

# 2022 Antlerless Harvest and Youth Season Recommendation

to the  
Vermont Fish and Wildlife Board



Vermont Fish and Wildlife Department  
Agency of Natural Resources  
1 National Life Drive, Davis 2  
Montpelier, VT 05620-3208  
802-828-1000

## Summary of Key Points

- Recent antlerless harvests have been sufficient to stabilize or reduce deer numbers in most WMUs despite a relatively easy winter in 2022.
- Yearling antler beam diameters, fawn weights, and other physical condition metrics are below optimal levels in many areas, indicating that deer numbers have exceeded the level their habitat can support long-term.
- Deer populations in 5 WMUs are projected to be above their respective population objectives in 2022. The recommended antlerless harvest is intended to reduce deer populations in these WMUs.
- Populations in all other WMUs will be close to their respective population objectives and the recommended antlerless harvest is intended to stabilize populations and provide additional harvest opportunities.
- The recommended permit allocations are expected to result in the harvest of 3,107 antlerless deer during the antlerless (early muzzleloader) and December muzzleloader seasons. This would result in an estimated total harvest from all seasons of approximately 7,121 antlerless deer.

## Executive Summary

The Vermont Fish and Wildlife Department estimates there will be approximately 128,000 white-tailed deer on the Vermont landscape prior to the start of the 2022 deer hunting seasons. This represents a decrease of 2 percent from the retrospective 2021 pre-hunt estimate. Deer populations in 5 Wildlife Management Units (WMU) are expected to be above their respective density objectives established in the *2020-2030 Big Game Management Plan*. The remaining 16 WMUs will have deer densities close to their respective density objectives. Deer are not evenly distributed across Vermont. As a result, harvest management strategies that account for regional differences in deer density are essential to the health and proper management of Vermont's deer herd.

For deer to be healthy and productive, deer populations must be kept below the carrying capacity of the habitat through the regulated harvest of antlerless deer. Biological information collected annually by the Department, including reproductive data, fawn and yearling body weights, and yearling antler size, indicate that deer populations have exceeded the level the habitat can support long-term in some parts of Vermont. Deer populations must be reduced or maintained below the limits of their habitat or physical condition will continue to decline, habitat damage will increase, and populations will become unstable and susceptible to substantial winter mortality.

The winter of 2022 was relatively easy for deer throughout most of Vermont. However, increased antlerless harvests in recent years have reduced deer numbers, or limited deer population growth, in many areas. Increased antlerless harvest will need to continue in order to reduce deer densities in those WMUs that remain above objective and to stabilize populations in other WMUs at their current level.

To achieve established density objectives, the Department recommends the harvest of 7,121 antlerless deer during the 2022 hunting seasons. The Department recommends that antlerless harvest be authorized during the archery and youth/novice seasons in all WMUs. After accounting for expected archery and youth/novice season harvests, the Department recommends that 3,107 antlerless deer be harvested, by permit, during the antlerless-only muzzleloader season in late October and the December muzzleloader season. Achieving this harvest requires the issuance of 19,400 WMU-specific antlerless permits distributed among 19 of Vermont's 21 WMUs (3 percent fewer permits than the 20,000 allotted in 2021).

Deer harvest patterns changed substantially in 2020 due to the COVID-19 pandemic and new hunting regulations, which created significant uncertainty when predicting the 2021 harvest. As a result, the 2021 antlerless harvest recommendation cautiously predicted high archery antlerless harvest and very high antlerless permit fill rates. However, archery antlerless harvest decreased considerably from 2020, and muzzleloader antlerless permit fill rates were similar to those observed before the new regulations. As a result, the Department is more confident in predicting the antlerless harvest in 2022.

Four public hearings were held March 21, 23, 24 and 26, 2022 to gather hunters' comments on the deer herd. A summary of comments on the status of the deer herd is provided in Appendix B. Two additional public hearings will be held May 10 and 12, 2022.

## 2021 Muzzleloader Antlerless Harvest Recommendation

Pursuant to 10 V.S.A. §§4081, 4082 and 4084, and Appendix Chapter 1 §2c, hereafter is the Department's 2022 antlerless harvest and youth season recommendation. Based on population estimates, a harvest of 7,121 antlerless deer is recommended during the 2022 hunting seasons. This includes 4,014 antlerless deer harvested during the archery, youth, and novice seasons, and 3,107 antlerless deer harvested, by permit, during the antlerless (October muzzleloader) and December muzzleloader seasons. Adult females are typically 84 percent of the total antlerless deer harvest, so harvesting this number of antlerless deer would yield approximately 5,947 adult does.

## Population Status

The 2021 deer hunting seasons saw a buck harvest 7 percent lower than the previous 3-year average (see *2021 Vermont White-tailed Deer Harvest Report* for more information). Four WMUs had retrospective population estimates in 2021 that exceeded their respective population objectives established in the *2020-2030 Big Game Management Plan*. The winter of 2022 was relatively easy for deer in most of the state; however, increased antlerless harvests in recent years are expected to stabilize deer numbers in most areas and reduce deer numbers in a few WMUs.

## Winter Severity 2021

The Department has long recognized the influence that winter weather can have on Vermont's deer herd and has been collecting winter severity data since 1970. Between December 1 and April 15, volunteers record one winter severity index (WSI) point for each day with at least 18 inches of snow on the ground, and one point for each day the temperature reaches 0°F or below. These data have proven useful to describe deer population dynamics; however, how well deer survive winter depends largely on three factors: 1) body condition of deer as winter begins, 2) availability of quality deer wintering habitats, and 3) the timing of snow in the fall and snowmelt in spring. Snow cover that remains late into spring can cause significant negative impacts by delaying spring green up and, consequently, reducing fawn survival.

The winter of 2022 was relatively easy for deer, with a state-wide average WSI of 27 points (Figure 1). This was well below the 30-year median of 38. Some WMUs in western Vermont and the northern Green Mountains had WSIs close to their long-term average (Figure 2), but most of the state experienced an easier-than-normal winter. In all areas, most WSI points were due to low temperatures rather than deep snow. While low temperatures require deer to burn additional energy, the lack of deep snow across much of the state for much of the winter allowed deer to utilize habitats outside of traditional wintering areas and access the best available foods. Abundant mast crops in 2021 also allowed deer in most areas to enter winter in good condition. As a result, overwinter mortality was minimal.

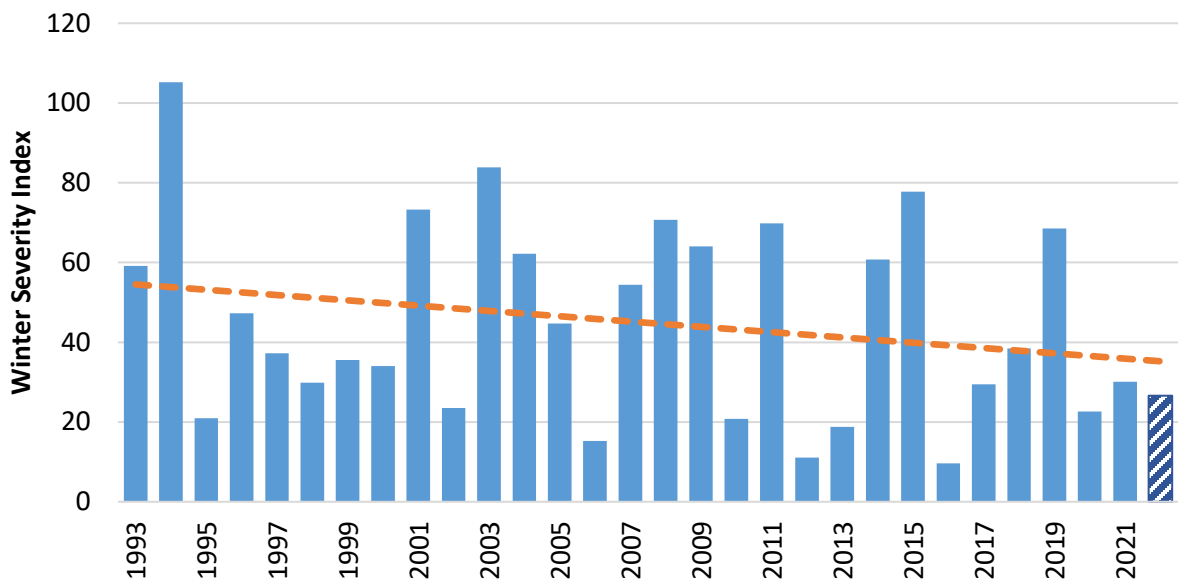


Figure 1. Statewide winter severity index (WSI), 1993–2022. The dashed line shows the 30-year trendline (linear regression).

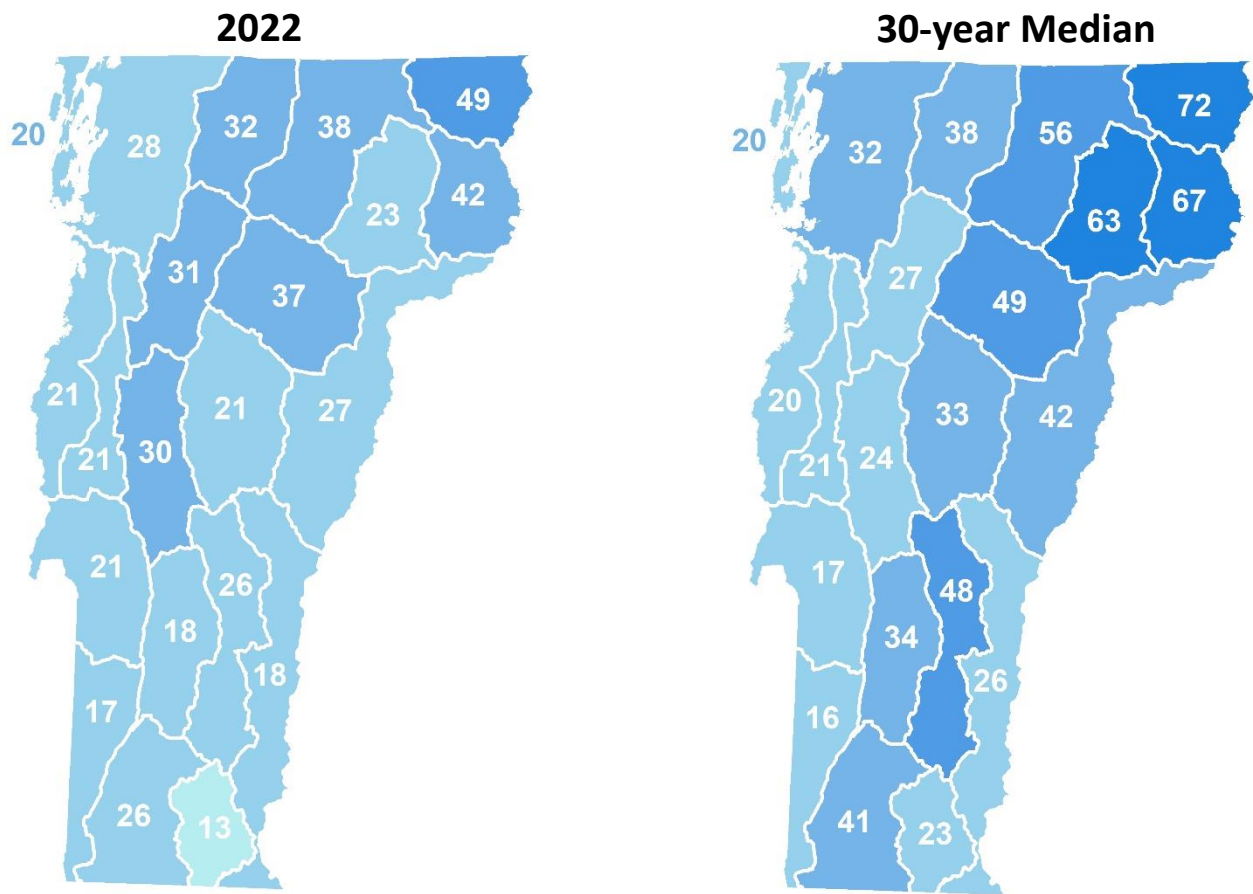


Figure 2. Regional winter severity index in 2022 and the 30-year median.

Population Health

Biological information collected annually by the Department, including reproductive data, fawn and yearling body weights, and yearling antler size, indicate that deer populations have exceeded the level the habitat can support long-term in some parts of Vermont (Figure 3, see Appendix A for individual WMU information). In many cases, this does not appear to be a new problem. Instead, this appears to be a subtle but chronic problem that may have occurred for decades in some areas. Declines in measures like yearling antler beam diameter have been slow (Figure 3); therefore, it takes many years of data to separate the trend from normal annual variation.

Health concerns are most pronounced in central Vermont but are evident in many parts of the state (see Appendix A for more detail). In most cases, the Department believes the primary driver of declines in physical condition was not a recent increase in deer abundance, but rather a slow, steady decline in the quality of deer habitat. Deer abundance has been relatively stable during the past 15 years, and, arguably, the past 30 years. However, Vermont’s forests are aging and the amount of young forest (less than 20 years old), which provides critical forage for deer, is declining. Other factors, including hunter access to private land, proliferation of invasive plants, and climate change are also important, and make the problem and any solutions more complex. The simple result, however, is that the habitat cannot support the number of deer it used to, and it is likely that carrying capacity will continue to decline. Deer populations must be reduced below the limits of their habitat or physical condition will continue to decline, habitat damage will increase, and populations will become unstable and susceptible to substantial winter mortality.

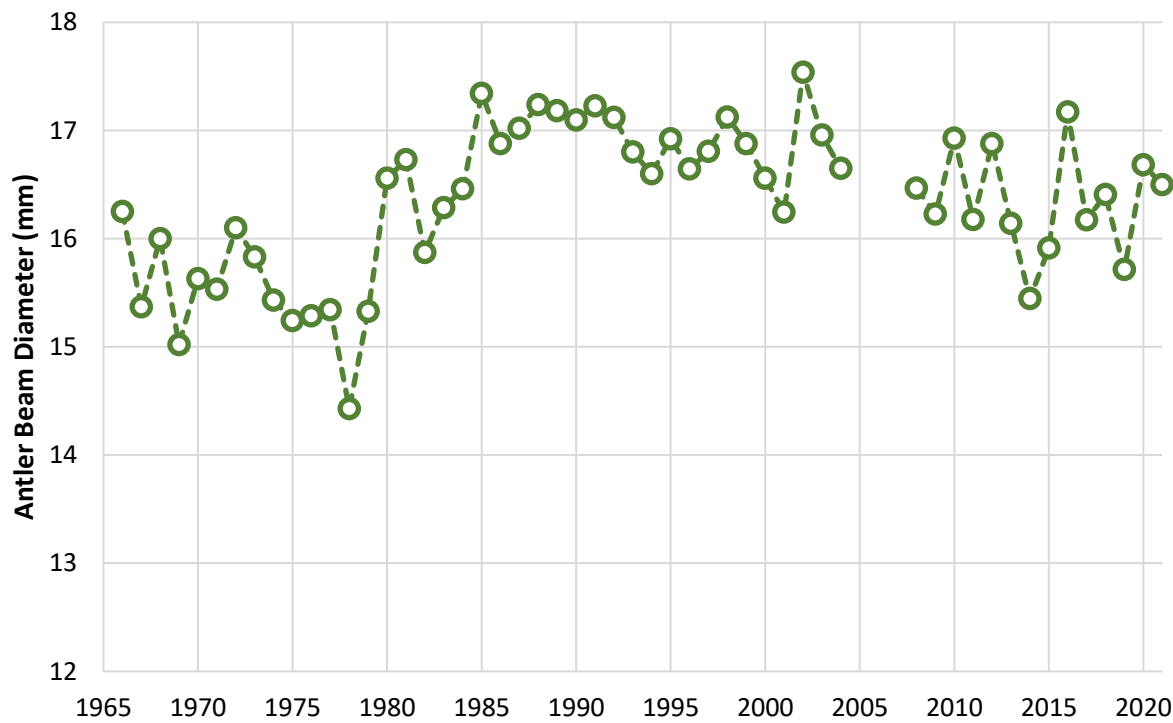


Figure 3. Antler beam diameter of yearling bucks in Vermont, 1965–2021. Data are from deer examined at biological check stations.

## Population Projections and Management Objectives

Although the winter of 2022 was relatively easy for deer in most areas, increased antlerless harvests in recent years will result in minimal population growth in most areas, and population reductions in a few WMUs. Importantly, deer densities remain above population objectives in several WMUs and recent management efforts are only beginning to reduce some of those populations. To provide healthy habitats and thereby keep deer healthy and productive, deer densities must be kept at established objectives (Figure 5). Maintaining a healthy deer herd is the best way to mitigate the potential effects of winter weather and provide a stable population over the long term.

Based on analysis of herd demographic data, hunter effort and sighting rate data, 2021 and 2022 winter severity information, and 2021 estimated deer populations at the WMU level, the Department expects the statewide deer population to decrease 2 percent from the 2021 retrospective estimate of 130,500 deer to approximately 128,000 deer (Figure 4). Importantly, 5 WMUs will have deer densities that exceed their respective population objectives, and the Department's intent is to reduce deer densities in those areas (Figures 5 and 6). Other WMUs will have deer densities that are within 2 deer per square mile of their population objective and the intent is to stabilize those populations at or near their current level.

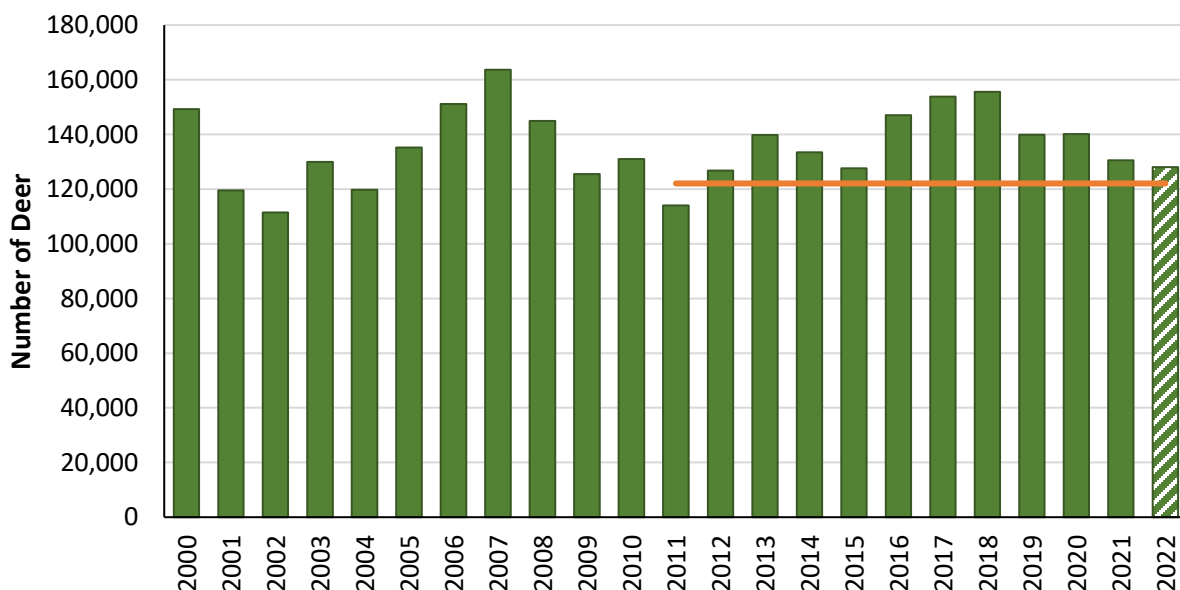


Figure 4. Statewide pre-hunt deer population estimates, 2000–2022. Population estimates are based on VT-DOEPOP, Sex-Age-Kill, Reconstruction, MARK-removal, and roadkill-based modeling. The horizontal orange line represents the sum of WMU-specific population objectives established in the 2020–2030 *Big Game Management Plan*.

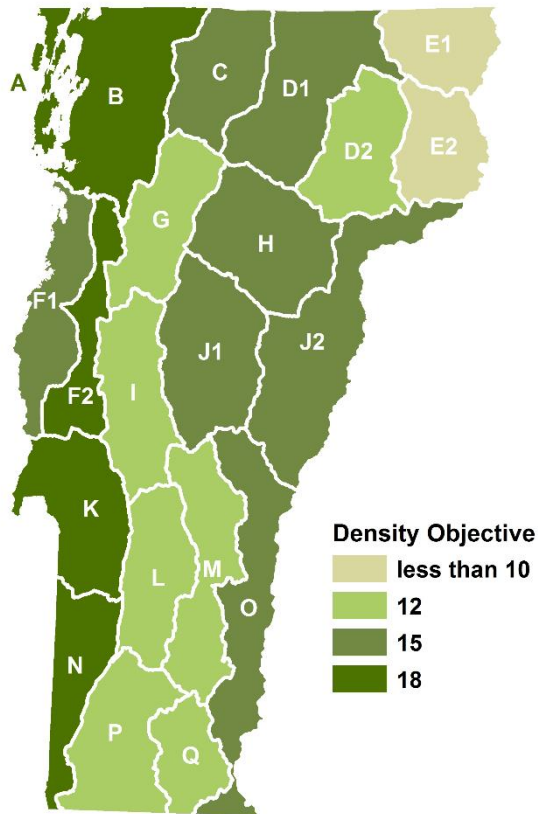


Figure 5. Deer density objectives by wildlife management unit. Deer densities are deer per square mile of habitat.

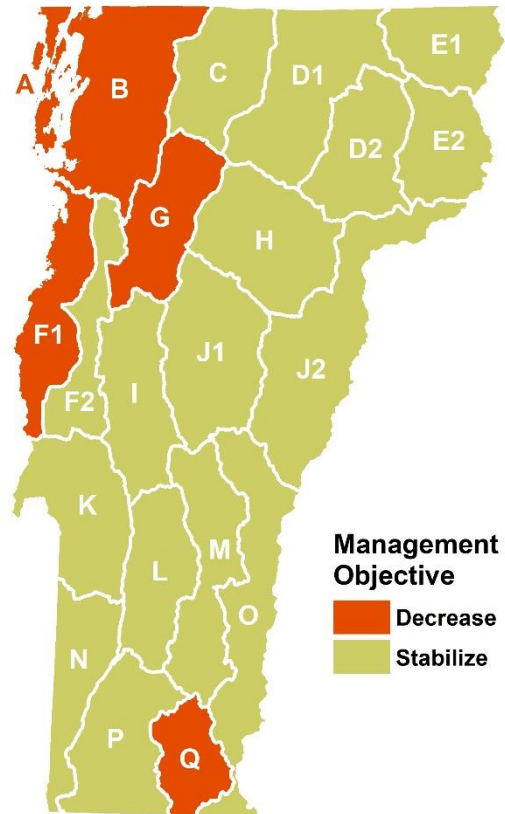


Figure 6. Desired change in the deer population, by wildlife management unit, to reach density objectives.

## Expected Changes in Harvest Patterns

Deer harvest patterns changed substantially in 2020 due to the COVID-19 pandemic and new hunting regulations, which created challenges for predicting the 2021 harvest. As a result, the 2021 antlerless harvest recommendation cautiously predicted high archery antlerless harvest and very high antlerless permit fill rates. However, archery antlerless harvest decreased considerably from 2020, and the muzzleloader antlerless permit fill rate was similar to fill rates observed before the new regulations.

It appears the increase in the archery harvest in 2020 was primarily due to people having more time to hunt due to the pandemic. The 2021 archery harvest provides a better basis for what should be expected in future years, and is consistent with what the Department expected due to the new regulations. As a result, the Department is more confident in predicting the archery harvest this coming fall.

Antlerless permit fill rates have not increased as expected following the addition of the 4-day, antlerless-only muzzleloader season in October. Fill rates increased slightly in 2020, but returned to pre-pandemic and pre-regulation-change levels in 2021. Therefore, the Department is confident that fill rates in 2022 will be similar to those observed in past years, and will return to using the previous 5-year average as the predicted fill rate for each WMU.



## Antlerless Harvest and Buck Age Structure Management

Antlerless harvests are an important tool for managing buck age structure and the overall buck hunting experience. 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.” Providing additional antlerless harvest opportunities helps to reduce hunting pressure on bucks, allowing more bucks to survive to older ages. Increased antlerless harvests are also necessary to achieve a more balanced buck-to-doe ratio. Perhaps most importantly, a healthy deer population produces healthier, larger-antlered, larger-bodied bucks.

Ultimately, the Department would like to maintain the buck population at its current level. It may seem counterintuitive that this can be done with fewer does in the population, but age structure and birth rate data clearly indicate that it is possible. When does are in better physical condition they give birth to more fawns, and, more importantly, are able to raise more of those fawns to adulthood. This means that fewer, healthier does can recruit more deer into the population than a larger number of less-healthy does on over-browsed habitat. If the physical condition of deer can be improved, recruitment of fawns to adulthood will improve. Since half of fawns are male, this would allow the buck population to remain at its current level, or even increase, despite fewer does on the landscape.

## Antlerless Harvest Recommendation

### Archery Season

The Department believes it is appropriate to have all WMUs open to the taking of antlerless deer during the 2021 archery season. Antlerless harvest in archery season is a key component in deer population management in Vermont. Archery hunters tend to distribute their hunting effort and, as a result, harvest in areas with higher deer numbers. Therefore, archery harvest has a low impact in areas with fewer deer. Importantly, archery harvest allows hunters to better regulate local deer herds in areas with high deer densities, particularly areas where firearm hunting is limited.

### Youth and Novice Season

The Department is strongly committed to recruiting new hunters into Vermont’s deer hunting heritage. Based on this commitment and the importance of harvesting an adequate number of female deer each year, the Department recommends that the youth and novice season bag limit be one deer of either sex in all WMUs. This will provide these hunters additional opportunity to harvest a deer and the opportunity to help properly manage Vermont’s deer herd. The Department also recommends that hunters during this season be able to take any buck, regardless of antler characteristics. It is critical that spike-antlered bucks be taken during this season so the Department can track their prevalence in the population (for population modeling) and obtain important biological information (e.g., weight, antler measurements) from this portion of the yearling buck population. This is the primary reason Department biologists examine deer during this season each year. This will have no impact on buck age structure management in WMUs that still have an antler restriction, as the buck harvest during this season is less than 10 percent (5 percent in 2021) of the overall buck harvest.

## Antlerless Permits

Antlerless permits are recommended for 19 of the state's 21 WMUs in 2021. These permits may be filled during the early antlerless-only muzzleloader season in late October or during the December muzzleloader season. The Department recommends that a total of 19,400 antlerless permits be issued (3 percent fewer than the 20,000 approved for distribution in 2021). An increase in antlerless permits is recommended in 3 WMUs, and a decrease in antlerless permits is recommended for 5 WMUs (Figure 7). These recommendations are intended to move populations toward WMU-specific deer density and physical condition objectives established in the *2020-2030 Big Game Management Plan* (see Appendix A for additional detail). This permit allocation is expected to result in the harvest of an additional 3,107 antlerless deer above those harvested during the archery and youth/novice seasons. Harvesting this number of antlerless deer should yield approximately 2,641 adult female deer (85 percent of muzzleloader antlerless deer are adult does).

The total recommended antlerless harvest is slightly higher than the harvest achieved in 2021, with most of the increase coming from WMUs in the Champlain Valley where deer populations remain well above objectives. This recommendation continues to take advantage of new hunting regulations to achieve the higher antlerless harvests that are necessary to achieve WMU-specific deer density and physical condition objectives. Harvests are intended to maintain populations near their current level, or to reduce populations toward density objectives over several years, not all at once. Relatively high antlerless harvests will continue to be necessary in the future to maintain populations at desired densities, particularly when winters are mild and as deer condition and fawn recruitment rates improve.

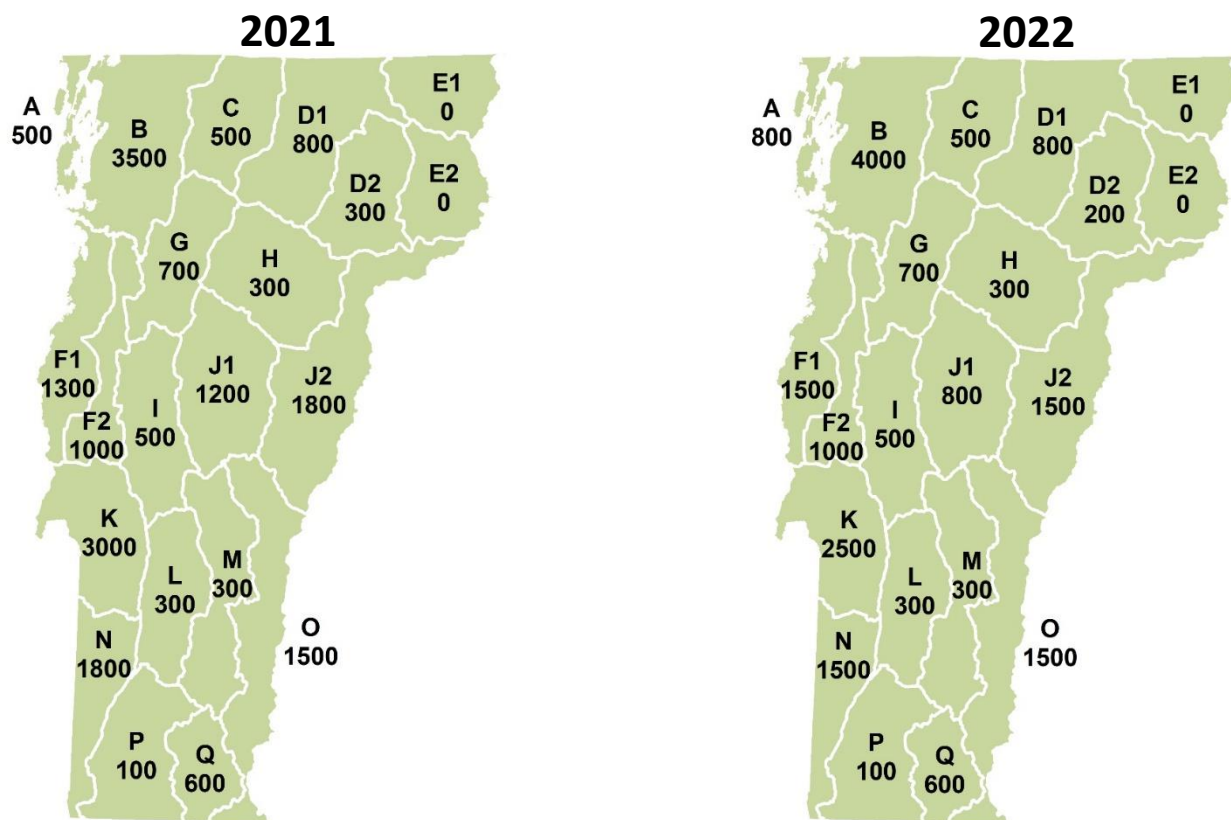


Figure 7. Antlerless permit allocations by wildlife management unit for 2021 and 2022 (proposed).

Table 1. Estimated deer densities, predicted antlerless deer harvest during the 2022 archery, youth/novice, and muzzleloader seasons, and actual 2021 antlerless harvest by wildlife management unit.

WMU	Deer per mi <sup>2</sup>			Early Antlerless		Muzzleloader Antlerless			2022 Total Antlerless	2021 Recommended & (Actual) Antlerless		% Change from 2021 Actual	% of Doe Population Harvested
	Objective	2021	2022	Archery	Youth/ Novice	Permits	Fill Rate	Harvest					
<b>A</b>	18	34	32	151	24	800	15%	119	294	308	(258)	+14%	23%
<b>B</b>	18	24	22	606	128	4000	16%	626	1360	1857	(1301)	+5%	17%
<b>C</b>	15	16	17	204	48	500	24%	119	372	461	(357)	+4%	10%
<b>D1</b>	15	18	17	283	97	800	25%	197	577	850	(532)	+8%	10%
<b>D2</b>	12	11	12	111	26	200	20%	39	175	300	(180)	-3%	7%
<b>E1</b>	<10	6	7	9	3	0		0	12	39	(11)	+8%	1%
<b>E2</b>	<10	6	7	14	0	0		0	14	21	(13)	+8%	1%
<b>F1</b>	15	18	18	150	30	1500	14%	212	392	577	(342)	+15%	11%
<b>F2</b>	18	19	19	127	33	1000	14%	141	301	479	(270)	+12%	10%
<b>G</b>	12	14	15	111	10	700	18%	123	244	389	(207)	+18%	7%
<b>H</b>	15	15	14	228	44	300	19%	56	328	501	(324)	+1%	7%
<b>I</b>	12	12	12	67	12	500	16%	82	162	309	(147)	+10%	5%
<b>J1</b>	15	16	16	231	41	800	19%	153	425	771	(428)	-1%	8%
<b>J2</b>	15	16	15	281	67	1500	18%	275	624	1031	(631)	-1%	9%
<b>K</b>	18	20	20	173	55	2500	14%	356	584	997	(553)	+6%	11%
<b>L</b>	12	11	12	46	10	300	18%	54	110	158	(91)	+20%	4%
<b>M</b>	12	11	12	48	12	300	16%	49	108	160	(94)	+15%	3%
<b>N</b>	18	20	20	110	28	1500	13%	197	335	540	(323)	+4%	9%
<b>O</b>	15	15	14	211	24	1500	15%	218	453	571	(441)	+3%	10%
<b>P</b>	12	10	11	67	11	100	15%	15	92	146	(86)	+7%	3%
<b>Q</b>	12	14	15	84	2	600	12%	73	159	195	(135)	+18%	8%
<b>STATE</b>				<b>3310</b>	<b>705</b>	<b>19400</b>	<b>16%</b>	<b>3107</b>	<b>7121</b>	<b>10660</b>	<b>(6725)</b>	<b>+6%</b>	<b>9%</b>

Table 2. Muzzleloader antlerless permit history by WMU, 2012–2021, and recommended permit allocation for 2022. Numbers in parentheses are the number actually distributed.

WMU	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>A</b>	650	900	900	900	1100	1100 (843)	1100 (720)	1100 (939)	1000	500	<b>800</b>
<b>B</b>	3600	3400	3800	3350	5500	5500	5500	5500	4500	3500	<b>4000</b>
<b>C</b>	0	400	400	100	350	700	800	300	500	500	<b>500</b>
<b>D1<sup>a</sup></b>	250	450	850	100	300	500	1200	500	1000	800	<b>800</b>
<b>D2<sup>a</sup></b>	0	100	0	0	100	300	800	300	500	300	<b>200</b>
<b>E1<sup>a</sup></b>	0	0	0	0	0	0	0	0	0	0	<b>0</b>
<b>E2<sup>a</sup></b>	0	0	0	0	0	0	0	0	0	0	<b>0</b>
<b>F1</b>	525	250	175	0	200	1200 (917)	1000 (900)	1000	1000	1300	<b>1500</b>
<b>F2</b>	575	450	275	0	700	1500 (1297)	1300	1300	1300	1000	<b>1000</b>
<b>G</b>	0	100	200	100	300	300	300	300	700	700	<b>700</b>
<b>H<sup>b</sup></b>	300	150	550	100	750	900	1100	400	300	300	<b>300</b>
<b>I</b>	0	50	0	0	0	300	300	300	500	500	<b>500</b>
<b>J1</b>	400	100	150	0	300	750	1200	800	1500	1200	<b>800</b>
<b>J2<sup>c</sup></b>	1150	950	1000	400	1500	1750	2500	2000	2000	1800	<b>1500</b>
<b>K<sup>d</sup></b>	2000	3900	5000 (4403)	2250	4100 (3569)	4100 (2505)	4000 (2446)	4000 (2440)	3000	3000 (2795)	<b>2500</b>
<b>L</b>	0	100	0	0	0	300	300	300	300	300	<b>300</b>
<b>M<sup>e</sup></b>	0	0	0	0	200	300	300	300	300	300	<b>300</b>
<b>N</b>	1975	2100	3000 (2123)	1850	2100 (1835)	2100 (1588)	2000 (1487)	2000 (1462)	2000	1800 (1642)	<b>1500</b>
<b>O<sup>f</sup></b>	750	750	750	500	1200	2000	2600 (2300)	2000	2000	1500	<b>1500</b>
<b>P</b>	0	0	0	0	0	0	0	0	100	100	<b>100</b>
<b>Q<sup>a</sup></b>	250	200	0	0	250	900 (692)	700 (604)	600	500	600	<b>600</b>
<b>STATE</b>	<b>12425</b>	<b>14350</b>	<b>17050</b> (15576)	<b>9650</b>	<b>18950</b> (18254)	<b>24500</b> (21442)	<b>27000</b> (24057)	<b>23000</b> (20741)	<b>23000</b>	<b>20000</b> (19637)	<b>19400</b>

<sup>a</sup> WMU boundary changed in 2014.

<sup>b</sup> Permit totals prior to 2014 are for former WMU H1.

<sup>c</sup> Permit totals prior to 2014 are for former WMUs H2 and J2.

<sup>d</sup> Permit totals prior to 2014 are for former WMUs K1 and K2.

<sup>e</sup> Permit totals prior to 2014 are for former WMUs M1 and O1.

<sup>f</sup> Permit totals prior to 2014 are for former WMUs M2 and O2. A portion of WMU Q was also added to this unit in 2014.

Table 3. Muzzleloader antlerless permit fill rate by WMU, 2012–2021.

WMU	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>A</b>	11%	10%	11%	9%	10%	12%	19%	13%	17%	14%
<b>B</b>	13%	13%	14%	12%	15%	13%	19%	14%	18%	15%
<b>C</b>		26%	22%	20%	29%	19%	33%	24%	23%	20%
<b>D1*</b>	22%	26%	22%	10%	25%	28%	29%	24%	23%	19%
<b>D2*</b>		21%			18%	18%	21%	21%	20%	17%
<b>E1*</b>										
<b>E2*</b>										
<b>F1</b>	13%	12%	13%		15%	11%	16%	13%	17%	13%
<b>F2</b>	15%	13%	12%		14%	11%	19%	12%	17%	11%
<b>G</b>		35%	16%	7%	20%	16%	28%	14%	17%	12%
<b>H*</b>	20%	18%	19%	12%	16%	17%	20%	18%	21%	18%
<b>I</b>		24%				11%	24%	15%	19%	14%
<b>J1</b>	16%	22%	12%		23%	19%	26%	19%	18%	14%
<b>J2*</b>	16%	22%	22%	16%	20%	16%	23%	17%	21%	16%
<b>K</b>	10%	11%	10%	10%	13%	12%	18%	14%	16%	11%
<b>L</b>		23%				14%	31%	15%	17%	13%
<b>M</b>					18%	15%	24%	13%	17%	13%
<b>N</b>	11%	11%	11%	9%	13%	12%	18%	11%	13%	11%
<b>O*</b>	15%	16%	23%	15%	15%	15%	20%	11%	13%	13%
<b>P</b>									17%	13%
<b>Q*</b>	14%	12%			11%	12%	18%	10%	13%	9%
<b>STATE</b>	<b>15%</b>	<b>18%</b>	<b>16%</b>	<b>11%</b>	<b>15%</b>	<b>14%</b>	<b>21%</b>	<b>14%</b>	<b>17%</b>	<b>14%</b>

\*WMU boundary changed in 2014.

## Public Meeting Comments

Four public hearings were held March 21, 23, 24, and 29, 2022 to gather comments on the deer herd. Approximately 86 members of the public participated in these hearings. Two additional public hearings will be held May 10 and 12, 2022.

## Appendix A: Population Status and Management Recommendations by WMU

Deer densities, habitat conditions, and winter severity can vary substantially from one part of Vermont to another. Additionally, these factors and the effects of historical deer densities have resulted in deer in some regions being in better physical condition than others. This results in variable deer population dynamics across the state; therefore, deer management prescriptions are made at the WMU level rather than statewide.

The Department is aware that deer densities (and other factors) vary within each WMU, sometimes substantially. Unfortunately, managing deer at a smaller scale than a WMU is not currently feasible given the structure of hunting regulations and the Department's ability to collect enough data. However, hunters generally do a good job of targeting areas of higher deer density within a WMU if they have sufficient access.

### Description of data provided for each WMU

**Area of deer habitat:** Deer habitat is all land that is not developed.

**Management Objective:** The desired change in the deer population (Increase, Decrease, Stabilize)

**Recommended Antlerless Harvest:** The total recommended antlerless harvest for 2022 across all seasons. The number of adult does ( $\geq 1$  year old) expected to be harvested as a result (85% of archery and muzzleloader antlerless harvest, 70% of youth/novice antlerless harvest) is also shown, as is the percentage of the WMU's doe population that this would represent.

**Deer Density:** Estimated pre-hunt deer density over the past 10 years based on retrospective population modelling and the projected density in fall 2022. The density objective established in the *2020-2030 Big Game Management Plan* is represented by a red line in the figure. The shaded green area shows  $\pm 2$  deer per square mile – the range in which the management objective will be to stabilize.

**Harvest:** The total buck and antlerless deer harvests during all seasons during the past 10 years. The proposed antlerless harvest for 2022 is shown by the dotted red line.

**Yearling Antler Beam Diameter/Yearling Male Weight/Fawn Weight:** These physical condition metrics are from deer examined by biologists at check stations. The average for the most recent 3 years of data is provided. Sample size is shown in parentheses. Minimum acceptable levels for each metric, established in the *2020-2030 Big Game Management Plan*, are also shown.

**Adult Birth Rate:** The average adult birth rate (fetuses per doe) over the past 5 years based on examinations of incidentally killed deer during February-May. Sample size is shown in parentheses. The minimum acceptable level established in the *2020-2030 Big Game Management Plan* is also shown.

**Winter Severity:** The median winter severity index in that WMU over the past 30 years and the expected adult doe mortality outside of the hunting seasons based on that winter severity.

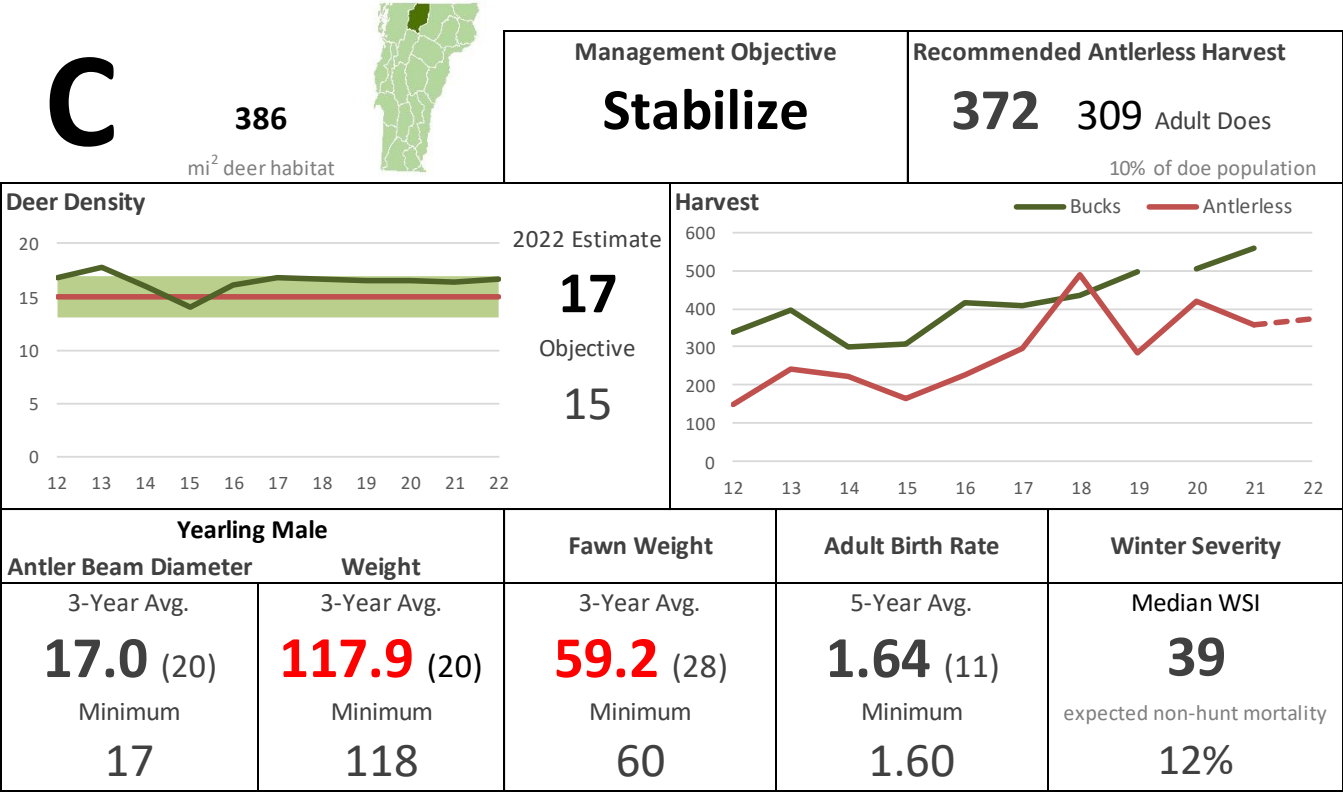
**Red Numbers:** Numbers are red when a metric does not meet the objectives established in the *2020-2030 Big Game Management Plan*.

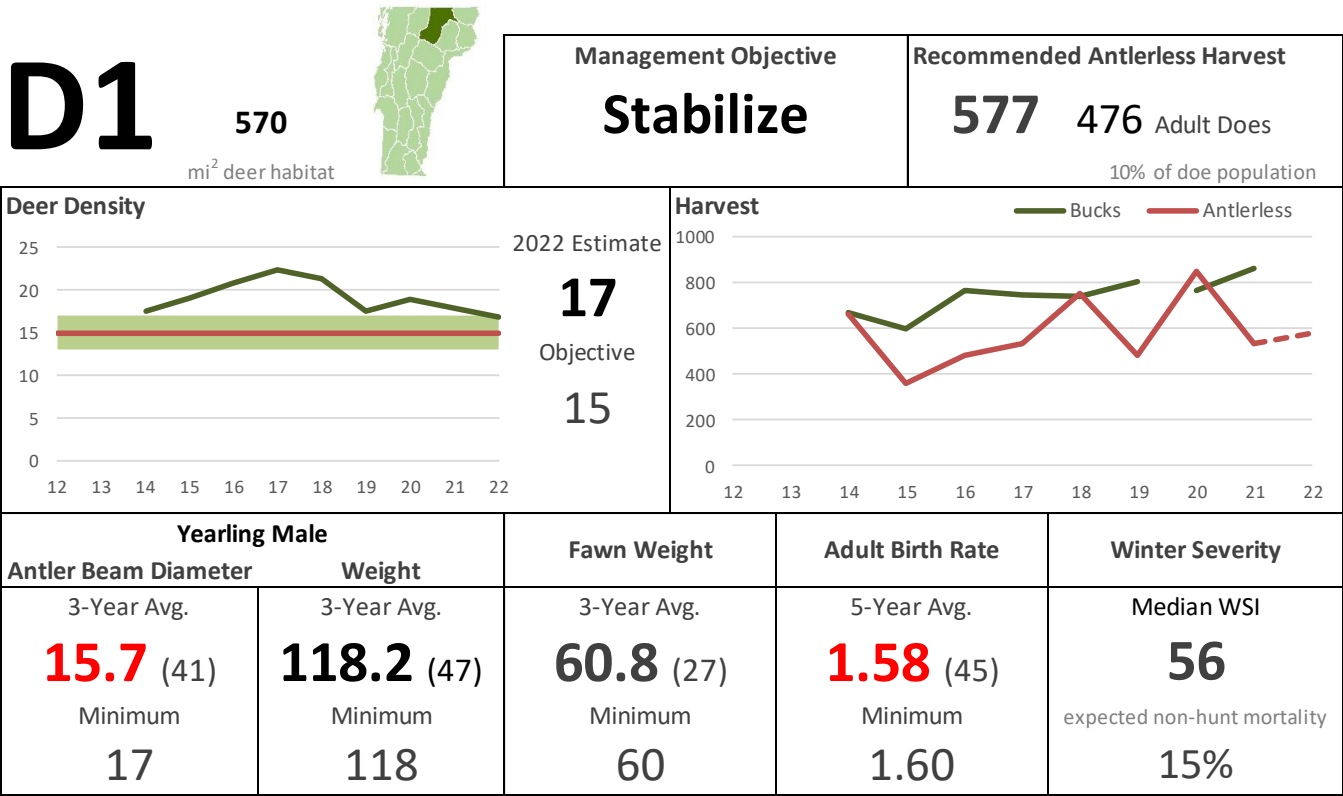
Limited hunter access to private land is a significant management challenge in this WMU.







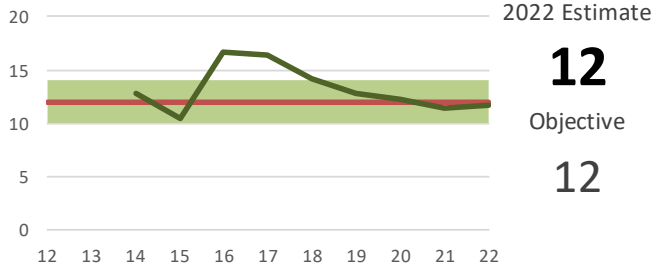




## Stabilize

**175** 145 Adult Does

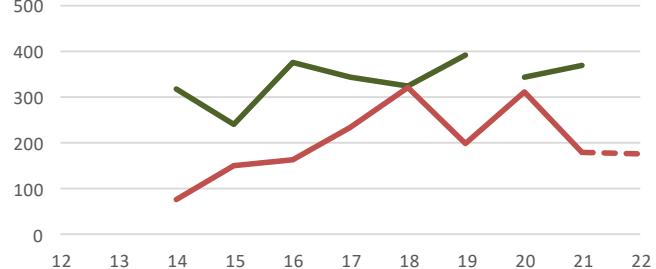
## Deer Density



12

12

— Bucks — Antlerless



Winters in this WMU are often severe, which limits deer density, particularly in the higher elevation areas, and helps keep deer in good physical condition. However, several of the lower elevation towns (e.g., Burke, Lyndon, St. Johnsbury) have seen record or near-record harvests in recent years, suggesting the deer population in this part of the WMU is growing.

The antlerless harvest recommendation is intended to maintain the population at 12 deer/mi<sup>2</sup>. Most antlerless harvest, particularly during the archery season, tends to be concentrated in the lower elevation, higher density parts of the WMU. The Department will also be considering an expanded archery zone around St. Johnsbury to further increase antlerless harvests in this area where complaints about deer damage to gardens and landscaping are common.

Deer density remains well below the 10/mi<sup>2</sup> threshold and has been relatively stable over the past 10 years. The current antlerless recommendation provides additional harvest opportunity to archery and youth/novice hunters and will have no effect on the population.

Limited hunter access to private land is a significant management challenge in this WMU.



mi<sup>2</sup> deer habitat

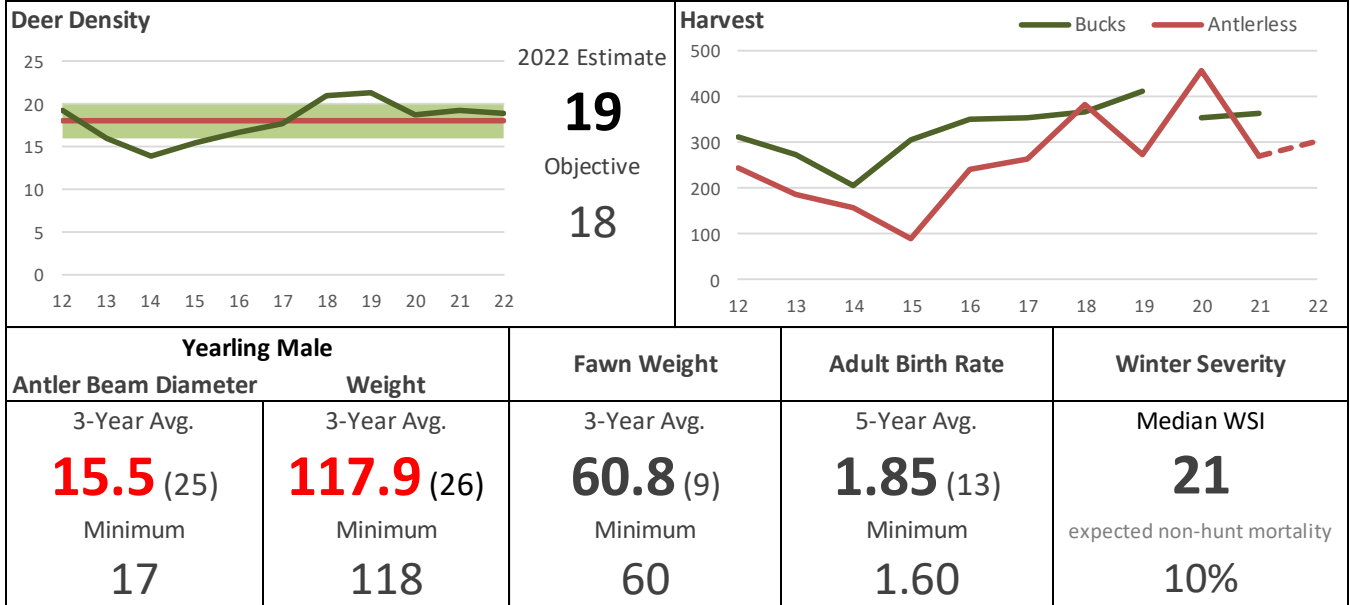
### Management Objective

## Stabilize

### Recommended Antlerless Harvest

**301** 251 Adult Does

10% of doe population



Wildlife Management Unit F2 is located in the southern Champlain Valley in the foothills of the Green Mountains. Winters here are relatively easy for deer and the habitat is generally good with a mix of forest and field.

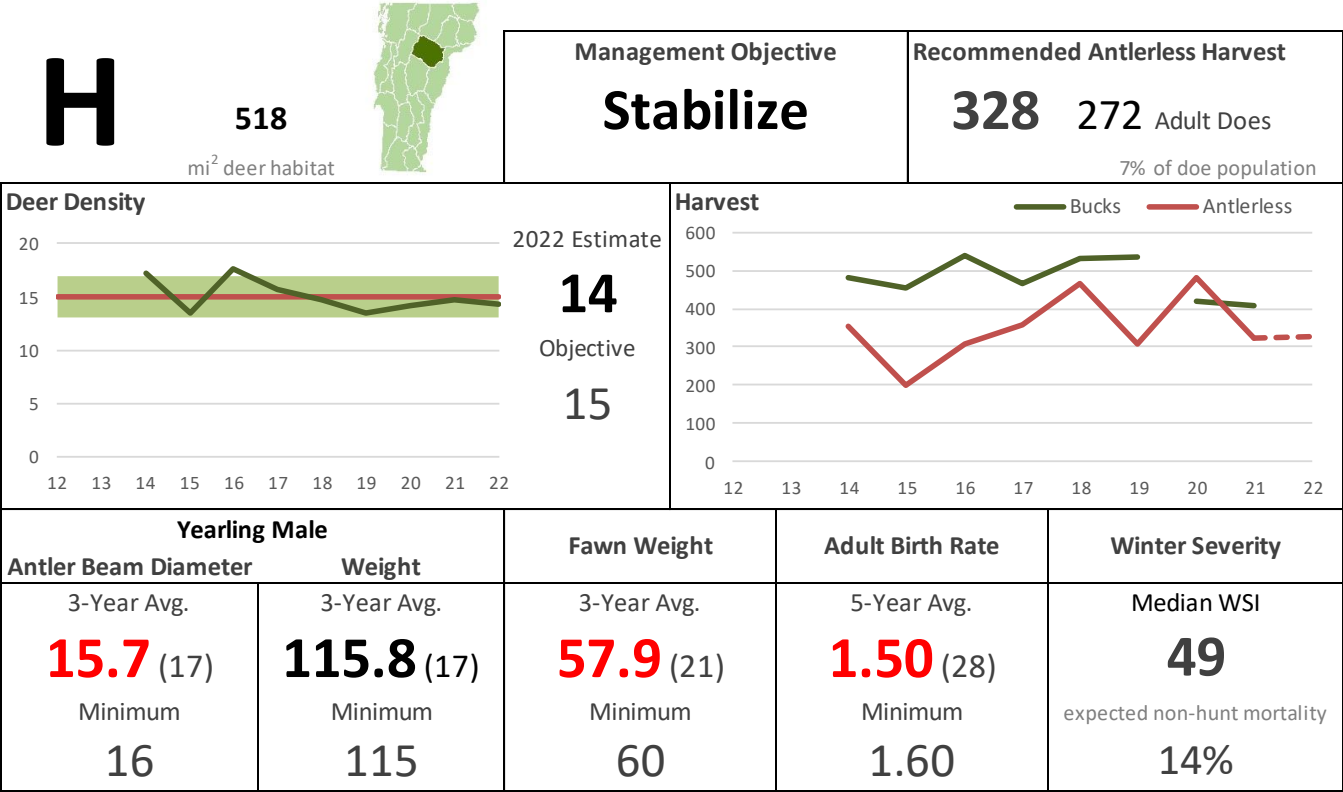
Considering the prevalence of agriculture and mild winters, the poor condition of yearling bucks is particularly concerning. This suggests that deer density has exceeded the level the habitat can support. Indeed, deer impacts to forest ecosystems are common in this WMU.

Many towns in this WMU have experienced record or near record harvests in the past few years. However, recent increases in the antlerless harvest appear to have stabilized the population near the objective.

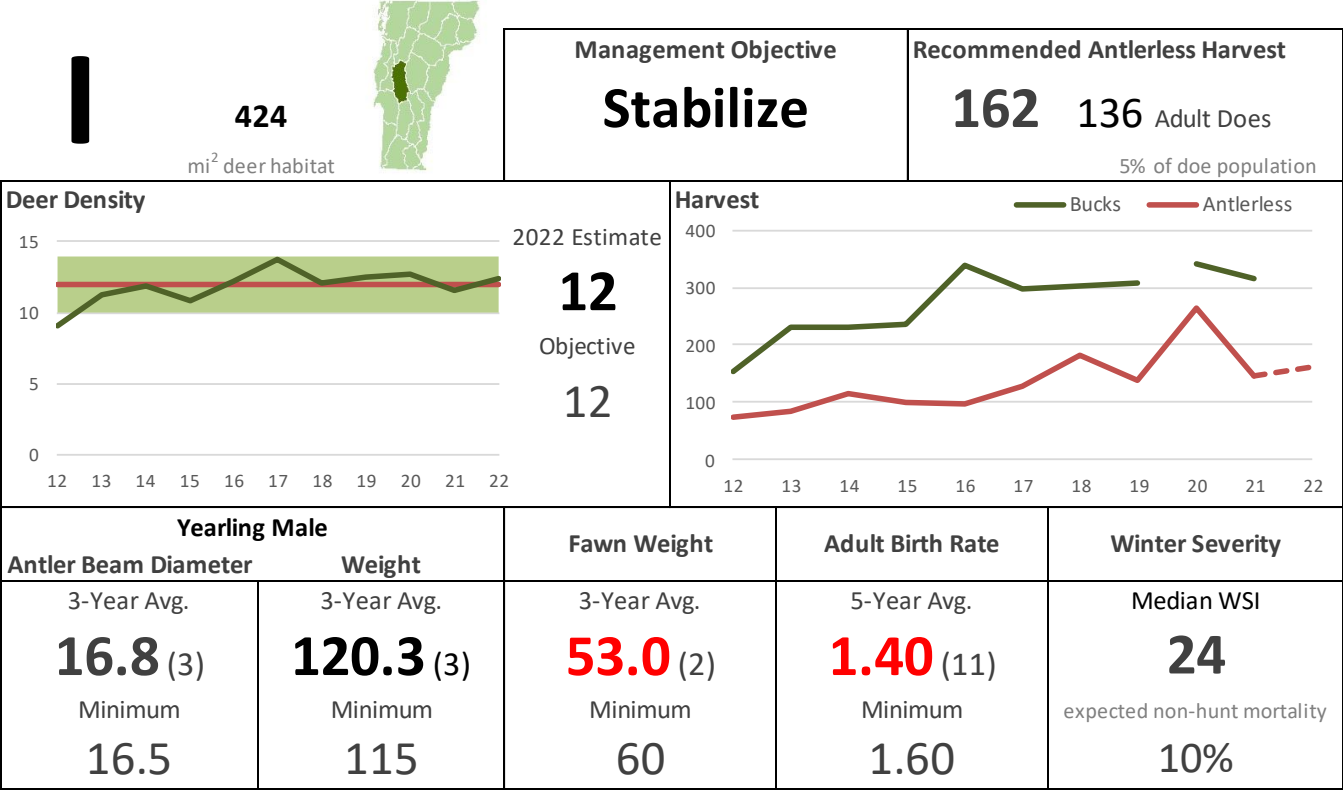
The current antlerless harvest recommendation is similar to the harvest achieved in 2021, and will be necessary to maintain the population near the objective level.

Limited hunter access to private land is a significant management challenge in this WMU.

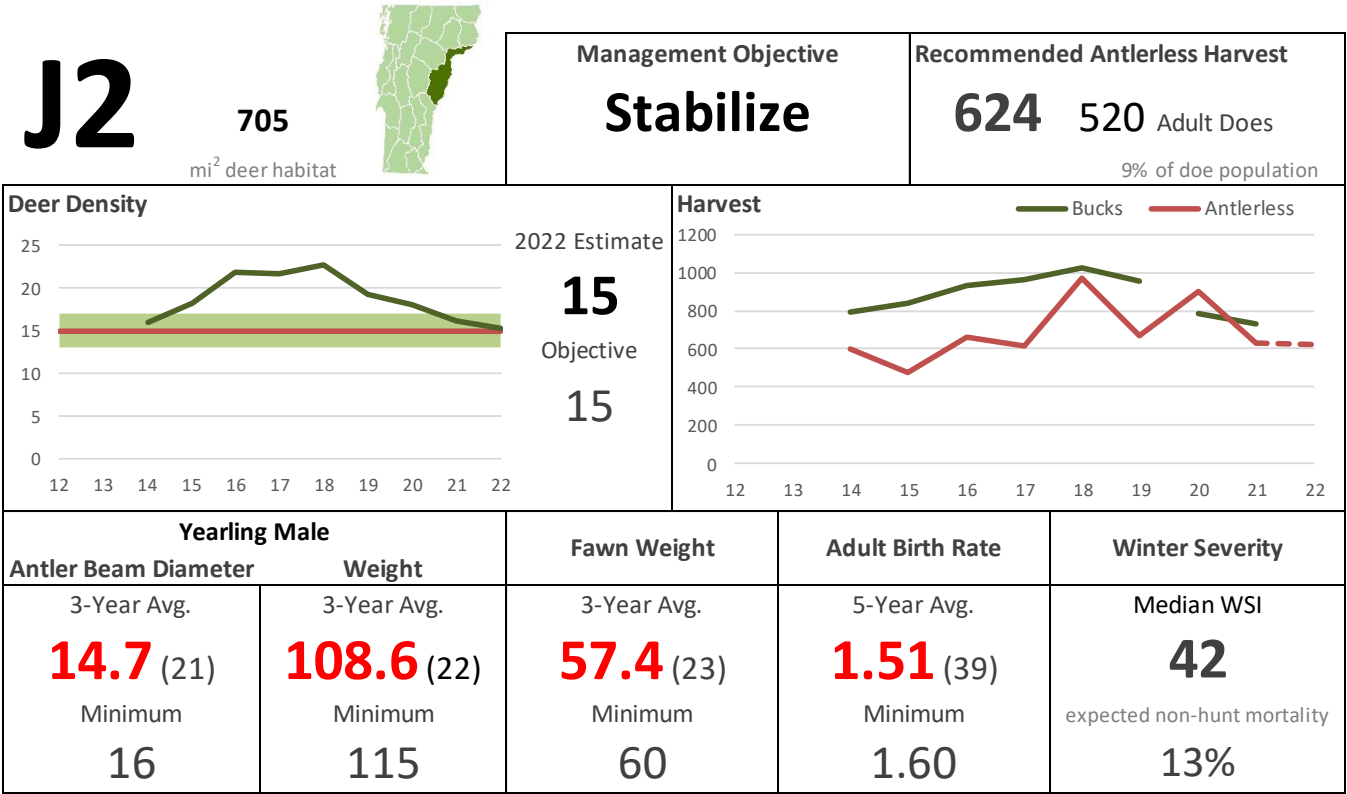
Past antlerless harvests have had no apparent effect on the deer population in this WMU. The recommended antlerless harvest in 2022 is slightly higher than the harvest achieved in 2021. Higher antlerless harvests will be necessary until the population is reduced to the objective and physical condition is consistently improved.







It will also be important to increase antlerless harvest in the Barre-Montpelier area where deer are overabundant and conflicts are more likely. The Department will be considering an expanded archery zone to address this concern.



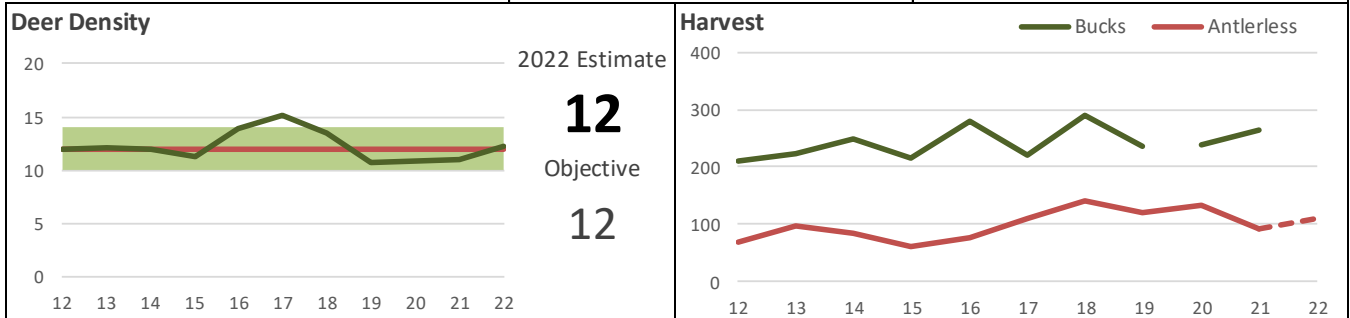
Limited hunter access to private land is a significant management challenge in this WMU.

mi<sup>2</sup> deer habitat

## Stabilize


## 110

4% of doe population

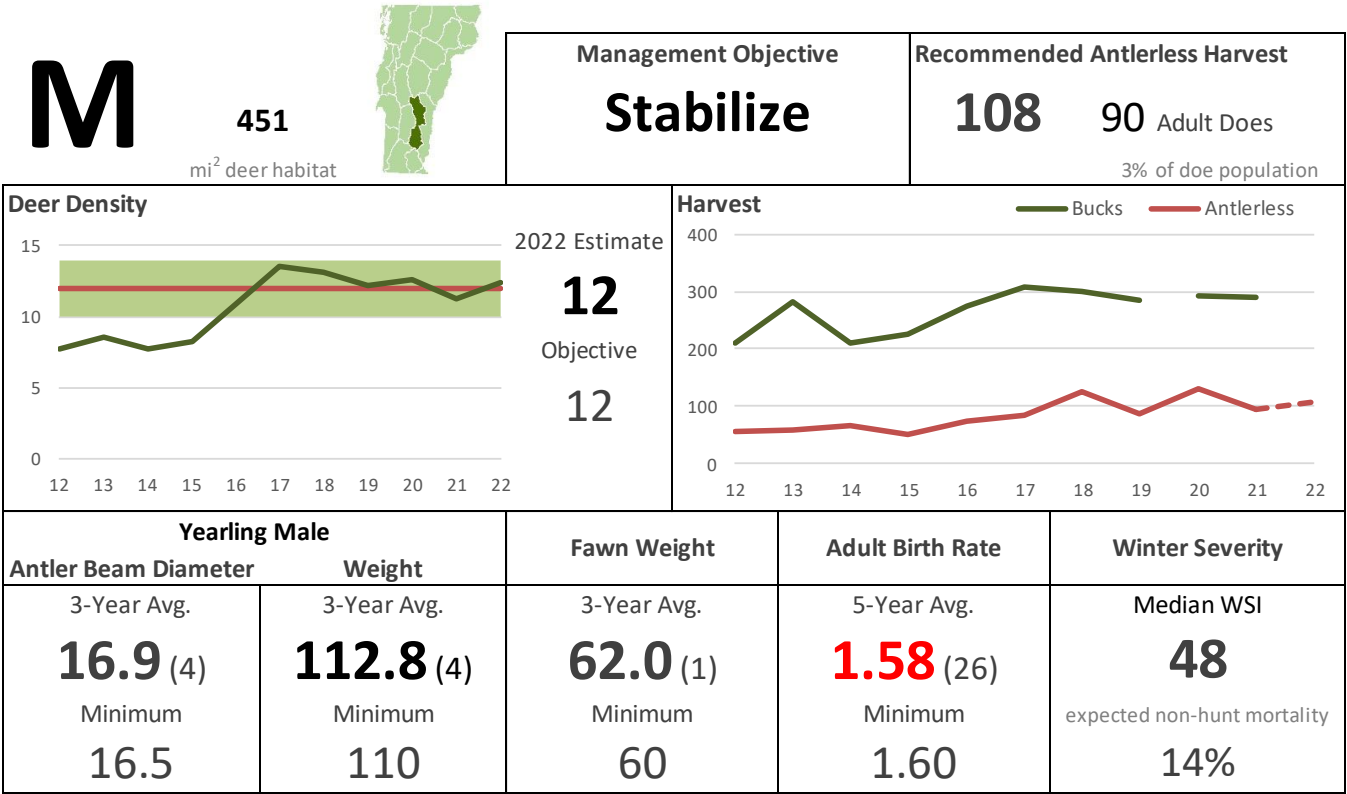


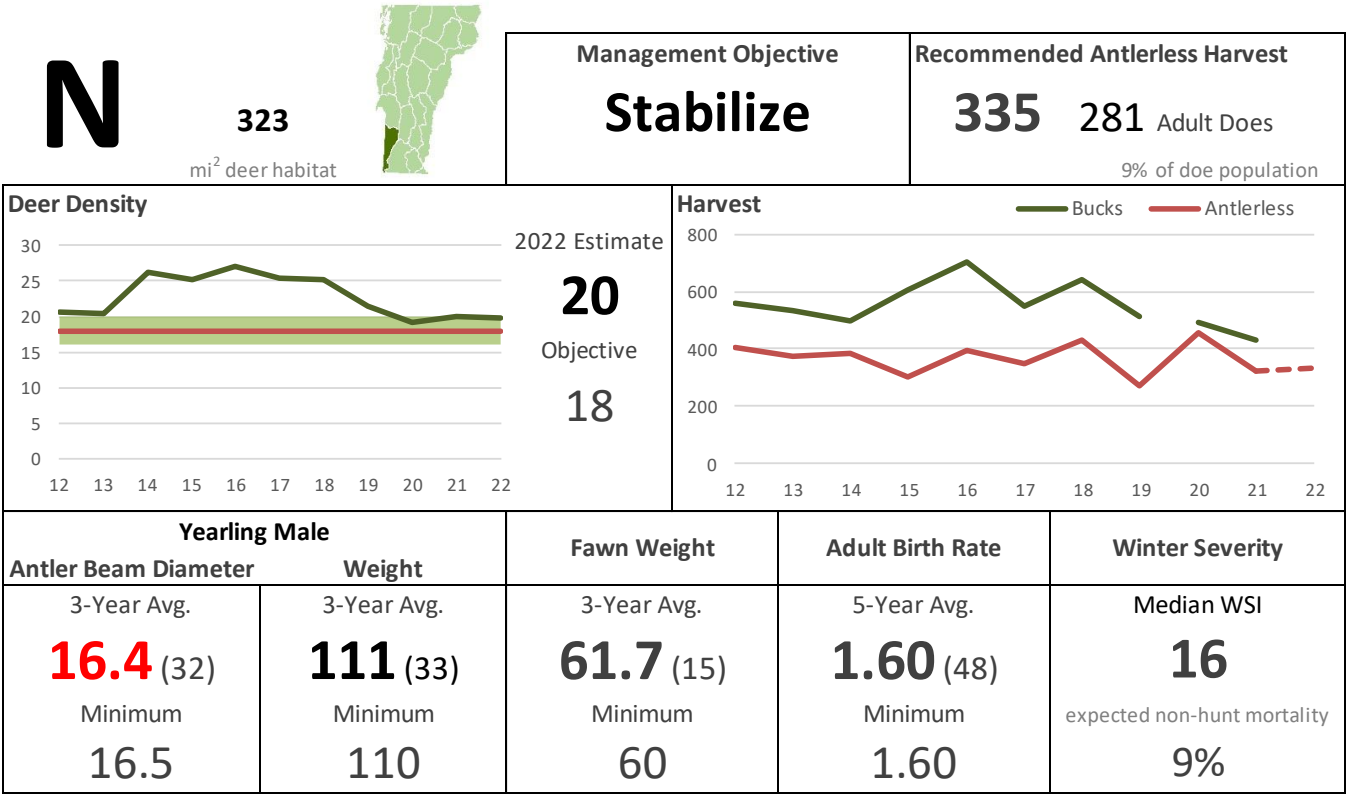
Yearling Male		Fawn Weight	Adult Birth Rate	Winter Severity
Antler Beam Diameter	Weight			
3-Year Avg. <b>16.0</b> <sup>(1)</sup> Minimum 16.5	3-Year Avg. <b>106.0</b> <sup>(1)</sup> Minimum 110	3-Year Avg. no data Minimum 60	5-Year Avg. <b>1.70</b> <sup>(23)</sup> Minimum 1.60	Median WSI <b>34</b> expected non-hunt mortality 12%



 The recommended antlerless harvest is intended to maintain the population at its current level. It is similar to recent antlerless harvests and will provide reasonable antlerless harvest opportunities and help address higher deer densities along the western edge of the unit without impacting overall deer numbers.







Deer density does vary within this unit due to both habitat quality and hunter access to private land. Limited hunter access to private land is a substantial management challenge.



Deer harvests have been steadily increasing near Bennington and in towns along the Massachusetts border. Some of these towns have had near-record harvests in recent years. Given this trend, the Department would like to continue issuing a small number of antlerless permits in this WMU. Most antlerless permits are likely to go to landowners, which will increase the likelihood that deer are harvested from areas of higher deer density.

Evidence of deer damage to forest ecosystems is common near Brattleboro. Unfortunately, deer harvest is limited by the town's firearm discharge ordinance. As a result, the Department will be considering an expanded archery zone to reduce deer impacts in this area.