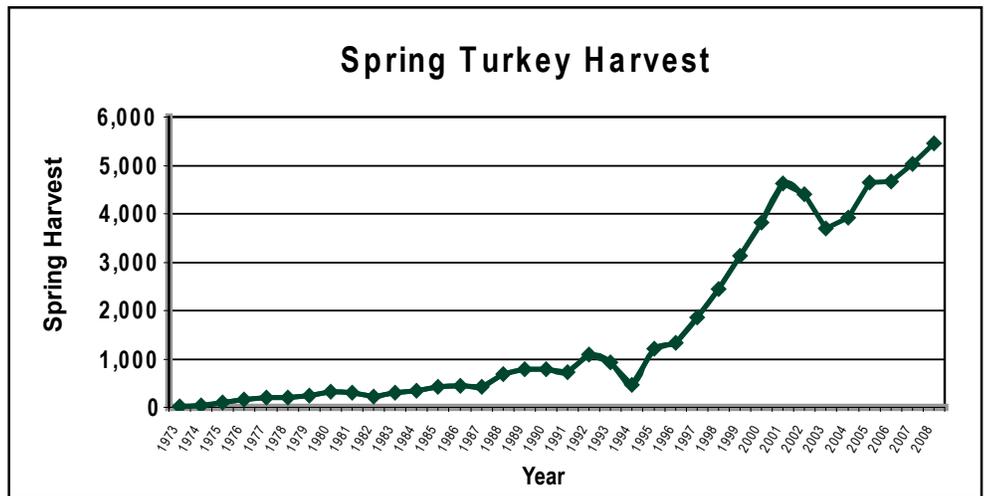


Figure 5.1. Spring Turkey Harvests 1972 - 2008

Champlain Valley, Connecticut River Valley, and the foothills of the Green Mountains and Taconic Mountains. Forest management practices can be used to insure availability of adequate mast crops and roost trees through time.

Clearings and openings in the forest are also a vital habitat component for Vermont's wild turkey population. Whether created as farm pastures, hay fields, or openings within the forest, herbaceous plants such as grasses and clover provide critical habitat for turkey broods. These open areas have abundant insect populations on which young turkeys rely during early growth. The most beneficial clearings are old pastures, dominated by a mix of forbs, weeds, and fruit-bearing shrubs, as opposed to monocultures of grasses. Management can be used to enhance openings through periodic, selective mowing, liming, and fertilizing to favor desirable plant species.

Turkey brood range is a very important habitat consideration. Hen turkeys nest on the ground and prefer nesting in locations having lateral cover of herbaceous plants and shrubs. Recent clear cuts, thinned timber stands, fields, and croplands provide cover suitable for nesting and brooding turkeys. The best management practices for enhancing forest nesting habitat are conventional forest regeneration practices, especially even-aged timber management and group selection methods.

Trends in agriculture may affect the future distribution and abundance of turkeys statewide. As the number of Vermont farms continues to decline and the trend toward increasing forestation and forest age progresses, availability of open land may limit wild turkey production in Vermont.

## II. 2010-2020 Turkey Management Issues, Goals, and Strategies

The overall goal of wild turkey management in Vermont is to manage the state's wild turkeys to sustain healthy, abundant populations that will provide hunting and viewing opportunities and will satisfy social expectations and tolerances for turkeys. This management goal aims to sustain an abundant wild turkey population that is truly wild and that is below both the biological carrying capacity of its habitat and the cultural carrying capacity.

### ISSUE 1. Turkey Population

**GOAL:** To adequately assess Vermont's wild turkey populations and trends.

Sustaining healthy wild turkey populations in each wildlife management unit (WMU) that is consistent with Department goals requires an ability to accurately estimate abundance of turkeys or at least trends in relative abundance. Harvest data, nesting success indices as provided by brood surveys, and hunter pressure through license sales are critical elements of the Department's ability to monitor turkey population trends.

### Management Strategies

- 1.1 Annually collect and assess turkey harvest data to determine trends as well as summer/fall turkey sighting survey data in order to direct future management decisions.
- 1.2 Conduct the public annual Internet turkey brood survey

## 1999-2008 Plan Accomplishments

Vermont's wild turkey population was estimated to be approximately 23,000 to 25,000 birds in 1998 at the time the previous turkey management plan was written. The population had risen to 50,000 to 55,000 birds by 2008, a doubling of the population during the ten-year management period. New spring turkey harvest records have been set in eight of the past 11 years. Wild turkey enthusiasts throughout our state have enjoyed countless hours of harvest and viewing opportunities of this highly regarded native wildlife resource.

The following is a list of specific issues and recommendations that were originally proposed in the 1999 plan with the resulting action taken to address them during the past ten-year planning cycle.

► **Recommendation 1. Adjust spring hunting hours to begin one-half hour before sunrise to noon (previous hours were 5:00 a.m. to 11:00 a.m.).**

► **Recommendation 2. Adopt turkey hunting season zones based on existing wildlife management units (WMUs).**

❖ **Action:** Both of these recommendations were adopted by regulation in 2000.

► **Recommendation 3. Change (expand) existing spring turkey hunting zones.**

❖ **Action:** The expansion of spring turkey hunting was adopted by numerous regulation changes throughout the planning period.

2000 – Expanded spring hunting to include all of WMUs H1, H2, and G

2001 – Expanded spring hunting to include Zones B, D1, and D2; WMU A opened to spring hunting by

permit, 75 permits issued  
2002 – Held the first spring youth season first weekend prior to start of May season; 80 permits issued in WMU A

2003 – Opened WMU A to all licensed hunters, no WMU A permits required

2004 – Expanded spring season to include all of Zone C and E, resulting in entire state of Vermont open to spring hunting for all licensed hunters

► **Recommendation 4. Change fall hunting zones and season length, and establish threshold guidelines for initiating, liberalizing, or curtailing fall hunting seasons.**

❖ **Action:** Changes to the fall wild turkey season were adopted by regulations established in 2000 and 2003.

2000 – Expanded the fall season in J1 to include the entire zone with seven-day shotgun season

– Expanded fall hunting in Zones H2 and J2 to include the regular bow and arrow season and a new archery-only season during the current seven-day shotgun season in adjacent zones

– Reduced fall shotgun season in WMUs G, I, L, M1, M2, O1, O2, P, Q from 16 days to 7 days in length

2003 – Expanded fall bow hunting season length in H1 to include regular bow and arrow season and through regular seven-day shotgun season

– Expanded fall seven-day shotgun hunting in J2 and H2

along with the Department staff summer turkey survey.

- 1.3 Continue the turkey project’s investigation into the genetic variability and structure of the statewide population.
- 1.4 Evaluate new wild turkey population estimation methods and models for use in Vermont.
- 1.5 Evaluate the use of a public Internet survey to assess winter flock sightings.

**ISSUE 2. Public Satisfaction with Current Population Levels**

**GOAL: Assess public and hunter satisfaction with current turkey population levels and management program.**

Respondents to a 2007 public opinion survey were asked their opinion about wild turkey population levels around the state. The majority of Vermonters (60%) were satisfied with the turkey population in their county; 15% wanted more turkeys, 10% wanted fewer turkeys, and 15% had no opinion. In an effort to gauge the current level of satisfaction among Vermont’s turkey hunters, the Department asked survey participants: “How satisfied are you with your wild turkey hunting experience in Vermont over the past five years?” Ninety-two percent (92%) of the respondents indicated that they were either “Very Satisfied” or “Somewhat Satisfied” with their hunting experience in Vermont. This level of satisfaction for turkey hunting was higher than any other big game species and 16% higher than the opinion survey taken in 1998. The complete results of this question are reported in Table 5.1.

**Management Strategies**

- 2.1 Provide statewide spring bearded-bird-only seasons (including the Youth and regular May season) and limited fall either-sex hunting seasons in WMUs that can sustain a fall harvest so as to provide for population stability.
- 2.2 Prioritize high quality spring hunting over additional fall harvest opportunity.
- 2.3 Manage fall turkey harvests through changes in fall hunting season length within WMUs depending upon stability or growth of three-year average spring harvest densities, except in WMU A Champlain Islands where inadequate forest cover exists to sustain a fall firearm harvest.

**ISSUE 3. Fall Turkey Hunting**

**GOAL: To provide appropriate opportunity for sustainable fall hunting while maintaining current levels of high quality spring turkey hunting.**

The topic of fall turkey hunting is perhaps one of the most misunderstood facets of turkey management in Vermont and generates the most comments from the hunting community. While there is inherent variation in both annual production and survival of wild turkeys, fall either-sex hunting can play a pivotal role in regulating population size. Research on wild turkeys and population modeling in several other states indicates that significant fall hunting pressure can suppress turkey population growth and reduce spring population densities. Although the effects of spring turkey hunting may not be entirely benign due to potential nest disturbance, illegal harvesting of hens, and effects on age structure of male turkeys, fall turkey hunting can have a much more profound impact on turkey populations. Vermont’s experience with fall turkey hunting in Grand Isle and Franklin counties in the mid-1980s demonstrated how quickly heavy fall harvests can reduce turkey populations. This is the principal reason that the current fall season bag limit and season length is less in zones with lower turkey densities. In some cases these limits are more conservative than some hunters would prefer.

The Department supports the management practice of using fall hunting zones to regulate turkey populations in areas having the best turkey habitat and highest densities for the following reasons:

- *Fall wild turkey seasons impact turkey populations by primarily removing female turkeys.* Sixty-five to 70% of Vermont’s fall harvest consists of female turkeys. This large

**Table 5.1 2007 Hunter Satisfaction Survey Results**

Satisfaction level	Percent of respondents
Very satisfied	57%
Somewhat satisfied	35%
Neither satisfied nor dissatisfied	0%
Somewhat dissatisfied	7%
Very dissatisfied	1%

female fall harvest reduces the number of hens nesting the following spring. Fall harvests of hens followed by a severe winter and/or poor reproduction the following spring can quickly change the abundance of turkeys — thus fall hunting in this situation can only add to the mortality rate.

- ***The illegal harvest of female turkeys may be more of a factor in the fall season when entire broods are vulnerable to harvest.*** Several states have documented higher illegal take during the fall season.
- ***Turkeys in Vermont are living at the northern fringe of their continental range and are more vulnerable to natural mortality from severe winters and cold, wet springs.*** Severe winters can result in substantial population losses and depress spring reproductive success. While Vermont can experience severe winter conditions throughout the state, this factor is especially significant in the more northerly and higher elevation wildlife management units. The harvest of female turkeys can be additive to these natural mortalities.
- ***The regulatory process does not allow for timely changes to the fall hunting season in response to annual fluctuations in turkey productivity.*** Changing harvest regulations via the mandatory, Administrative Procedures Act is a very deliberative, lengthy process. The time frame for developing a change in turkey regulations, from preparing a proposed rule until final adoption of the rule, requires approximately 18 to 22 weeks. This severely limits the Department's ability to respond quickly to significant increases or decreases in poult production or survival. This also requires the Department to be conservative when proposing harvest regulations.

When asked in the 2007 opinion survey, the majority of turkey hunters (68%) support the current management strategy to limit fall turkey hunting for the purpose of maximizing spring turkey

harvests. Although this indicates strong support for the current approach, there may be opportunities to systematically enhance/expand fall turkey hunting without compromising the goal of providing quality spring turkey hunting in Vermont.

### Management Strategies

- 3.1 Provide public opportunity to harvest wild turkey for food and other utilitarian purposes.
- 3.2 Facilitate healthy, abundant spring turkey populations that are stable using modest, fall hunting seasons/bag limits to control the population. When the three-year spring average harvest density reaches the specific threshold value, liberalization of fall hunting in a WMU may be called for (initiate shotgun seasons, extend gun seasons). See Table 5.2.
- 3.3 Consider reducing the current guideline for the threshold as to when fall gun hunting opportunities could be initiated in a new WMU, from the three-year average spring harvest density of one bird per square mile, to an average harvest density of .75 bird per square mile.
- 3.4 Lengthen the current fall seven-day shotgun season to a nine-day season.
- 3.5 Expand the fall shotgun season to include WMUs H1, D1, and B with a nine-day shotgun season.
- 3.6 Expand the fall archery turkey season, coinciding with the opening of the deer archery season, to allow archery hunting statewide.
- 3.7 Investigate establishing a new separate "Fall Gun Season Only" tag.



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Table 5.2 Spring Wild Turkey Harvest 1998-2008

WMU	Spring Harvest per Square Mile											3-year Average
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2006-08
A	1.10	1.57	1.86	1.90	1.62	3.33	2.76	2.38	2.86	3.19	3.10	<b>3.05</b>
B				0.28	0.37	0.25	0.43	0.59	0.83	0.84	1.32	<b>1.00</b>
C							0.20	0.25	0.39	0.29	0.49	<b>0.39</b>
D-1				0.34	0.37	0.23	0.39	0.56	0.70	0.54	0.99	<b>0.74</b>
D-2				0.36	0.44	0.25	0.35	0.53	0.60	0.53	0.65	<b>0.59</b>
E	0.01	0.03	0.02	0.04	0.08	0.05	0.17	0.25	0.27	0.20	0.28	<b>0.25</b>
F-1	2.14	2.90	3.59	3.92	4.14	3.50	3.40	3.36	3.14	3.78	2.61	<b>3.18</b>
F-2	1.73	1.55	2.76	2.64	2.34	2.02	2.12	2.04	1.99	1.80	1.57	<b>1.79</b>
G	0.10	0.18	0.26	0.21	0.25	0.16	0.32	0.29	0.35	0.37	0.40	<b>0.37</b>
H-1	0.11	0.41	0.60	0.63	0.80	0.52	0.60	0.79	0.77	0.68	0.85	<b>0.77</b>
H-2	0.58	0.78	1.24	1.03	1.64	1.37	1.37	1.56	1.16	1.40	1.78	<b>1.45</b>
I	0.17	0.19	0.24	0.24	0.30	0.20	0.23	0.25	0.24	0.24	0.20	<b>0.23</b>
J-1	0.49	0.46	0.74	0.85	0.84	0.64	0.78	0.81	0.60	0.90	0.86	<b>0.79</b>
J-2	0.41	0.67	0.63	0.83	0.78	0.54	0.74	0.78	0.67	0.83	0.66	<b>0.72</b>
K-1	1.29	1.96	1.95	2.00	1.85	1.70	1.09	1.08	1.42	1.34	1.28	<b>1.35</b>
K-2	1.43	1.66	1.74	2.02	1.35	1.50	1.33	1.49	1.34	1.50	1.30	<b>1.38</b>
L	0.11	0.21	0.25	0.33	0.25	0.21	0.15	0.28	0.26	0.28	0.30	<b>0.28</b>
M-1	0.23	0.31	0.41	0.34	0.23	0.26	0.17	0.36	0.27	0.47	0.42	<b>0.39</b>
M-2	0.53	0.62	0.87	0.86	0.65	0.65	0.51	0.77	0.75	0.88	1.08	<b>0.90</b>
N	0.92	1.01	1.24	1.47	0.92	0.91	0.67	0.79	0.91	0.97	1.09	<b>0.99</b>
O-1	0.21	0.19	0.34	0.44	0.27	0.33	0.21	0.41	0.31	0.44	0.45	<b>0.40</b>
O-2	0.58	0.77	0.61	0.91	0.75	0.75	0.49	0.72	0.75	0.84	0.93	<b>0.84</b>
P	0.12	0.14	0.15	0.16	0.17	0.13	0.10	0.17	0.15	0.21	0.25	<b>0.20</b>
Q	0.40	0.53	0.34	0.40	0.44	0.44	0.43	0.50	0.50	0.59	0.50	<b>0.53</b>

**ISSUE 4. Wild Turkey/Human Conflicts**

**GOAL:** To minimize and manage agricultural damage and nuisance turkey incidents.

Some wild turkey nuisance complaints and/or negative interactions with the public are unavoidable. While complaints have increased in recent years as the turkey population has grown, the annual number of complaints is relatively low compared with those for black bear and white-tailed deer.

The majority of the nuisance wild turkey complaints stem from turkeys' consumption or spoilage of silage or other stored crops. This situation often occurs when deep snow limits turkey mobility and restricts the birds' access to natural foods. Extreme weather creates intense stress on wild turkey populations whose fall food supplies become buried under snow at the same time that cold temperatures cause fat reserves to dwindle. Wild turkeys have a strong survival instinct that leads large winter flocks to exploit a convenient high calorie agricultural crop. Given this natural survival instinct, it is difficult to discourage them, especially once birds have established a pattern of regular feeding around a farm. While fall hunting may reduce the numbers of

offending birds to some degree, it will not solve this problem.

Farmers can protect silage in exposed bunkers by periodically placing waste silage close to the forest where turkeys are taking shelter. By starting this early before turkeys become accustomed to going to the bunker, the birds may be diverted to a food source that has little value to the farmer.

Dairy farmers have expressed concerns regarding potential transmission of diseases to their livestock from turkey feeding/defecation in feed bunkers. Vermont, New Hampshire, and Minnesota have conducted numerous investigations involving disease testing of local wild turkey flocks and, to date, have found no evidence of the presence of Salmonella DT 104 bacteria in these birds. Thus, farmers' concerns for disease transmission between wild turkeys and dairy cows appear to be unwarranted.

A turkey damage control regulation has been promulgated as another method to help address the nuisance issue. Under the "turkey damage rule," a landowner under game warden supervision may take a pre-approved number of offending turkeys that have been determined to have caused repeated or substantial damage to cultivated crops. The use of lethal control by shooting is normally considered to be the last option. With the assistance of a game warden, Department biologists, and U.S. Department of Agriculture's Wildlife Services personnel, other control methods such as hazing and/or fencing are attempted first. Frequently, complaints can be handled simply by providing technical or management assistance over the phone to educate landowners regarding turkey behavior and methods to change problem behavior.

Local National Wild Turkey Federation (NWTF) members can assist in quelling wild turkey/human conflicts. It is possible, given the demographic shift from farming to increased rural development, that nonagricultural nuisance complaints may increase in the near future. With this in mind, the Department will continue to adapt its approach to fit the issue.

**Management Strategies**

4.1 Provide property owners with access to coordinated services of personnel trained to deal with nuisance turkey issues including wildlife biologists, game wardens, and USDA Wildlife Services staff to assist with nuisance complaints

via technical guidance/assistance on techniques to minimize/discourage damage.

4.2 Conduct follow-up site visits to nuisance complaint sites when necessary and provide hazing equipment to help ameliorate persistent nuisance situations.

4.3 Solicit assistance from local volunteers through the Vermont Chapter of the National Wildlife Turkey Federation (NWTF) to help provide on-the-ground assistance to landowners via hazing and behavior modification efforts.

4.4 Assist USDA Wildlife Services staff with development of educational materials to inform and educate farmers about techniques for minimizing conflicts.

4.5 Compile and evaluate wild turkey damage complaint reports from farmers, state game wardens, biologists and wildlife service personnel to document problems, management approaches and results.

4.6 Develop/modify a standard set of protocols/guidelines/solutions to perceived and actual conflicts caused by wild turkeys (nuisance animals, agricultural damage).

**ISSUE 5. Turkey Habitat Management and Conservation**

**GOAL: To encourage conservation and appropriate habitat management practices to support and sustain Vermont's wild turkey population.**

Habitat quality and quantity are necessary to achieve wild turkey management goals. Land use changes that convert habitat to a lower quality or result in permanent habitat loss diminish its ability to sustain healthy, abundant turkey populations.

**Management Strategies**

5.1 Continue efforts on wildlife management areas and other public lands to provide habitat demonstration areas to promote appropriate commercial and noncommercial vegetation management practices beneficial to turkeys and other wildlife. This includes the use of prescribed fire and other management practices to establish and maintain long-term mast production areas.

5.2 Provide technical information and assistance regarding turkey habitat management to private





landowners and other land managers, town planning commissions via staff biologists, habitat demonstration projects, LIP and WHIP program lands, etc.

- 5.3 Update the “A Landowner’s Guide, Wildlife Habitat Management for Vermont Woodlands” and make it available on the Department’s website and in published form.
- 5.4 Work with the NWTf regional biologists and chapter volunteers on development of the North American Wild Turkey Management Plan.
- 5.5 Work with partnering organizations on high priority projects and issues.

**ISSUE 6. Perception Regarding the Interaction Between Deer and Wild Turkeys, Ruffed Grouse and Wild Turkeys, and Various Predators and Wild Turkeys**

**GOAL:** To improve the public’s knowledge, awareness, and understanding of the role of the wild turkey and its interactions within the ecosystem.

While the number of wild turkeys has increased dramatically throughout Vermont over the last decade, ruffed grouse and deer have at times declined in abundance. This leads some hunters to assume that turkeys could somehow be having a negative impact upon these other popular species. Some hunters believe that turkeys are eating more and more of the available food. However, biologists throughout the range where these species overlap believe that changes in deer or grouse numbers have nothing to do with the size of the turkey population. The factors limiting survival and populations of deer and grouse

are different than those limiting turkeys. Although the effects of winter severity can limit all three species, their effects vary by species. In winter, deer require softwood cover and woody browse. Turkeys don’t eat woody browse. While the formation of crusts on the snow surface can trap or prevent grouse from burrowing below the snow’s surface, crusts make it easy for turkeys to get around in search of food.

Through all the restoration efforts and the tremendous population growth there have been no documented reports of wild turkeys having any negative impact on other wildlife or threatened or endangered species. Because of their general and opportunistic feeding habits and adaptability, the wild turkey seems to be able to find a noncompetitive niche in which to survive regardless of the other species found in the area. One researcher noted that turkeys “usually have filled a vacant environmental niche wherever they have been introduced and no significant environmental problem has been attributed to them.” (Wunz 1992, National Wild Turkey Federation 2001).

**DEER AND WILD TURKEYS**

The most common concern expressed regarding turkeys competing with deer is that they out-compete deer for hard mast such as acorns or beech nuts. While it’s true that both deer and turkeys feed more on mast during years of mast abundance, but so do bears, squirrels, grouse, blue jays, and numerous small mammal species. Of these, turkeys may leave the most obvious evidence of feeding due to their scratching, but it’s highly unlikely that the birds consume mast to the detriment of deer. Autumn is the period of greatest wild food abundance. Wild apples, corn and other agricultural crops, grasses and forbs, berries and seeds of all kinds are used by both turkeys and deer and many other animals. In fact, a Pennsylvanian researcher used fencing to determine that of all species feeding on red oak acorns, deer actually obtain the greatest proportion of mast. Regarding beech mast, a Michigan researcher (Rosemier et al. 2005) found that in non-mast years, rodents actually consume most of the beechnuts. Considering the fact that only two 150 pound deer (300 lbs) equal the biomass of a flock of about 30 juvenile turkeys (or 15 large adults), it is easy to see how a few deer could easily consume considerably most of the mast crop.

While high turkey densities are believed to have no significant negative impact upon deer populations,

high deer densities do have a harmful impact upon turkeys, ruffed grouse, and other forest birds because excessive browsing of shrubs reduces protective cover, food sources, and nesting sites (Witmer and DeCalesta 1991).

### RUFFED GROUSE AND WILD TURKEYS

**D**an Dessecker, a forest biologist with the Ruffed Grouse Society, points out that “In order for increasing wild turkey populations to be able to exert a direct negative influence on local ruffed grouse, there would have to be some form of competition” (Dessecker 1996). This competition would be expected to focus on some limited resource, such as space, food, breeding areas, nesting sites, or some other resource. Dessecker notes that it’s highly doubtful that these two species compete for any limited resource. Ruffed grouse thrive in dense young forest stands. Turkeys prefer relatively open mature forests.

Regarding breeding areas, grouse drum on logs surrounded by dense shrubs, and turkey gobblers display in fields or forest openings. Although hens of both species nest in middle-aged or mature forest, their nest site requirements are quite general with both species using a wide range of sites that are found throughout forests. Again, it is very unlikely that there is limited space and competition for nest sites.

Research has shown that wild turkeys do not affect other bird species by eating young birds or destroying nests. Dr. Bill Palmer, a game bird biologist in Florida, used micro-video cameras and radio-tagged hens to monitor more than 400 quail nests and broods in an area with very high turkey populations (30-60 turkeys per square mile). The research did not record a single turkey destroying a nest or eating or killing a quail chick (Zimmer 2002). Gary Zimmer, another Ruffed Grouse Society forest biologist, points out that young grouse can fly well at only three weeks of age. When threatened the brood flushes in all directions to find cover and hide. That would make it nearly impossible for a turkey, with its poor sense of smell, to locate and harm grouse chicks (Zimmer 2002).

Competition for food is also not likely to be significant between turkeys and ruffed grouse. Both birds are generalists, in that they feed on an extremely wide variety of foods throughout the year. During winter, the most stressful period when food resources are most scarce, turkeys and grouse typically use different food sources (Whitaker 1998).



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Ruffed grouse feed on the buds of trees and shrubs. Dessecker notes that turkeys are heavy birds that can only stand on stout tree limbs, so they prefer to feed on the ground on waste grains, acorns and beechnuts, and residual fruits and seeds, such as highbush cranberry, burdock, and ash seeds.

Dave Neu, a regional biologist for the National Wild Turkey Federation, states, “Ruffed grouse and wild turkey are two species that have evolved together for thousands of years and their habitats slightly overlap. There is no documented evidence that either species directly impacts populations of the other” (Zimmer 2002). Although turkey populations have increased while grouse have decreased in some portions of Vermont, the population changes are mainly due to changes in agriculture and forest habitat. As young forests mature, the habitat becomes more suitable for turkeys and less attractive to grouse. Thus, populations of both species birds respond to changing habitat conditions rather than turkeys displacing grouse. Gary Zimmer stated it best when he said that “Any impact caused to ruffed grouse populations by turkeys is insignificant compared to declines in young-forest habitats...” (Zimmer 2002).

### PREDATORS AND WILD TURKEYS

**D**epartment personnel are often asked why they don’t promote a bounty on coyotes or some other form of predator control to “protect” wild turkeys or other game species. It is well established that predator “control” will not protect wild turkeys. Predator/prey relationships are extremely dynamic and complex. These relationships involve a variety of factors that defy a simple, quick fix. Wild turkeys are prey to a long list of predators including coyotes, bobcats, foxes, fisher, weasels, skunks, opossum, raccoons, snakes, hawks, owls, domestic dogs,





and humans. In the case of implementing “coyote control,” for example, assuming that this could be effective, removal of coyotes would only reduce competition among the remaining host of predators that would continue to prey on turkeys. Coyotes, in fact, prey upon weasels, opossums, raccoons, foxes, and rarely skunks. All of these species are effective predators of nests, chicks, and nesting turkey hens. For this reason, it is possible that removal of coyotes could allow the populations of these other predators to increase resulting in more, not less, turkey predation and an overall decrease in a turkey population. Complex species relationships are common in nature. In fact, the rapid growth in Vermont’s turkey population has occurred during a time when the coyote population has been abundant.

Many of the qualities that hunters admire so much about these birds, such as their incredible eyesight, ability to detect movement and wariness, are products of the turkey’s long evolutionary history that they share with their predators. As wild turkey populations increase, the potential role of this species as a significant source of prey for other Vermont animals may now be greater than ever before.

**Management Strategies**

6.1 Promote sound scientific principles regarding inter-species competition and predator-prey relationships through a variety of outreach methods including public speaking events, web-based information and links, and print and broadcast media.

**ISSUE 7. Developing and Maintaining an Informed Public is Crucial to the Management Success of the Wild Turkey Project.**

**GOAL: To ensure continued information exchange and program acceptance by keeping the general public, state and federal agencies informed on the status of the wild turkey resource in Vermont.**

Habitat conservation and public use of the turkey resource are best accomplished when citizens are well-informed. Understanding the public’s opinion regarding turkey biology, habitat, and management issues is important in making acceptable management decisions.

**Management Strategies**

- 7.1 Disseminate wild turkey project information to the public/media professionals via biological reporting stations, teacher workshops, private and public landowner visits/conferences, slide/video presentations, mail correspondence, popular and technical reports, etc.
- 7.2 Use the Department’s library to fill all public requests for its video production “The Wild Turkey in Vermont” as well as its wildlife study guide “The Wild Turkey Education Kit.”
- 7.3 Continue involvement with standing professional committees, regulatory bodies and cooperative agreements with nongovernmental organizations to assist the Department with meeting the goals and objectives of this plan.

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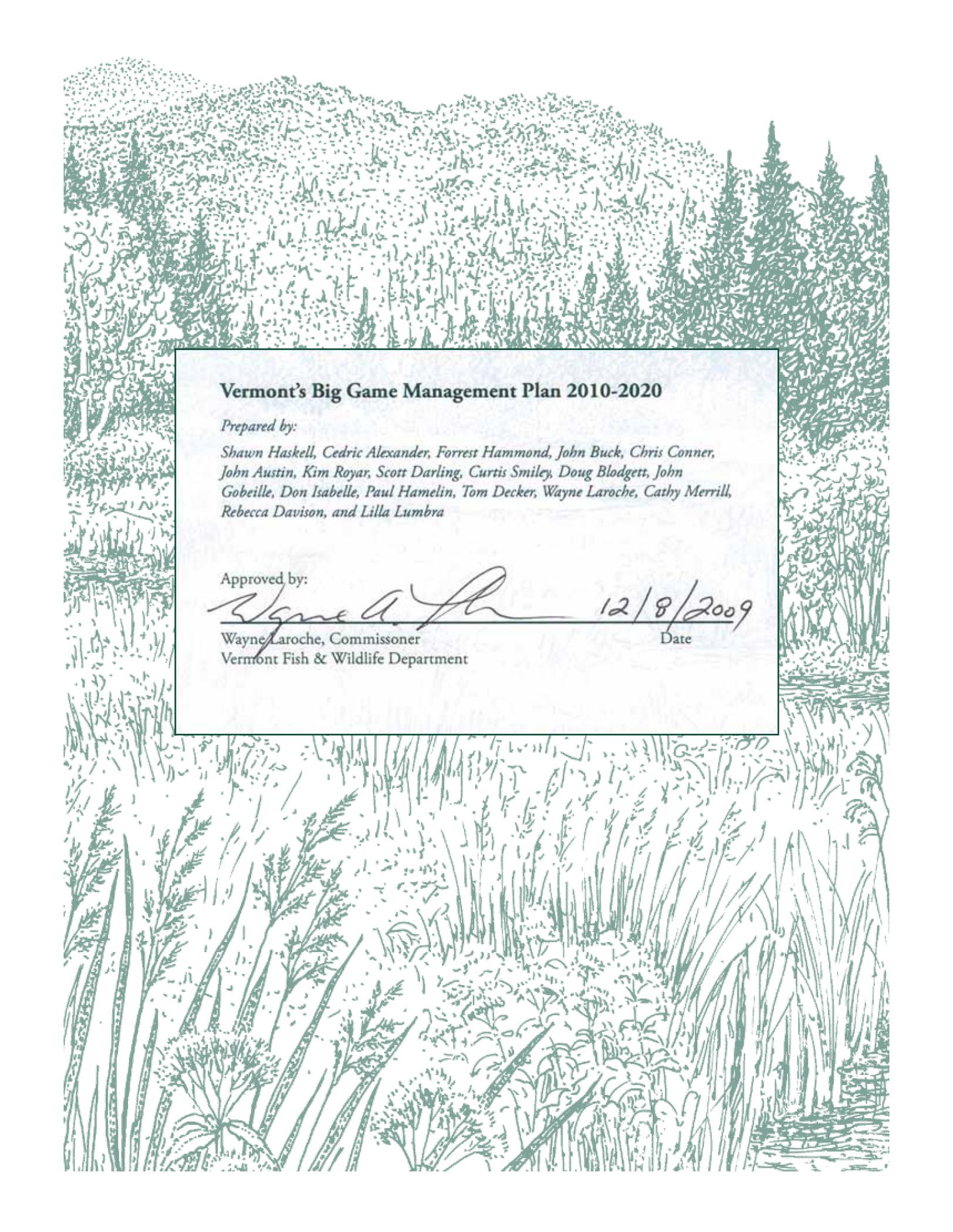
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## Vermont's Big Game Management Plan 2010-2020

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