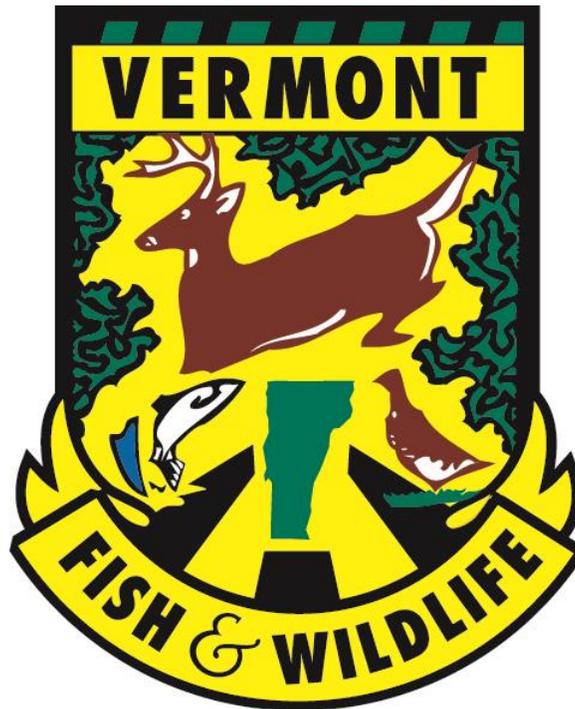


Deer Management Rule Change Recommendation

to the
Vermont Fish and Wildlife Board

March 20, 2019



Vermont Fish and Wildlife Department
Agency of Natural Resources
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Background

Periodic changes to hunting regulations are necessary as new issues arise or conditions change. Hunter numbers have been and continue to decline, average age of hunters is getting older, deer numbers and distribution change, winter mortality is less significant as winters become shorter and milder, and the desires of hunters and the general public change. Except for the archery season extension in 2016, no alterations to the timing or structure of Vermont's deer hunting seasons have occurred since 2002, and no changes to seasons other than the youth season have occurred since the late 1980s. There have been additional tweaks to hunting regulations, including establishment of the antler point restriction in 2005, repeated changes to bag limits, various changes to regulations regarding the harvest of antlerless deer, and many others. Vermont's current deer hunting seasons and regulations are the result of these and many other small changes over time, nearly all of which were driven by hunter interest in expanded hunting opportunities.

In early 2013, the Department, in collaboration with the Board, embarked on a comprehensive review of all Vermont deer hunting regulations and potential hunting opportunities. This initiative was partly due to the Board and Department receiving a variety of petitions to change current hunting seasons and regulations (including petitions for a longer archery season, special flintlock season, early muzzleloader hunting, reduced bag limits, and alterations to the antler point restriction). Rather than continue the piecemeal approach, the Department and Board decided that a comprehensive evaluation of current and potential management approaches would be more effective. This evaluation was a means to assess how hunting regulations can best meet the desires of hunters and the general public, while simultaneously ensuring that the Department can achieve deer management objectives.

During phase I, the Department and Board conducted several surveys and public involvement activities. Department staff also began an analysis of the current antler point restriction, which raised some concerns regarding antler development in Vermont's bucks. In April 2015, the Board approved a set of regulation changes and agreed to a three-year evaluation of the effects of those changes along with further evaluation of remaining issues.

Phase II of the Comprehensive Deer Management Evaluation assessed the effects of regulation changes passed in 2015, reviewed options for changes to season timing and structure, and further evaluated the effects of the antler restriction on buck age structure and antler development. The results of this evaluation, as well as evolving deer management and hunter recruitment and retention concerns are the basis for this proposal.

The proposed changes are broad and substantial, and some of them are integrally related. These changes and the overall deer season structure should be considered collectively, as each hunting season influences the other seasons, and each proposed change affects other proposed changes to some degree. This package is intended to provide a quality hunting experience for as many hunters as possible while allowing for more effective deer management.

Goals

The primary goals of these proposed changes are to maximize hunter satisfaction and improve the Department's ability to manage the deer herd and maintain a healthy deer population.

Maximize Hunter Satisfaction

This proposal aims to maximize hunter satisfaction by providing additional hunting opportunity, improving management of buck age structure, and providing additional deer harvest opportunities.

- Longer seasons allow hunters to spend more time afield, which is the primary driver of hunter satisfaction in Vermont. The proposed changes provide additional hunting opportunity for many hunters in a way that will not negatively affect the deer population or other hunters' opportunity.
- Regulations that are simple and easily understandable reduce barriers to participation and increase acceptance and compliance. Some of the proposed changes are inherently more complex than existing regulations, but we have attempted to make them as simple as possible.
- Opportunities to see and harvest bucks, particularly older, larger-antlered bucks, are important drivers of hunter satisfaction. The proposed changes will improve our ability to manage for older bucks without unnecessarily impacting buck harvest opportunities.
- Opportunity to see and harvest any deer is also an important driver of hunter satisfaction. The proposed changes provide additional antlerless deer harvest opportunities, which will increase some hunters chance of harvesting a deer and improve management of locally abundant deer. This also helps minimize unnecessary impacts on lower density rural deer populations as antlerless harvest will be more targeted.

Improve Management of the Deer Herd

This proposal aims to improve the Department's ability to achieve WMU-specific deer density objectives and buck population age structure objectives that will be established in the 2020-2030 Big Game Management Plan.

- Adequate antlerless harvests are critical for effective deer management. The proposed changes increase our ability to harvest more antlerless deer when and where it is necessary, while maintaining the ability to limit antlerless harvest when appropriate.
- There are substantial regional differences in deer habitat, deer density, hunting pressure, and winter severity across Vermont. As a result, a one-size-fits-all approach to buck age structure management can be unnecessarily restrictive in some areas and ineffective in others. The proposed changes allow for different approaches in different regions to more effectively manage for older bucks.

Summary of Proposed Changes

Buck Age Structure Management

1. One Buck Annual Limit

- Reduces buck harvest rate
- Maintains buck age structure in some WMUs without the need for an antler restriction

2. Regional Antler Point Restriction

- Allows management approach to reflect regional differences in deer density, hunting pressure, habitat, winter severity, etc.

Archery Season

3. Extension

- Early October thru muzzleloader season
- Archery hunters are impacted by the one buck limit
- Provides additional opportunity to harvest antlerless deer

4. Establish Expanded Archery Zones

- Developed areas or pockets of high deer density
- Season starts September 15
- Helps address areas with many deer-human conflicts

5. Allow Crossbows for All Ages

- May increase recruitment of archery hunters
- Increases participation among existing hunters

New Seasons

6. Establish an Antlerless Season

- 4 days, Thursday-Sunday, 2 weeks before rifle season
- Limited to muzzleloader hunters with a lottery antlerless permit
- Helps achieve antlerless harvest objectives

7. Establish a Novice Season

- Allows new adult hunters to hunt during youth season for one year
- Expect 200-250 hunters each year and no impact on the deer harvest

Youth Season

8. Move youth season to late October

- Still provides youths the first opportunity with a firearm
- Provides more favorable weather conditions

Bag Limits

9. Change the Annual Bag Limit

- Annual limit of 4 deer, one of which can be a legal buck

2020 Season Calendar with Proposed Changes

September

		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	Expanded Archery			25	26
27	28	29	30			

October

				1	2	3
4	5	6	7	8	9	10
			Archery			
11	12	13	14	15	16	17
			Archery			
18	19	20	21	22	23	24
			Archery			Youth/ Novice
25	26	27	28	29	30	31
Youth/ Novice				Antlerless		

November

1	2	3	4	5	6	7
		Archery				
8	9	10	11	12	13	14
			Archery			
15	16	17	18	19	20	21
			Rifle			
22	23	24	25	26	27	28
			Rifle			
29	30					

December

		1	2	3	4	5
			Archery			
6	7	8	9	10	11	12
		Muzzleloader				
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

*Crosshatched areas represent new hunting opportunities

Related Changes

Several of the changes proposed here are related and cannot be considered separately. These include:

- The one buck annual limit and regional APR are intended to work together to achieve buck age structure goals. A one buck annual limit is unnecessary in many WMUs if the APR is continued, but if the APR is removed the one buck limit is necessary to achieve buck age structure goals.
- The archery season extension would not be appropriate without the one buck annual limit, as it would increase the buck harvest and reduce our ability to achieve buck age structure goals. Without the extension, the one buck limit would have an undue impact on the archery season.
- The antlerless season is a critical element of the proposal. Not only does it provide a needed tool to improve the effectiveness of our deer population management, but it also improves the effectiveness of buck age structure management by allowing more hunters to harvest an antlerless deer for meat prior to the rifle season.

Buck Age Structure Management

The 2018 Big Game Survey found that 74% of Vermont hunters are interested in managing for older, larger deer. Further, the most important drivers of hunter satisfaction, after “just going deer hunting,” were “harvesting an older, larger-antlered buck” and “the amount of buck sign in the woods.” With strong interest in bucks among Vermont hunters, and relatively high hunting pressure for a northern state with relatively low deer densities, the pressure on our buck population is high. For perspective, we estimate as many as 70,000 active deer hunters in Vermont in 2018 pursuing an estimated 27,000 bucks, or about 2.6 hunters for every buck. For these reasons, it would not be appropriate to completely abandon managing for older bucks.

While the current antler point restriction (APR) is supported by the majority of hunters, it is not the only option for managing buck age structure. The Department also remains concerned about potential negative effects on antler development and overall population fitness resulting from the selective harvest caused by the current APR (for more information on the Department’s evaluation of these concerns, please see the *Comprehensive Deer Management Evaluation Final Report*). Alternative approaches can be more effective at achieving buck age structure goals while simultaneously reducing the potential for negative effects and meeting other population management and hunter satisfaction objectives.

The following changes are recommended to improve our ability to meet buck population age structure goals that will be proposed in the 2020-2030 Big Game Management Plan. Those goals will likely involve maintaining current proportions of older bucks in the population, which can be achieved by ensuring that yearling bucks comprise less than 50% of the total buck harvest.

1. One Buck Annual Limit

The Department recommends reducing the annual limit for antlered bucks from two to one. The intent of this change is to reduce the harvest rate of bucks, thereby allowing more to survive to older age classes. From 2015-2017, 5% of the total buck harvest was a hunter's second buck. More importantly, this regulation will result in many hunters passing opportunities to harvest bucks, particularly younger bucks early in the season, because they do not want to be done buck hunting. It is not clear exactly how much this selectivity could affect the buck harvest, but it is likely to exceed the 5% reduction caused simply by eliminating the harvest of second bucks. Therefore, we expect this change to achieve at least a 10% reduction in the buck harvest rate.

This change will have the greatest impact on hunters who currently hunt during multiple seasons and, therefore, are allowed to harvest multiple bucks. Archery hunters will be particularly impacted, as they will be giving up their opportunity to hunt during the rifle season if they choose to harvest a buck during the archery season. Archers, however, will have a longer hunting season and additional opportunity to harvest antlerless deer.

By providing additional antlerless harvest opportunities prior to rifle season, more hunters will have already harvested a deer (have venison to eat) and may be more willing to not shoot a small buck. This helps reduce the buck harvest rate further, and effectively shifts some hunting pressure from bucks to antlerless deer.

The Department recommends that bucks harvested by youth hunters during youth season or novice hunters during novice season not count toward this annual limit. In 2017, a total of 38 youth hunters harvested a buck in youth season and a buck in another season.

2. Regional Antler Point Restriction

Vermont is a small state, but there are substantial regional differences in deer habitat, deer density, hunting pressure, and winter severity. As a result, the effect of regulations like an antler restriction differs from one region to another. What works in parts of Vermont may be unnecessarily restrictive in some areas and ineffective in others. Therefore, the Department recommends a regional APR where the current APR is maintained in some WMUs, while others would have no APR. The definition of a legal buck in these WMUs would return to "one antler 3 inches or more in length."

No APR is recommended in WMUs where the reduced buck harvest rate caused by the one buck limit will be sufficient to maintain the current buck population age structure. In WMUs where maintaining the current APR is recommended, relatively few bucks currently survive beyond 2 years old. The combination of the APR and a one buck limit will allow more bucks to survive to older age classes.

The following criteria were considered when determining which regulation would work best in each WMU:

Experimental Design Needs

The Department remains concerned about the APR's potential negative effects on antler development and overall fitness of the deer population. It is critical that we continue to evaluate these concerns. A regional APR will allow us to develop a new, robust experimental design to provide better data and new insights in a timely manner.

A major limitation of evaluations to date has been the necessity of comparing youth season data (post-APR) to rifle season data (pre-APR; see *CDME Final Report* for additional detail). These datasets do not appear directly comparable, but it is not clear how or why they are different. A regional APR where comparisons can be made between youth and rifle season harvests in the same years under similar regulations (in WMUs with no APR) and between similar WMUs with different regulations (APR vs. no APR) will provide valuable new insights. For this design to work, it is imperative that some WMUs with moderate-high deer densities and good youth season sample sizes be included in each group.

Buck Harvest Age Composition

The current age composition of the buck harvest is a good indicator of the buck harvest rate (the proportion of all bucks that are harvested by hunters each year) and the proportion of bucks surviving to older age classes. This provides an index of the buck population age structure and whether we are achieving a desired age structure.

Deer Density

Hunters in areas with more deer have a better chance of encountering multiple bucks in a season; therefore, they are less impacted by an antler restriction than hunters in low density areas. Further, in low density areas antlerless harvest opportunities are limited, so harvesting a buck is many hunters only opportunity to harvest a deer.

Hunting Pressure

Hunting pressure (hunters per square mile) affects the buck harvest rate. Antler restrictions have the greatest potential impact in areas with high hunting pressure because it's more difficult for a buck to avoid hunters in these areas. Conversely, in areas of low hunting pressure a one buck limit may be sufficient because most bucks would only need to be passed once, if at all, to survive the season.

Deer Habitat Composition

The proportion of deer habitat in a WMU that is forested was used as an index of how vulnerable deer are to hunters. Hunters are more effective in areas with more open habitats (less forest) because cover and travel routes for deer are limited, and the open areas allow hunters to see and harvest deer at greater distances.

Winter Severity

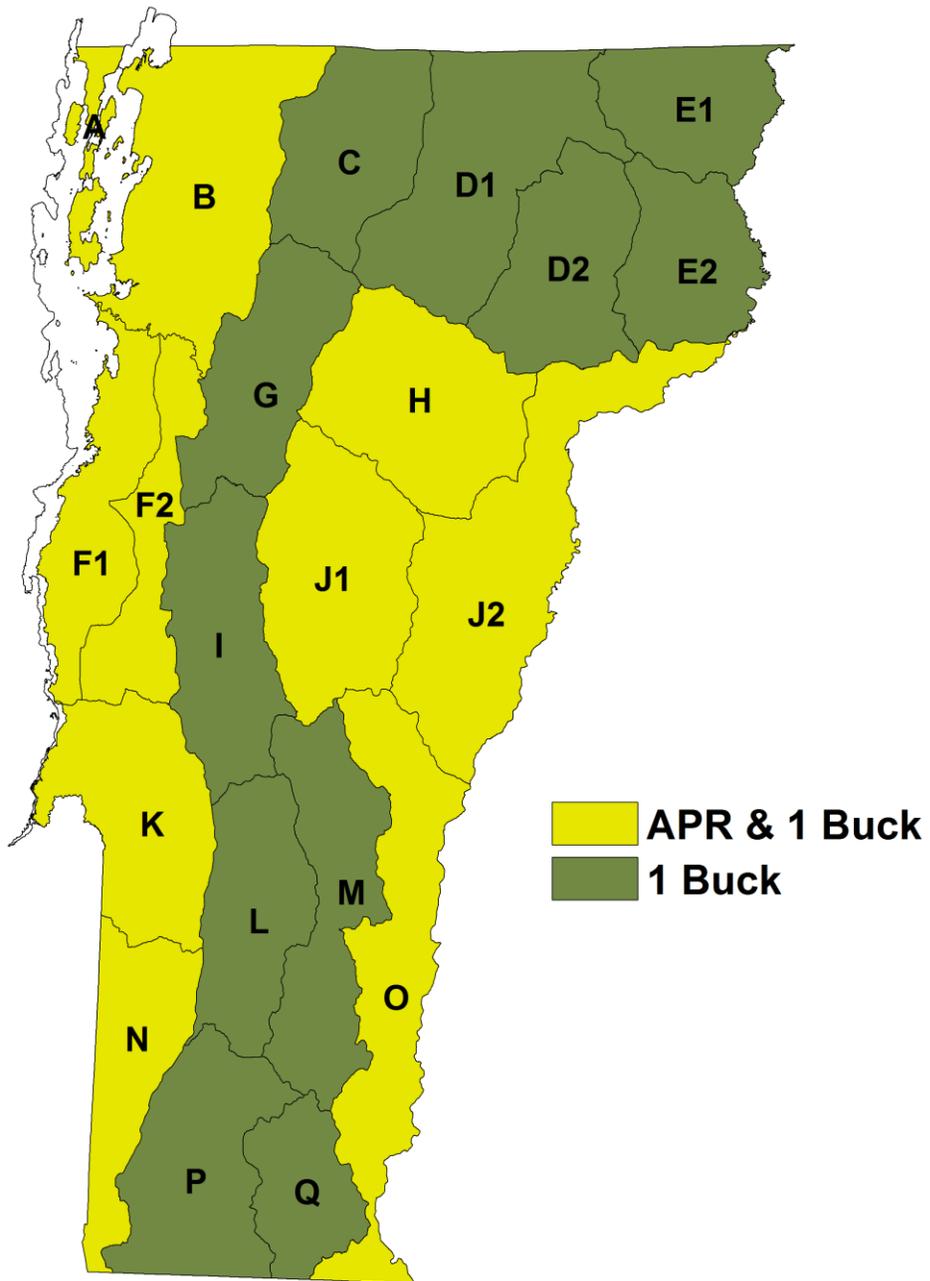
Winter severity affects the proportion of deer that die outside of the hunting seasons. In areas with more-severe winters, fewer deer will survive from one hunting season to the next. Therefore, antler restrictions will be less effective in these areas because many of the deer that were spared from hunters will subsequently die during the winter.

Geographic Simplicity

A regional approach is inherently complex, and rifle season hunters in Vermont have never had to worry about which WMU they were hunting in, unless they were reporting a deer. To minimize potential confusion and law enforcement challenges, WMUs with the same regulation should be clustered as much as possible.

Based on these criteria, the Department recommends the following buck age structure management strategies for the following WMUs:

Wildlife Management Units	BASM Strategies
A, B, F1, F2, H, J1, J2, K, N, and O	Maintain Current APR & 1 Buck Annual Limit
C, D1, D2, E1, E2, G, I, L, M, P, and Q	1 Buck Annual Limit



Archery Season

3. Extend Archery Season

The Department recommends extending the archery season so that it runs from October 1st through December 15th, except is closed during the regular rifle season. This extension would provide additional hunting opportunity, counteract impacts to this season resulting from a one buck limit, and help to manage locally overabundant deer.

This extension will allow archers to hunt during the rut, when bucks are more active, thereby providing a more desirable hunting experience. While bucks may be more vulnerable during this period, this is not expected to result in an increased buck harvest with a one buck annual limit in place. Based on the effects of the 5-day archery season extension that took effect in 2016 and experiences in other states, this extension is not expected to result in increased hunter effort. Instead, existing effort will be spread out over the longer season.

Importantly, a longer season, in concert with a one buck limit, should maintain or slightly increase the archery antlerless harvest. Because archery hunters tend to hunt in areas with higher deer densities, the antlerless harvest during this season comes from the areas where it is most needed. Archers are also more effective at harvesting deer in more developed landscapes where firearm hunting is prohibited by local ordinances, less tolerated by the public, or simply not the experience most hunters are looking for. Thus, maintaining and promoting the harvest of antlerless deer during the archery season is, and will continue to be, a key component of deer management in Vermont.

The Department recommends that the season start October 1st and run through December 15th but is closed during the regular rifle season (see calendar). This adds two weeks of archery hunting prior to rifle season, 5 days between rifle and muzzleloader season, and a couple days at the beginning and/or end of the season. The Department recommends antlerless deer harvest be allowed during the entire archery season. The closure during the regular rifle season is intended to avoid antlerless harvest at that time and minimize law enforcement challenges. Hunters will continue to be able use archery equipment during the rifle season but will need to follow rifle season regulations.

4. Establish Expanded Archery Zones

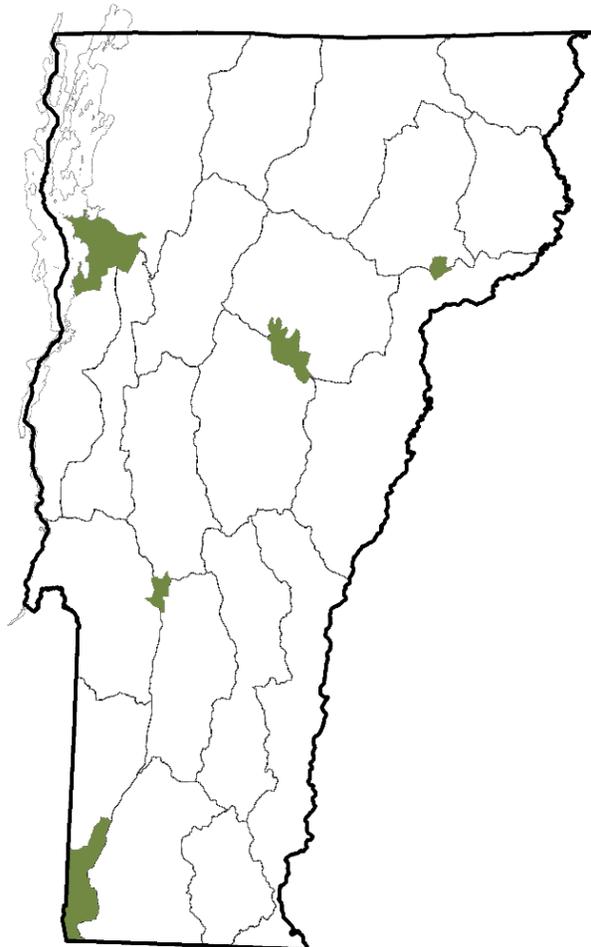
The Department recommends establishing Expanded Archery Zones in select areas where deer are overabundant or at risk of becoming overabundant and where firearm hunting is limited by regulation or development or is otherwise unable to achieve antlerless harvest objectives (primarily suburban and exurban areas around major cities and towns). Within these zones, the archery season would start September 15 (see calendar) and be limited to antlerless deer only until October 1, when the regular archery season started. Hunters would use their regular archery tags when hunting in these zones.

The intent of this approach is to encourage additional archery antlerless harvest (or at least concentrate existing antlerless harvest) in these areas. By starting the season earlier, hunters who wish to hunt at that time will be directed to these areas. Overall, increases in the antlerless harvest in these zones as a result of these expanded opportunities are likely to be modest; however, it will be critical for effectively managing deer abundance in these areas.

Expanded archery zones would be bounded by public roadways, and detailed maps of each zone will be published annually. Outreach to affected communities and participating hunters will be necessary for this approach to be effective.

No expanded archery zones are being proposed at this time. Initial proposed zones could include the following:

- Greater Burlington Area
- Barre-Montpelier Area
- Part of the Town of St. Johnsbury
- Parts of Rutland City and Rutland Town
- Bennington Area



5. Allow Crossbows for All Ages

The Department recommends allowing all hunters to use crossbows any time a vertical bow can be used. The exact impact of this change on the archery harvest will depend on the level of adoption by hunters currently using vertical bows. It will likely result in a small increase in the archery harvest due to greater success rates with crossbows; however, any increase in the buck harvest should be counteracted by the one buck annual limit. An increase in the archery antlerless harvest is generally desirable. It is not clear whether liberalization of crossbow use will facilitate recruitment of new archery hunters, but it did increase participation by older hunters.

New Seasons

6. Establish an Antlerless Season

Antlerless permit fill rates during the muzzleloader season have been slowly declining, averaging about 15% in recent years. As a result, the Department needs to recommend additional permits to harvest the desired number of antlerless deer. Currently, the number of permits required to achieve harvest objectives often exceeds the number of muzzleloader hunters in some WMUs. Increasing permit fill rates would reduce the number of permits required to achieve antlerless harvest objectives.

To increase the antlerless permit fill rate and provide additional hunting opportunity, the Department recommends establishing a 4-day, antlerless deer season in late October that would be restricted to hunters holding a lottery antlerless deer permit. Weather at this time of year will be more favorable to most hunters, potentially increasing hunter effort and/or encouraging more hunters to participate. Holding this season prior to the rifle season means that deer will have been less pressured, won't have adjusted their behavior to avoid hunters, and will be less concentrated in areas hunters don't have access to. Additionally, many firearm hunters will be able to harvest an antlerless deer for meat before the buck-only rifle season. This effectively shifts some hunting pressure from bucks to antlerless deer, which helps achieve antlerless harvest objectives while simultaneously contributing to buck age structure management. Further, hunters that have already harvested a deer will presumably be more willing to pass young bucks during the rifle season.

The Department recommends that this season be restricted to muzzleloaders, meaning that a muzzleloader permit would be required. This would appear to hunters as an extension of the current muzzleloader season (except antlerless only), which may help minimize confusion and maximize acceptance. In the 2018 Big Game Survey, the majority of hunters supported harvesting antlerless deer with muzzleloaders, while the majority remained opposed to harvesting antlerless deer with rifles. Further, requiring a muzzleloader permit to hunt in this season will avoid dramatic changes in license sales, which avoids the need for dramatic changes in license fees. However, this is being proposed as a separate season because it may eventually become necessary, as hunter numbers continue to decline, to allow the use of rifles during this season.

The Department proposes to start this season on a Thursday, two weeks (16 days) prior to the rifle season, resulting in season dates ranging from October 25-28 to October 31-November 3 (see calendar). This timing aims to remove antlerless deer earlier in the season, but late enough to avoid the foliage season and associated tourism and minimize conflicts with other hunting seasons and recreational

activities. Removing deer earlier helps to alleviate browsing impacts in problem areas as deer begin browsing around this time. It also minimizes potential impacts to the rifle season by providing a longer break between seasons. The Thursday start is intended to soften the effects of hunting pressure during this season while still including a weekend. Some hunters would be able to fill their tags during the week and be out of the woods before the weekend, when the majority of hunters are able to hunt. The weekday start may also help to concentrate harvest where it is most needed, as many hunters will hunt in the morning or evening, before or after work, closer to home than they might hunt during the weekend.

7. Establish a Novice Season

The Department recommends establishing a hunting season for new, first-time hunters that are too old to participate in the youth season. This season would be concurrent with the youth season (see calendar) and would be open to hunters 16 years or older, who have completed hunter education, and hold their first hunting license. The Department proposes to charge a fee for this permit and its associated tag, which will be determined later.

Hunters would hunt under the same rules and restrictions as youth hunters during youth season (e.g., mentor required, landowner permission required). Hunters during this season would be allowed to harvest one deer with the same restrictions on sex, age, and antler characteristics as youth hunters during youth season.

Currently, about 500 people over age 16 complete hunter safety each year and would be eligible for this season. Since many of these are parents that took the course with their child, or others that had no intention of hunting, the Department reasonably expects 200-250 people would actually participate in this season annually. In the short term, this may counteract declining youth season participation (youth season tag sales have declined by about 200 tags per year over the past 10 years) and stabilize the harvest, but it is not expected to result in an increased harvest.

Youth Season

8. Move Youth Season to Late October

The Department recommends moving the youth season two weeks earlier so that it would be three weeks prior to rifle season and the weekend before the proposed antlerless season (see calendar). This would result in season dates ranging from October 20-21 to October 26-27. This timing provides more favorable weather conditions and would continue to offer youth hunters the first opportunity to harvest deer with a gun. This would also ensure that the season is always before Daylight Savings Time ends (currently ends during or one week prior to youth season), providing more evening hunting time.

Bag Limits

9. Change the Annual Bag Limit

The department recommends that the annual bag limit be 4 deer, one of which can be a buck, and that there be no individual season limits during the archery or muzzleloader seasons. The only way a hunter would be able to reach this annual limit would be to harvest at least 2 antlerless deer during archery season, or to hunt in a WMU with unallocated antlerless permits. In either case, these deer would be harvested from areas where it is most needed.

Antlerless Harvest Management

The Department recognizes that this recommendation proposes substantial increases in hunting opportunity, particularly antlerless harvest opportunities, and that may cause concerns about overharvest. Therefore, it is important to also clarify how the antlerless harvest will be limited when and where it is necessary.

First, it is important to note that much of the increased antlerless harvest opportunity is focused on increasing the harvest in more-developed areas and pockets of higher deer density while maintaining current harvest levels in more rural areas. The primary means of controlling the antlerless harvest will continue to be modifications to the antlerless permit allocation through the annual antlerless harvest recommendation. With expanded opportunities providing increased antlerless harvest during the archery season and greater fill rates of antlerless permits, it is expected that fewer antlerless permits will need to be allocated each year in order to achieve harvest objectives.

Archery antlerless harvest is the Department's best deer management tool and, as such, we would like to encourage it as much as possible. Archery hunters harvest deer primarily where deer densities are highest and have little or no impact on deer numbers in other areas. They are also the only effective option in developed areas where firearm hunting is limited due to local ordinances, access challenges, and safety concerns. As a result, this harvest is important for managing locally abundant deer without unnecessarily impacting lower-density areas. The Department will continue to be able to restrict archery antlerless harvest in specific WMUs, if necessary, by limiting the WMUs where archery antlerless harvest is allowed.

Implementation Plan

The Department recommends that any enacted changes remain in place for a minimum of five years, and that no additional substantial changes be made during that time. This period is necessary to determine how the changes affect hunter numbers and participation, deer harvests, and buck age structure. Buck age structure management approaches should be adjusted at that time, if necessary, to ensure that buck age structure goals established in the 2020-2030 Big Game Management Plan are being met.

The department recognizes that the extent of these changes justifies changes to the current license structure and fees. However, the timeline for these rule changes means that changes to license structure cannot occur at the same time. In the interim, the department will use the existing license structure, with minor changes, as outlined below. The department will pursue changes to license structure and fees, as appropriate, in coming years.

Licensing/Tag Structure

Hunting License

- **Regular (rifle) Season Buck Tag** (Included with hunting license)

Archery License (required to hunt during the archery season)

- **Archery Tag** (included with archery license)
 - Used on any deer harvested during archery season
 - May purchase multiple licenses/tags to harvest additional deer (up to annual limit)

Muzzleloader License (required to hunt during antlerless season or muzzleloader season)

- **Muzzleloader Tag** (included with muzzleloader license)
 - To be used only on bucks harvested during muzzleloader season

Antlerless Permit (required to hunt in antlerless season)

- **Antlerless Tag** (included with permit)
 - Allocated through a lottery
 - Unallocated tags may be purchased over-the-counter
 - Availability determined by annual antlerless harvest recommendation
 - May be used during the antlerless or muzzleloader seasons

Novice License (required to hunt during novice season)

- **Novice Tag** (included with novice license)

Youth Deer Weekend License (required to hunt during youth season)

- **Youth Season Tag** (included with youth deer weekend license)
 - Valid for deer of either sex, determined by annual antlerless harvest recommendation