

# North Carolina Election Analysis

July 19, 2020

*Author:* Blair Read

## Table of Contents

<b>Introduction</b>	<b>2</b>
<b>Summary of Findings</b>	<b>4</b>
<b>Analysis of 2020 Primary</b>	<b>5</b>
Turnout	5
Turnout by Age	6
Turnout by Gender	7
Turnout by Race	8
Vote Mode	10
By County: 2016 vs. 2020 Vote Mode	11
By Party Primary: 2016 vs. 2020 Vote Mode	14
By Age: 2016 vs. 2020 Vote Mode	14
By Race: 2016 vs. 2020 Vote Mode	15
Unreturned and Uncounted Mail Ballots	16
By Age: Uncounted Ballots	19
By Race: Uncounted Ballots	20
By Voter Experience: Uncounted Ballots	20
By County: Uncounted Ballots	21
<b>Voter Registration</b>	<b>22</b>
<b>Polling Station Traffic</b>	<b>24</b>
Early Voting vs. Election Day	25
<b>Conclusion</b>	<b>29</b>
<b>Data</b>	<b>30</b>

# Introduction

The North Carolina primaries took place on March 3, 2020 as part of the Super Tuesday states. The North Carolina primaries were semi-closed, where unaffiliated voters could choose the primary in which to vote. Biden won 68 delegates with 42.95% of the vote, followed by Sanders with 24.22% of the vote and 37 delegates. Michael Bloomberg won 3 delegates (12.95% of the vote), and Elizabeth Warren won 2 delegates (10.50% of the vote). Biden won 96 out of 100 counties. Other parties with presidential primaries included the Republican Primary (Trump, Joe Walsh, Bill Weld, with Trump receiving 93.5% of the vote), the Constitution Party Primary, the Green primary, and the Libertarian primary.<sup>1</sup>

North Carolina employs a “semi-closed” primary, in which voters who have registered with one of the parties may only vote in that party’s primary, but unaffiliated voters may generally choose the primary they vote in.<sup>2</sup> Table 1 shows the relationship between party registration and which party primary voters cast ballots in for the 2016 and 2020 primary elections. The vast majority of voters registered with a party cast ballots for that party. In 2016, a majority of unaffiliated voters cast votes in the Republican Presidential Primary, while in 2020, a majority of unaffiliated voters cast votes in the Democratic Presidential Primary.

Turnout declined slightly from 2016 to 2020, both in absolute numbers (from 2.3 million to 2.2 million) and as a share of registered voters (from 36% to 31%). These small changes in top-line numbers mask significant compositional change, however. First, turnout in the Democratic primary grew from 1,160,836 to 1,340,256, while it declined in the Republican primary from 1,154,516 to 807,483. Second, unaffiliated voters--”independents”--shifted where they voted. In 2016, 55% of unaffiliated voters participated in the Republican primary; in 2020, 65% participated in the Democratic primary. These shifts created different partisan compositions in each primary election compared to 2016. The Republican primary was more dominated by Republican registrants, comprising 74.8% of the Republican primary electorate, compared to 69.9% in 2016. Conversely, the Democratic primary, while still dominated by Democratic registrants, saw the fraction of Democrats voting in the primary fall from 75.7% to 70.9%, while the fraction of the electorate that was unaffiliated grew from 22.2% to 28.9%

---

<sup>1</sup> Data from [https://er.ncsbe.gov/?election\\_dt=03/03/2020&county\\_id=0&office=FED&contest=0](https://er.ncsbe.gov/?election_dt=03/03/2020&county_id=0&office=FED&contest=0).

<sup>2</sup> <https://www.ncsbe.gov/Voters/Registering-to-Vote>

2016 Primary					
	Party Registration				
Party Primary	Democrat	Republican	Third Party	Unaffiliated	Total
Democratic	75.7%	2.0%	0.1%	22.2%	1,160,836
Republican	1.0%	69.9%	0.1%	29.0%	1,154,516
Third Party	7.9%	7.5%	38.5%	46.2%	6,735
Unaffiliated	3.9%	2.5%	0.1%	92.9%	8,773
<b>Total</b>	<b>38.2%</b>	<b>35.7%</b>	<b>0.2%</b>	<b>25.9%</b>	<b>2,330,860</b>
2020 Primary					
	Party Registration				
Party Primary	Democrat	Republican	Third Party	Unaffiliated	Total
Democratic	70.9%	0.2%	0.01%	28.9%	1,340,256
Republican	0.1%	74.8%	0.01%	25.1%	807,483
Third Party	3.0%	1.4%	56.3%	39.3%	7,093
Unaffiliated	0.4%	0.3%	0.0%	99.3%	3,983
<b>Total</b>	<b>44.1%</b>	<b>28.1%</b>	<b>0.2%</b>	<b>27.6%</b>	<b>2,158,815</b>

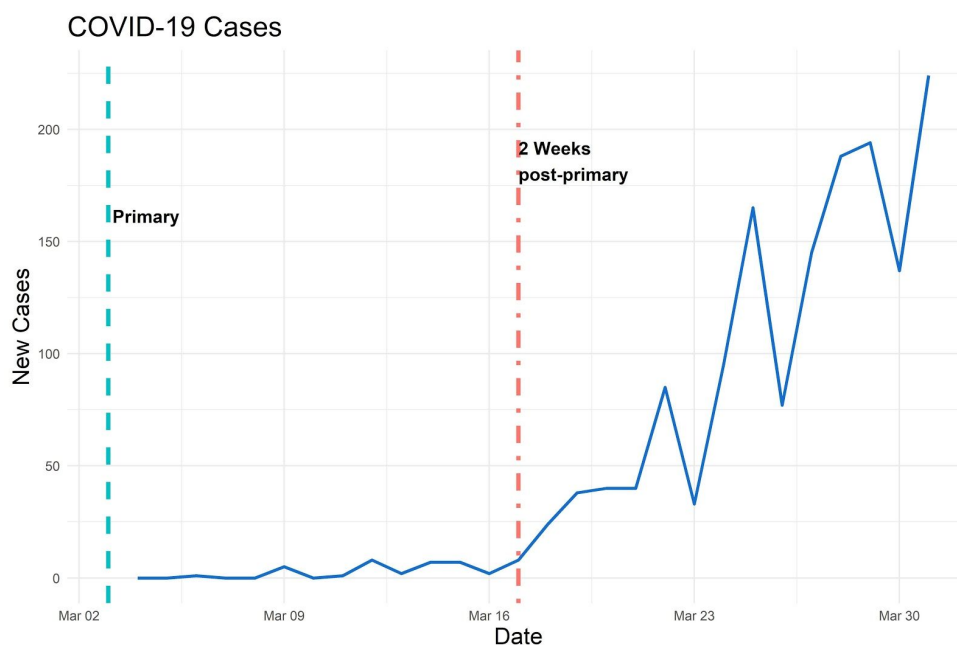
**Table 1: Comparison of party registration and primary voting for the 2016 and 2020 primary elections.**

North Carolina offered three principal modes of voting. Voters may vote early, which North Carolina calls “one-stop early voting,” where they could vote at a range of polling stations within their county. Voters may request an absentee ballot and mail it in.<sup>3</sup> Finally, some voters voted in person on Election Day. For both in-person methods (one-stop early voting, and Election Day voting), voters with disabilities had the option of curbside voting, where an election official brings a ballot out to the voter’s car.

---

<sup>3</sup> North Carolina has an online absentee ballot request portal. Ballots can also be requested using a paper form. The deadline for the request of an absentee ballot for the primary was a week prior to the primary, February 25 by 5:00 p.m. The deadline for return was 5:00 p.m. on Election Day, although ballots were accepted if they were postmarked by 5:00p.m. on Election Day and arrived by 5:00 p.m. three days after the primary.

COVID concerns were largely absent for the 2020 North Carolina primary. Although the virus was already spreading in the US, the primary occurred only three days after the first reported COVID-19 death in Kirkland, Washington. The first case in North Carolina was not announced until Super Tuesday itself. Only two states had declared a state of emergency by this point (Florida and Washington), and the governor of North Carolina did not declare a state of emergency until March 10th.



**Figure 1: Timing of the COVID Pandemic and the 2020 Primary Election**

State, local, and presidential primaries occurred simultaneously, a change legislated in June 2018. Both Democrats and Republicans had U.S. Senate primaries. Thom Tillis, the incumbent, won 78% of the Republican primary vote, while Cal Cunningham won the Democratic primary in a five-person field with 57%. The Democratic Primary was canceled in five of the state's 13 congressional districts, because they were uncontested; the Republican primary was canceled in eight districts for the same reason. Three districts had third-party primaries. The number of candidates competing in these varied. Primaries were held for all state-level executive positions. The gubernatorial primaries were uncompetitive (incumbent Democrat Roy Cooper won his primary with 87.2% of the vote, and the Republican, Dan Forest, won his with 89% of the vote.) However, many of the lesser state offices were very competitive. Finally, there were numerous primaries for local offices.

## Summary of Findings

The North Carolina Presidential Preference election occurred too early for COVID-19 to affect election administration. However, analyzing the 2020 primary elections yields some important insights for administering the general election.

- Voting rates declined between 2016 and 2020. This decline, however, obscure important changes to the electorate between the two elections. While overall turnout declined, the decline is driven by a steep reduction in Republican primary turnout. Participation in the Democratic primary grew among registered Democrats and unaffiliated voters.
  - Compared to 2016, the 2020 Democratic primary electorate was younger and had a smaller proportion of African American voters. The demographic makeup of the Republican primary electorate was similar to that of 2016.
- The North Carolina electorate skewed older, and older voters voted at higher rates. These voters were more likely to vote early, and less likely than younger voters to vote absentee.
- North Carolina voters relied primarily on early (“one-stop absentee”) voting and voting on Election Day. A very small proportion (approximately 1%) of voters vote by mail. When voters *did* vote by mail, they often did so incorrectly, yielding a high proportion of uncounted ballots (~ 9% in the 2020 Primary).
- Young voters were the most likely to have their mail ballots uncounted, either because they arrived late or had a technical defect. This was also true of non-white voters, as well.
  - There was a significant increase in ballots rejected due to the lack of a signature, compared to 2016, from 0.5% of all mail ballots in 2016 to 5.1% in 2020. This may be associated with confusing design of the absentee application and certificate.
- North Carolina has not experienced a decline in voter registration similar to that observed in many other states.
- Average daily traffic at early voting sites was less than average Election-Day traffic at precinct voting. The exception was the final two days of early voting, when average hourly traffic at early voting sites was higher.

## I. Analysis of 2020 Primary

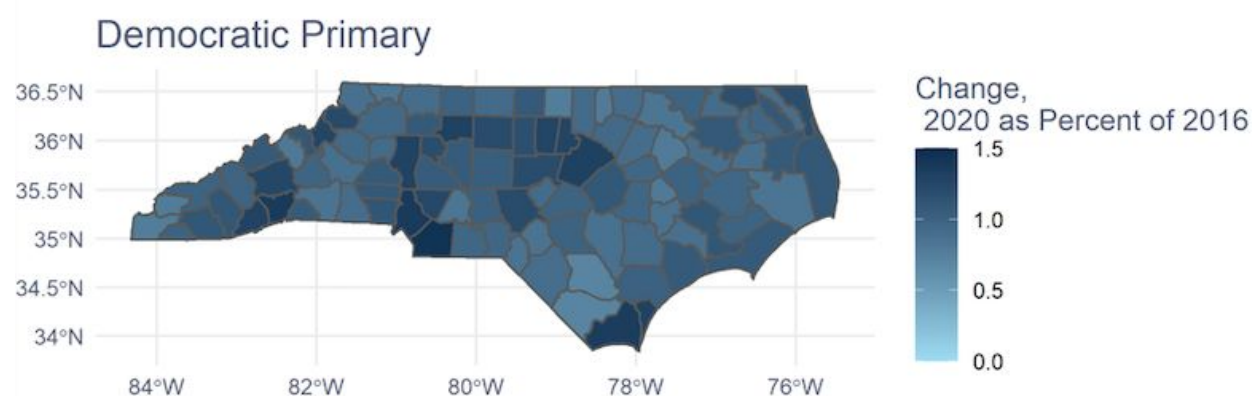
### A. Turnout

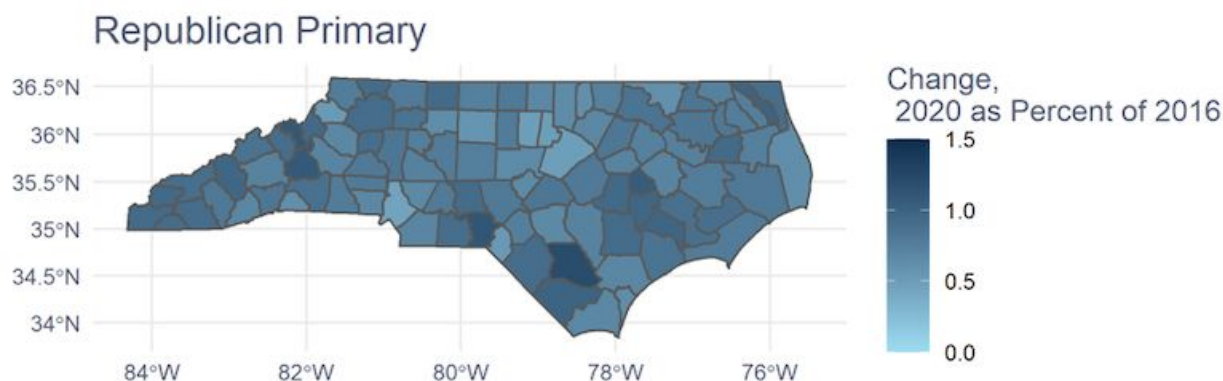
Overall, 2.2 million people voted in the 2020 presidential primary, compared to 2.3 million in 2016. The fact that turnout was relatively steady is a bit surprising, considering the lack of

competition in the Republican presidential primary and in top-of-ballot state races. However, by having primaries for other state and local offices on the presidential preference primary, rather than in a separate summer primary, turnout was probably preserved somewhat. Using the 2016 primary elections as a benchmark, turnout rates declined or were unchanged in the 2020 primary elections. This pattern holds true even when we examine turnout trends separately by demographic groups. In all groups, turnout rates declined from 2016 to 2020. Rates declined the least among registered Democrats and the most among Republicans.

Because the 2016 and 2020 presidential primaries differed substantially in terms of competitiveness, we focus on the size and composition of the respective partisan primaries. Table 1 demonstrates the difference in the partisan composition of the primaries, suggesting that unaffiliated voters took the opportunity to cast votes in the Democratic primary. We extend this analysis below, examining the demographic composition of the Democratic and Republican primaries, benchmarked to the 2016 primary demographics.

The expansion of the Democratic electorate, corresponding to a shrinkage of the Republican electorate, persisted across counties in North Carolina. Figure 2 depicts the county-level change in the size of the primaries. With the exception of the western part of the state, where the size of the Republican electorate grew slightly, the trend extends across counties to varying degrees.





**Figure 2: Change in Primary Turnout in North Carolina Counties from 2016 to 2020. Turnout rates for 2020 were calculated as a percentage of 2016. Values greater than one indicate an increase in turnout, while values less than one indicate a decline in turnout, relative to 2016.**

Below, we discuss the composition of the Democratic and Republican primaries in 2016 and 2020, displaying demographic breakdowns by age, gender, and race. For the demographic distributions in the primary electorate, we examine the composition of those who cast ballots in either the Democratic or Republican primaries. This includes unaffiliated voters who cast ballots for one of the two parties.

### Turnout by Age

The profile of North Carolina voters skewed older, both in terms of the proportion of all voters who were older (Table 2), and turnout rates among older voters (Table 3). To the extent that older voters are more vulnerable to complications and fatality due to COVID-19, the age distribution of North Carolina's primary electorate poses potential difficulties for election administration in the upcoming General Election.

In terms of the composition of the two parties' electorates compared to 2016, the Democratic electorate was notably younger in 2020, whereas there was little change on the Republican side. (Both parties were, nonetheless, dominated by older voters.) Almost half the Democratic primary electorate was 60 and older in 2016; in 2020, that fell to 42.8%. The share under the age of 30 increased significantly, although this group was still under-represented, in terms of their share of the voting-age population.

**Table 2: Age distribution of primary electorate, 2016 and 2020.**

	Total		Democratic		Republican	
	2016	2020	2016	2020	2016	2020
18-29	10.0%	18.5%	8.0%	11.9%	5.4%	6.4%
30-44	21.6%	22.9%	18.1%	19.9%	14.6%	13.2%
45-59	26.6%	24.0%	24.3%	25.5%	28.4%	28.5%
60+	41.7%	34.2%	49.6%	42.8%	51.5%	52.0%

**Table 3: Turnout rates of primary electorate, by age, 2016 and 2020.**

	Total			Democratic			Republican		
	2016	2020	Percent Change	2016	2020	Percent Change	2016	2020	Percent Change
18 - 29	157,712	212,538	1.35%	92,756	115,8686	1.71%	62,476	51,300	0.62%
30 - 44	383,405	376,519	0.98%	210,032	266,902	1.27%	169,008	106,221	0.63%
45 - 59	614,403	574,064	0.93%	282,344	341,462	1.21%	328,120	229,896	0.70%
60 +	1,175,340	995,684	0.85%	575,704	573,024	1.00%	594,912	420,064	0.71%

### Turnout by Gender

There were sizable differences in the composition of the primary electorates, with women making up a much larger proportion of the Democratic electorate (57.1%) than men (39.1%) in 2020, while women and men were more evenly balanced.<sup>4</sup> The gender compositions of the two primaries were virtually unchanged from 2016 to 2020.

**Table 4: Gender distribution of primary electorate, 2016 and 2020.**

	Total		Democratic		Republican	
	2016	2020	2016	2020	2016	2020
Male	45.2%	44.4%	38.5%	39.1%	48.9%	49.2%
Female	53.5%	51.5%	59.2%	57.1%	49.2%	48.7%

<sup>4</sup> The two percentages do not add to 100% because the gender of some voters is not recorded in the voter file.

**Table 5: Turnout rates of primary electorate, by gender, 2016 and 2020.**

	Total			Democratic			Republican		
	2016	2020	Pct. change	2016	2020	Pct. change	2016	2020	Pct. change
Male	1,019,587	927,854	0.91%	446,739	524,801	1.17%	564,523	397,302	0.70%
Female	1,261,676	1,163,718	0.92	687,300	765,355	1.13%	567,747	393,647	0.69%
Unknown	49,596	67,241	1.36%	26,796	50,098	1.87%	22,246	16,534	0.74%

### Turnout by Race

There were stark differences in the racial composition of the North Carolina primary electorates. The most notable difference was between White and Black voters, wherein white voters make up nearly the entire Republican primary electorate, but constitute a bare majority of the Democratic electorate. In both 2016 and 2020, Blacks made up approximately one-third of the voters in the Democratic primary, falling somewhat in 2020.

**Table 6: Racial distribution of primary electorate, 2016 and 2020.**

	Total		Democratic		Republican	
	2016	2020	2016	2020	2016	2020
Black	22.6%	21.7%	36.2%	33.2%	0.9%	0.9%
Asian	1.0	1.3%	0.8%	1.2%	0.8%	0.4%
Indigenous	0.8%	0.8%	0.9%	0.7%	0.3%	0.4%
White	70.7%	67.2%	56.2%	57.0%	94.6%	94.6%
2+ Races	0.5%	0.6%	0.6%	0.7%	0.2%	0.2%
Undesignated Race	2.3%	5.7%	3.5%	5.2%	2.7%	2.8%
Other Race	2.1%	2.7%	1.7%	2.1%	0.9%	0.8%

**Table 7: Turnout rates of primary electorate, by race, 2016 and 2020.**

	Total			Democratic			Republican		
	2016	2020	Pct. Change	2016	2020	Pct. Change	2016	2020	Pct. Change
Black	432,833	453,880	1.05%	420,639	445,304	1.06%	10,726	7,254	0.68%
Asian	14,380	19,650	1.37%	9,477	16,201	1.71%	4,736	3,327	0.70%
Indigenous	14,249	12,608	0.88%	10,799	9,394	0.87%	3,228	2,876	0.89%
White	1,757,800	1,535,955	0.87%	652,945	763,994	1.17%	1,092,621	763,977	0.70%
2+ Races	9,274	10,280	1.11%	6,822	8,790	1.29%	2,285	1,362	0.60%
Unknown	72,039	91,959	1.28%	40,212	68,786	1.71%	9,918	22,310	0.64%
Other Race	30,283	34,481	1.39%	19,942	27,787	1.39%	31,000	6,375	0.72%

## B. Vote Mode

North Carolina voters can cast ballots using three major voting modes: in-person on Election Day, in-person before Election Day (which is termed “one-stop absentee voting in North Carolina”), and absentee.

In both 2020 and 2016, North Carolina primary voters most frequently voted on Election Day, although this percentage fell somewhat (from 69% to 63%) in favor of early voting (from 29% to 36%). Absentee balloting remained essentially flat, dropping from 2% to 1%.

There are also some differences in *when* people voted early, beyond up-ticks due to the higher number of early voters in 2020. The following plot shows the number of votes cast in North Carolina (pooled) based on the day count prior to the election. The early voting period was lengthened in 2020 to a period of seventeen days, which gave voters seven additional days to vote, compared to 2016. In both years, early voting accelerated as Election Day approached, with registered Democrats voting early in greater numbers throughout the whole time period. In 2020, however, registered Democrats tended to vote in even greater numbers later in the voting period, while the timing between the two parties was more consistent in 2016. Both the contestation patterns and dates of the primaries may have played into this. In 2020, the North Carolina primary was moved to Super Tuesday, which was earlier in the election cycle.

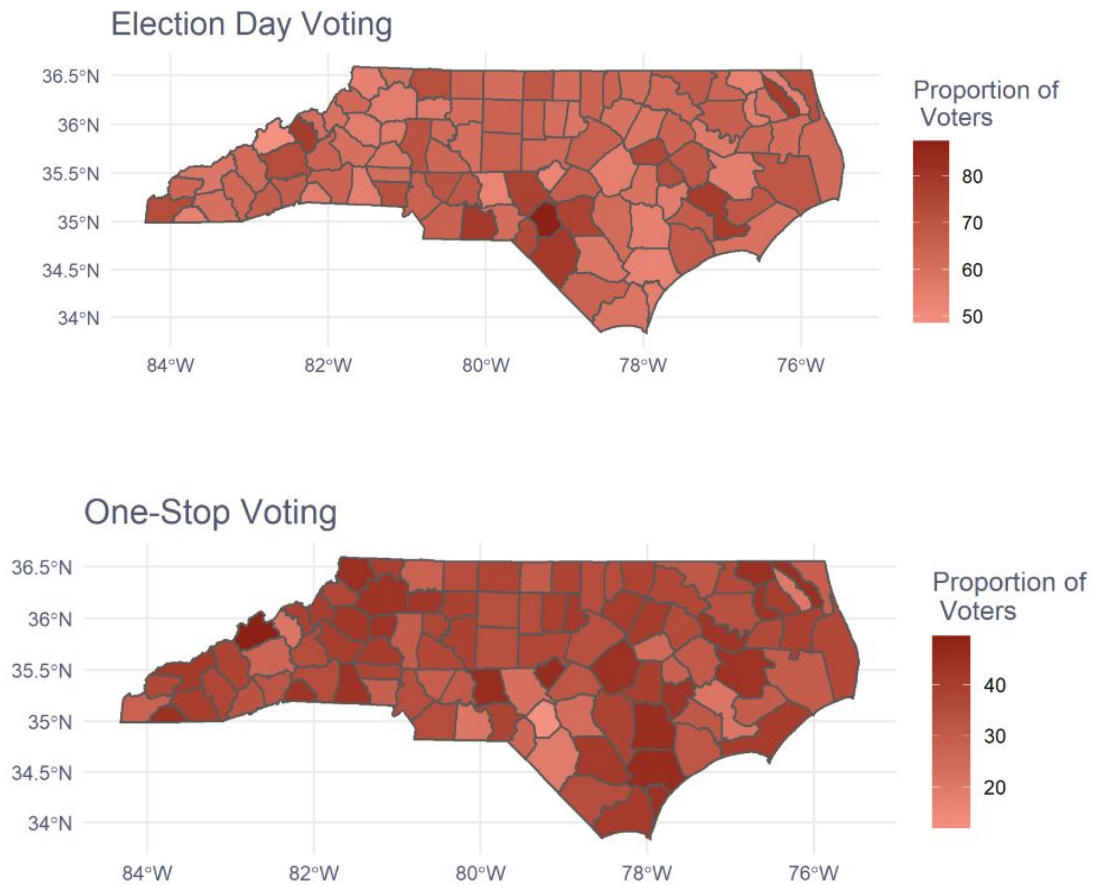


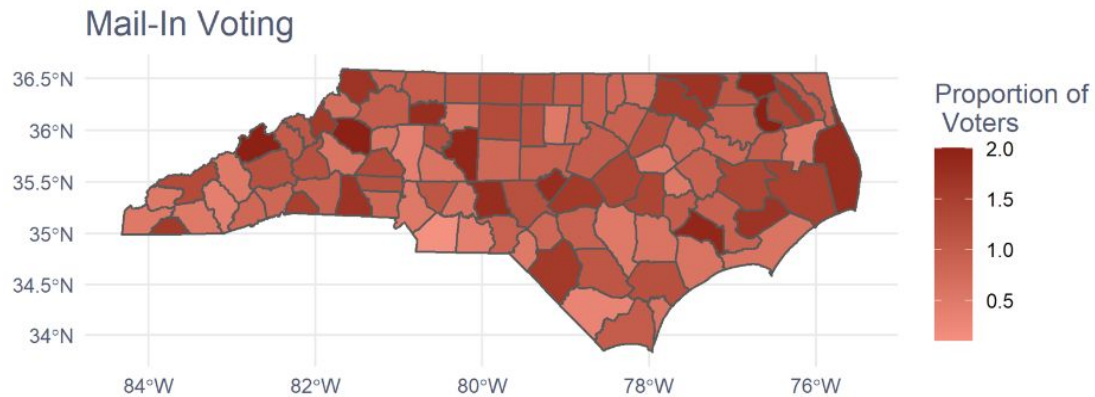
**Figure 3: Timing of Early Voting**

### By County: 2016 vs. 2020 Vote Mode

Though the temporal patterns were consistent across counties, counties varied spatially in the extent to which voters relied heavily on one method of voting over another. There were pockets where

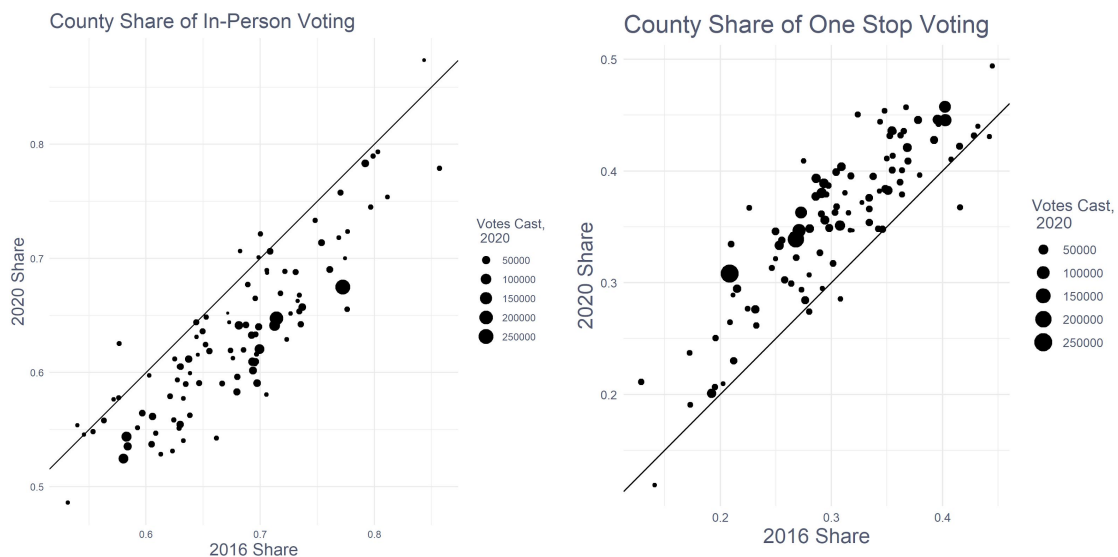
mail-in ballots were more heavily used than elsewhere, particularly along the coast, while some counties remained almost exclusively reliant on in-person voting on Election Day.



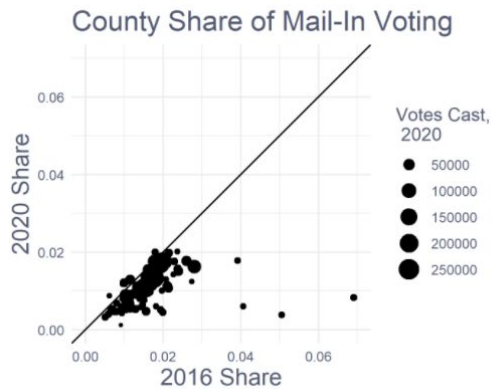


**Figure 4: Spatial Distribution of Vote Mode, 2020**

Between 2016 and 2020, the proportion of people who used early voting increased, from under 30% in 2016 to 36% in 2020. Importantly, this was a trend across geographic and county lines. Figure 4 shows this trend at the county-level. This figure plots the share of all voters who used one-stop early voting, both in 2016 (x-axis) and 2020 (y-axis). Points above the line through the origin indicate that there was an increase in the proportion of voters who used one-stop early voting from 2016 to 2020. Only a few counties saw declines by this metric.<sup>5</sup>



<sup>5</sup> Notably, four counties were outliers in reliance on mail-in voting in 2016, with over 3% of votes coming in from mail-in voting. These counties are Bladen County, Northampton County, Greene County, and Yancey County.



**Figure 4: Distribution of Vote Mode**

### By Party Primary: 2016 vs. 2020 Vote Mode

In both elections, Democrats were more likely to use one-stop voting than Republicans, though once again, both groups saw an increase in reliance on early voting, as well as a slight decline in the proportion of voters who used vote-by-mail.

Table 8: Voting Mode by Party Primary						
	2016			2020		
Primary	Election Day %	Early %	Absentee %	Election Day %	Early %	Absentee %
Democratic	64.5%	33.1%	1.5%	60.8%	37.8%	1.3%
Republican	72.4%	25.9%	1.8%	65.8%	35.2%	1.1%
Third Party	79.7%	19.3%	1.0%	75.5%	23.6%	0.9%

### By Age: 2016 vs. 2020 Vote Mode

Out of all age groups, older voters were the most likely to rely on one-stop early voting. This increased in 2020, where only approximately 50% of older voters chose to vote in-person on Election Day, while 45% relied on one-stop early voting. Given high turnout among older voters, and their membership in a high risk group for COVID-19 complications, this trend will be important to consider when planning for the November election.

<b>Table 9: Democratic Primary Vote Mode by Age</b>						
	<b>2016</b>			<b>2020</b>		
	<b>Election Day %</b>	<b>Early %</b>	<b>Absentee %</b>	<b>Election Day %</b>	<b>Early %</b>	<b>Absentee %</b>
18-29	60.8%	36.2%	3.0%	60.3%	36.6%	3.1%
30-44	72.9%	26.0%	1.1%	69.8%	29.4%	0.8%
45-59	72.3%	27.0%	0.7%	66.5%	32.9%	0.6%
60+	60.0%	38.1%	1.9%	53.4%	45.1%	1.5%

<b>Table 10: Republican Vote Mode by Age</b>						
	<b>2016</b>			<b>2020</b>		
	<b>Election Day %</b>	<b>Early %</b>	<b>Absentee %</b>	<b>Election Day %</b>	<b>Early %</b>	<b>Absentee %</b>
18-29	70.0%	26.7%	3.2%	74.1%	24.5%	1.4%
30-44	82.5%	16.5%	1.1%	77.7%	21.8%	0.6%
45-59	79.3%	19.8%	0.8%	71.6%	27.9%	0.5%
60+	65.9%	31.8%	2.3%	58.5%	40.0%	1.5%

### **By Race: 2016 vs. 2020 Vote Mode**

Voters across races tended to use one-stop early voting at similar rates, with Black voters being the most likely to use early voting, and “Other” racial group voters being the least likely to use early voting.

Table 11: Democratic Vote Mode by Race						
	2016			2020		
	Election Day %	Early %	Absentee %	Election Day %	Early %	Absentee %
Asian	64.5%	33.3%	2.2%	59.6%	38.1%	2.3%
Black	63.5%	35.6%	1.1%	61.6%	37.9%	0.5%
Indigenous	64.8%	33.1%	2.0%	63.5%	35.9%	0.6%
White	66.5%	31.6%	1.8%	60.1%	38.3%	1.7%
Other Race	71.2%	27.8%	1.0%	67.5%	31.5%	1.0%
2+ Races	63.9%	34. %	1.7%	60.3%	37.6%	2.1%

Table 12: Republican Vote Mode by Race						
	2016			2020		
	Election Day %	Early %	Absentee %	Election Day %	Early %	Absentee %
Asian	64.5%	33.3%	2.2%	68.0%	30.5%	1.5%
Black	63.4%	35.6%	1.1%	65.6%	33.5%	0.9%
Indigenous	72.1%	26.9%	0.9%	65.1%	33.9%	1.0%
White	72.3%	25.9%	1.8%	65.6%	33.3%	1.1%
Other Race	76.2%	22.1%	1.7%	70.0%	29.0%	1.0%
2+ Races	71.2%	26.5%	2.3%	66.4%	31.9%	1.8%

### C. Unreturned and Uncounted Mail Ballots

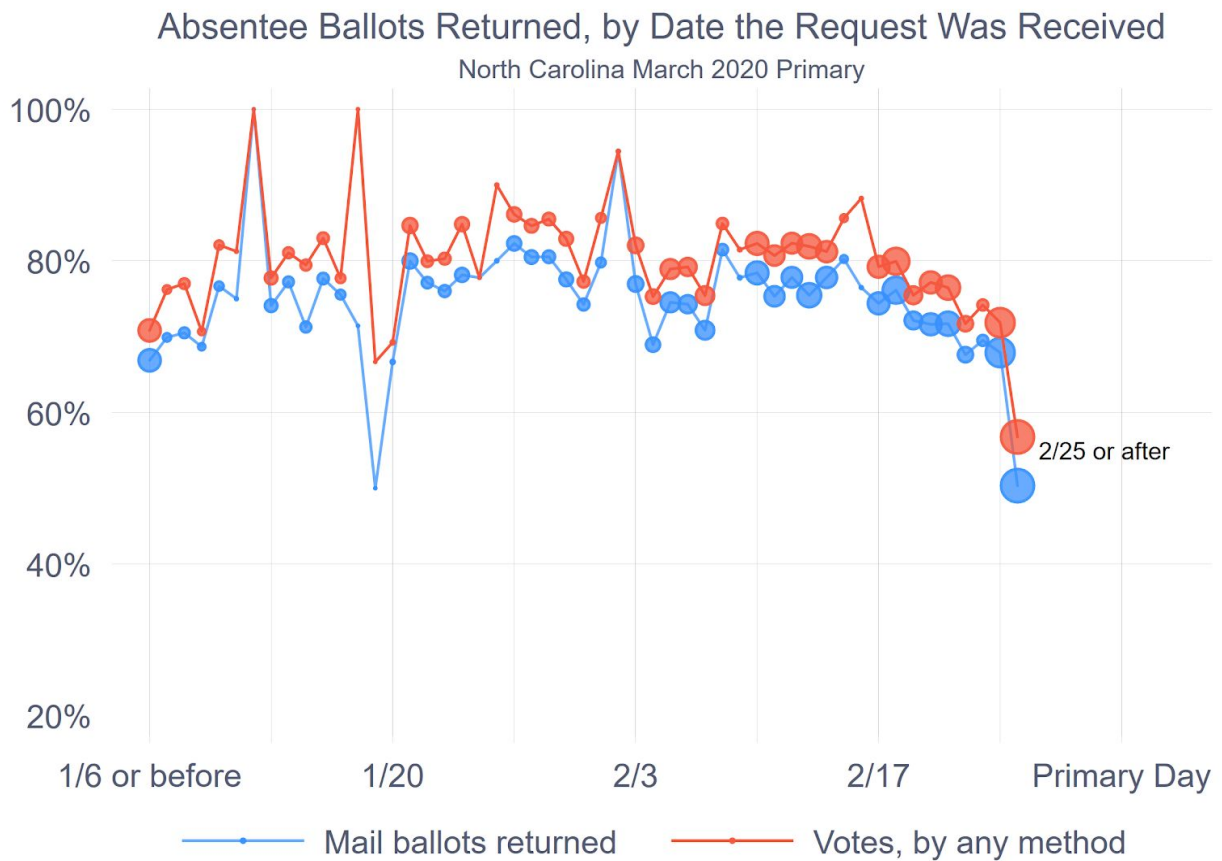
One of the most pressing concerns for the upcoming general election is the performance of the vote-by-mail (VBM) process. Compared to many other states, North Carolina has a relatively low proportion of mail-in ballots cast. Out of the total number of ballots *cast*, only a few percent of ballots are mailed-in. However, a larger number of voters request absentee ballots, and out of those ballots,

many fail to be counted. Some of these ballots are requested but never returned. Of the 41,428 mail-in ballots requested in 2020, 12,067 were never returned. For 2016, those quantities are 56,237 and 14,731 respectively. The following analyses examine the mail-in ballots, some of which are not included in the official tally of votes cast, due to the fact that they were either not returned, or were rejected when they were returned.

### **Unreturned Mail Ballots**

As noted above, 12,067 mail ballots requested were not returned for counting. Although this is a small number of ballots, in the context of 2.2 million ballots that were counted, the pattern of non-returns provides insights into mail-ballot administration more generally.

The return rate was not constant across time, as the accompanying figure shows. From the first of January through mid-February, the overall return rate averaged 75.6%; of those who did not return a ballot, about a quarter ended up voting in person, which means that the overall voting rate (regardless of mode) of these requesters was 80.3%. From that point forward, both the return and voting rates began to gradually decline. Of the 3,719 requests made on February 25, the last day requests could be made, 50.3% yielded a returned ballot. Because some of the requesters who did not return a ballot voted in person, the overall rate of voting among the requesters on February 25 was 56.8%.



### Uncounted Mail Ballots

The percentage of mail-in ballots rejected (as a proportion of all mail-in ballots returned) rose from 6.6% to 9.7%, an increase of 3.1 points.<sup>6</sup> Due to the low number of mail-in ballots, the number of uncounted ballots is relatively low in absolute terms. However, in light of the fact that North Carolina is likely to see greater mail-ballot usage in November, rejected ballots could be more consequential in the November election..

Media and scholarly reports suggest that absentee ballot requests for the September primary are coming in at substantially higher rates than in the past; North Carolina voters have already requested four times the number of absentee ballots than in 2016.<sup>7</sup> In a recent special election held on

<sup>6</sup> At the time of publication, the North Carolina absentee voter file did not list a status for 12,049 absentee ballots in 2016, and 10,380 absentee ballots in 2020. These ballots are excluded from the analysis, as are ballots that were requested but never returned.

<sup>7</sup> <https://www.oldnorthstatepolitics.com/2020/07/NC-july-ABM-requests-estimates.html>

June 23, 3.7% of ballots cast were mail-in ballots, which was a much higher rate than even in the 2020 primary contest a few months prior.

The acceptance rate of mail ballots declined from 93.4% in 2016 to 90.3% in 2020. The overall differences between the two parties were small.

<b>Table 13: Ballot Return Status by Party Primary</b>						
	All Ballots		Democratic Ballots		Republican Ballots	
Ballot Return Status	2016	2020	2016	2020	2016	2020
Accepted	93.4%	90.3%	92.9%	90.2%	94.1%	90.9%
Not Properly Notarized	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%
Returned After Deadline	3.6%	2.6%	3.9%	3.1%	3.4%	1.5%
Returned Undeliverable	0.2%	0.2%	0.3%	0.3%	0.1%	0.1%
Signature Different	0.0%	0.1%	0.9%	0.1%	0.0%	0.1%
Voter Signature Missing	0.5%	5.1%	0.4%	4.9%	0.5%	5.4%
Witness Information Incomplete	1.6%	0.9%	1.7%	0.9%	1.4%	0.9%
Returned ballots	41,506	29,361	19,269	19,656	21,671	9,495

The most notable change in rejections was the dramatic increase in the fraction of returned ballots that were rejected because they lacked a voter signature, rising from 0.5% of returned ballots in 2016 to 5.1%. It is unclear why rejections due to the lack of a signature rose so much in 2020. One election official we spoke to suggested this was due to the confusing layout of the absentee application and certificate, a copy of which is appended to this report.

### **By Age: Uncounted Ballots**

In both elections, younger voters were more likely to have their ballots uncounted, followed by older voters. Rates of uncounted ballots increased across all age groups in both parties.

<b>Table 14: Ballot Rejection Rates by Age</b>				
	<b>Democratic Primary</b>		<b>Republican Primary</b>	
	<b>2016</b>	<b>2020</b>	<b>2016</b>	<b>2020</b>
18-29	8.0%	12.9%	8.4%	11.2%
30-44	6.4%	7.1%	5.6%	6.5%
45-59	6.7%	5.9%	5.4%	6.4%
60+	5.9%	8.6%	4.9%	8.3%

### By Race: Uncounted Ballots

Black voters from both parties were the most likely to see their ballots rejected. While there is a large disparity between the rejection rates among Black Democrats and Republicans, the small numbers of Black registered Republicans made the proportions more driven by just a few ballots cast.

<b>Table 15: Ballot Rejection Rates by Race</b>				
	<b>Democratic Primary</b>		<b>Republican Primary</b>	
	<b>2016</b>	<b>2020</b>	<b>2016</b>	<b>2020</b>
Asian	3.9%	10.7%	6.3%	10.7%
Black	8.0%	13.1%	9.0%	11.7%
Indigenous	3.1%	11.8%	3.4%	9.1%
White	6.0%	8.8%	5.5%	8.1%
Other Race	5.4%	12.1%	9.2%	8.5%
2+ Races	13.0%	10.8%	4.8%	11.1%

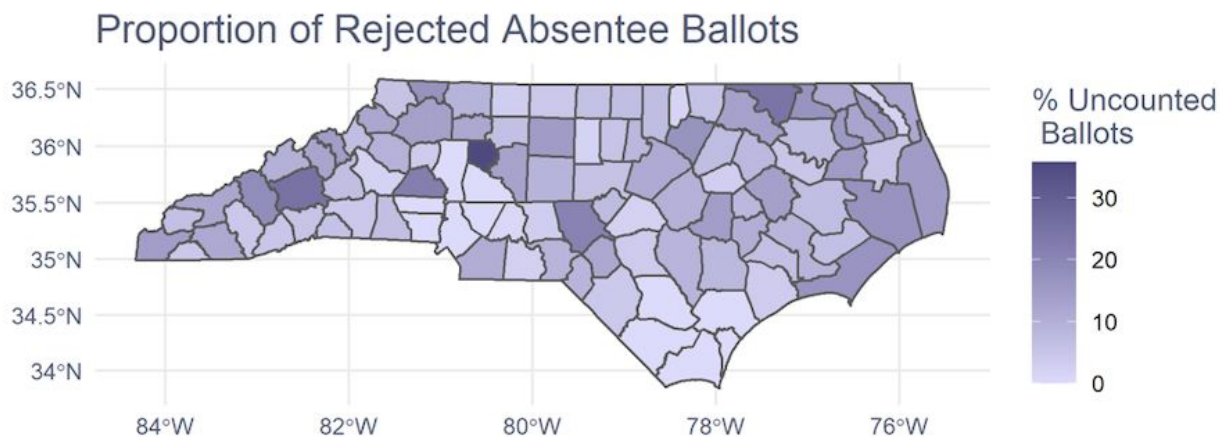
### By Voter Experience: Uncounted Ballots

The increase in absentee ballot rejection rates is potentially troubling for a November general election that relies heavily on early and absentee voting. However, demographic differences do not fully explain why more ballots were rejected. Are people incorrectly filling out ballots -- because they

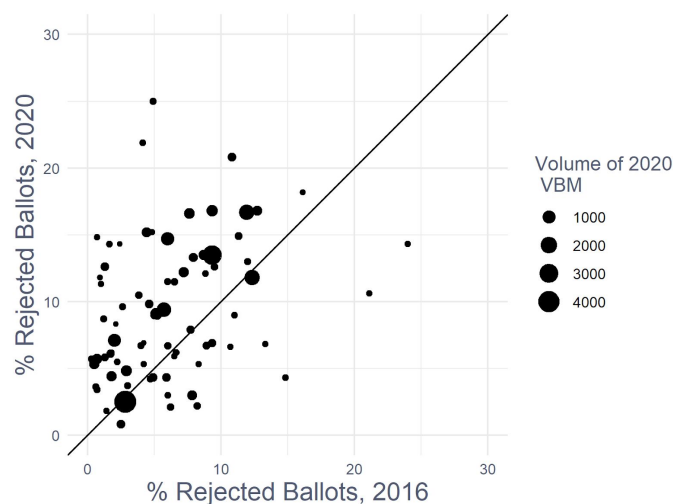
are new to the process, or did not have enough information? We find no substantial differences between experienced and new voters in terms of uncounted ballots. While experienced voters had, on average, a 91.7% acceptance rate of mail-in ballots, new voters had an 88.8% acceptance rate in 2020. For both groups, the most likely reason for rejection was missing voter signatures (4.9% among new voters, and 4.6% among experienced voters). However, new voters were twice as likely to return the ballot after the deadline than experienced voters (3.9% versus 1.9%).

### By County: Uncounted Ballots

There were large geographic disparities in the proportion of mail-in ballots that were rejected, as shown in the map below. There were also increases in most counties in the proportion of mail-in ballots that were rejected between 2020 and 2016. The scatterplot below shows that most counties rejected a higher proportion of mail-in ballots in 2020 than they had in 2016, with the points adjusted to depict the number of mail-in ballots received in that county in 2020.



**Figure 6: Spatial Distribution of Ballot Rejections**



**Figure 7: County Distribution of Ballot Rejections**

## II. Voter Registration

Until recently, most new voter registration in North Carolina has been handled through the Division of Motor Vehicles. According to data provided by the North Carolina State Board of Elections to the U.S. Election Assistance Commission, between 2015 and 2018, the DMV was the source of 51.9% of North Carolina’s 2.1 million new registrations, followed by in-person registration (23.7%), and mail, e-mail, and fax (15.7%). With the recent unveiling of an online portal in cooperation with the DMV, more North Carolinians have begun registering online.<sup>8</sup> Through the first six months of 2020, almost half (47.5%) of new registrations still came through the DMV. However, online registration was in second place, at 24.3% of new registrations, followed by mail applications (15.6%) and in-person/registration drives (9.7%).

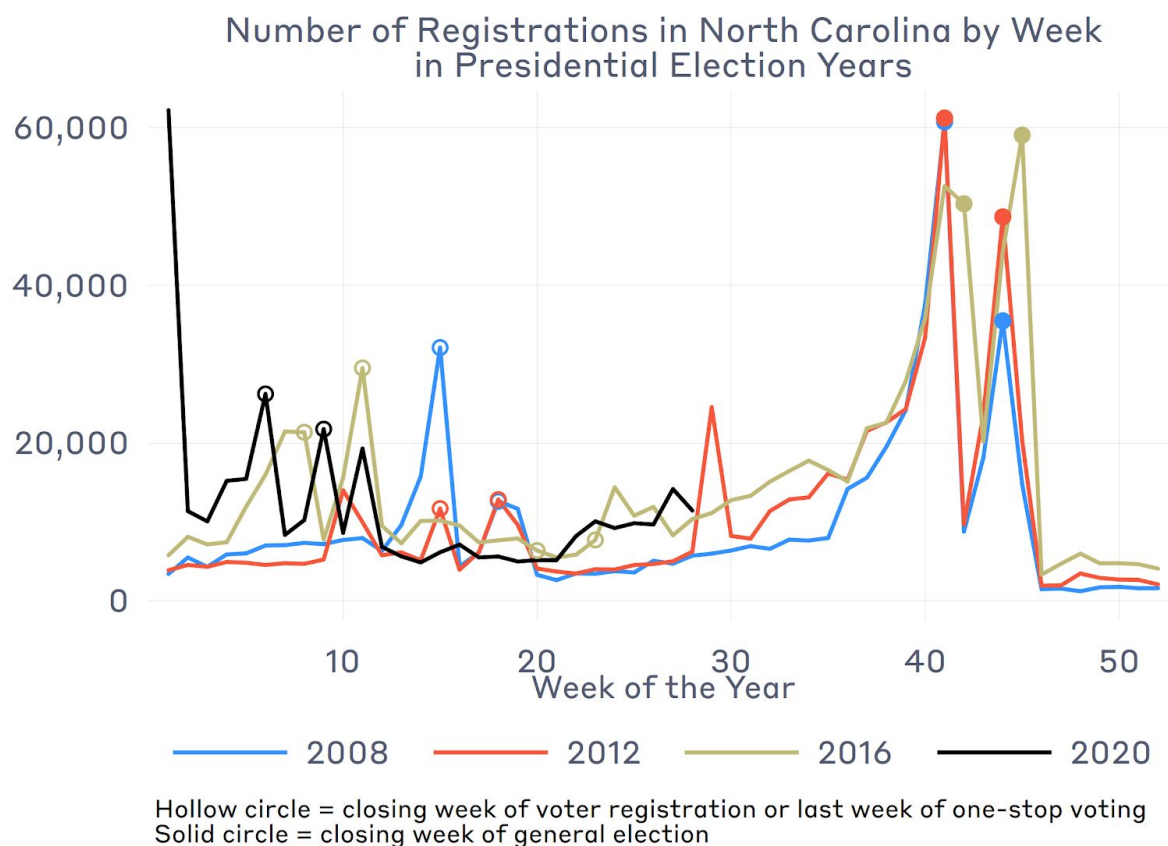
Unlike many other states, North Carolina has not experienced a drop in new voter registrations in 2020, despite disruptions to DMV hours and limitations to in-person registration

<sup>8</sup> North Carolina Board of Elections, “State Board, DMV Partner to Expand Online Voter Registration Service,” Press Release, 3 March 2020, [https://www.ncsbe.gov/Press-Releases/u2226q/6F6E6C696E65?udt\\_2226\\_param\\_detail=2195](https://www.ncsbe.gov/Press-Releases/u2226q/6F6E6C696E65?udt_2226_param_detail=2195).

drives. The graph below shows the relevant data. Each time series shows the number of new registrations recorded in each week of presidential election years from 2008 to 2020. (The last registration date for 2020 reflected in the graph is 17 July 2020.) Hollow circles indicate the week that either included the registration closing date for a primary or the last week of early voting for a primary (when same-day registration was allowed). Solid circles indicate the week that either included the closing date of registration for the general election or the last week of early voting.

Note that virtually all the registration deadlines show a peak in registrations. (The one exception relates to the runoff primary in 2016.) There are a few peaks associated with dates that do not appear to include registration deadlines, which we have not investigated thoroughly.

The registration trend for 2020 is shown in black. It shows the expected peaks before the March primary and two unexpected ones--during the first week of the year, in which over 60,000 new registrations were recorded, and the week after the primary, which experienced another peak similar in size to the two pre-primary surges. (The first-week surge is due to an extraordinarily large number of registrations attributed to the online system run by the Division of Motor Vehicles. We have not yet investigated this further.) Registration levels did drop immediately after the primary, but to levels comparable to prior years. Registrations began picking up toward the beginning of June, and have stayed on par with 2016, and well ahead of 2008 and 2012.



A perusal of the state’s online NVRA data suggests that the late-spring/early-summer rise in registrations is attributable to the state’s new online system that is not directly tied to DMV transactions. If so, then online registration in North Carolina seems to have replaced in-person registration modes (such as drives) and mail, unlike many other states.

### III. Polling Place Traffic

Arguably the most critical question, from a public health perspective, about online voting in November, is whether in-person polling places will be sufficiently “de-densified.” This is the main motivation behind trying to shift as many voters as possible to voting by mail. A related impulse is to encourage more early in-person voting, under the assumption that early voting sites are less crowded than Election-Day sites. There is some evidence from 2016 that this assumption may be incorrect.<sup>9</sup>

<sup>9</sup> Charles Stewart III, “Will expanded early voting help with social distancing? Maybe not.” *Election Updates*, 25 March 2020, <https://electionupdates.caltech.edu/2020/03/25/will-expanded-early-voting-help-with-social-distancing-maybe-not/>.

Here, we investigate the relative occupational density of early voting and Election Day polling place sites in the 2020 North Carolina primary.

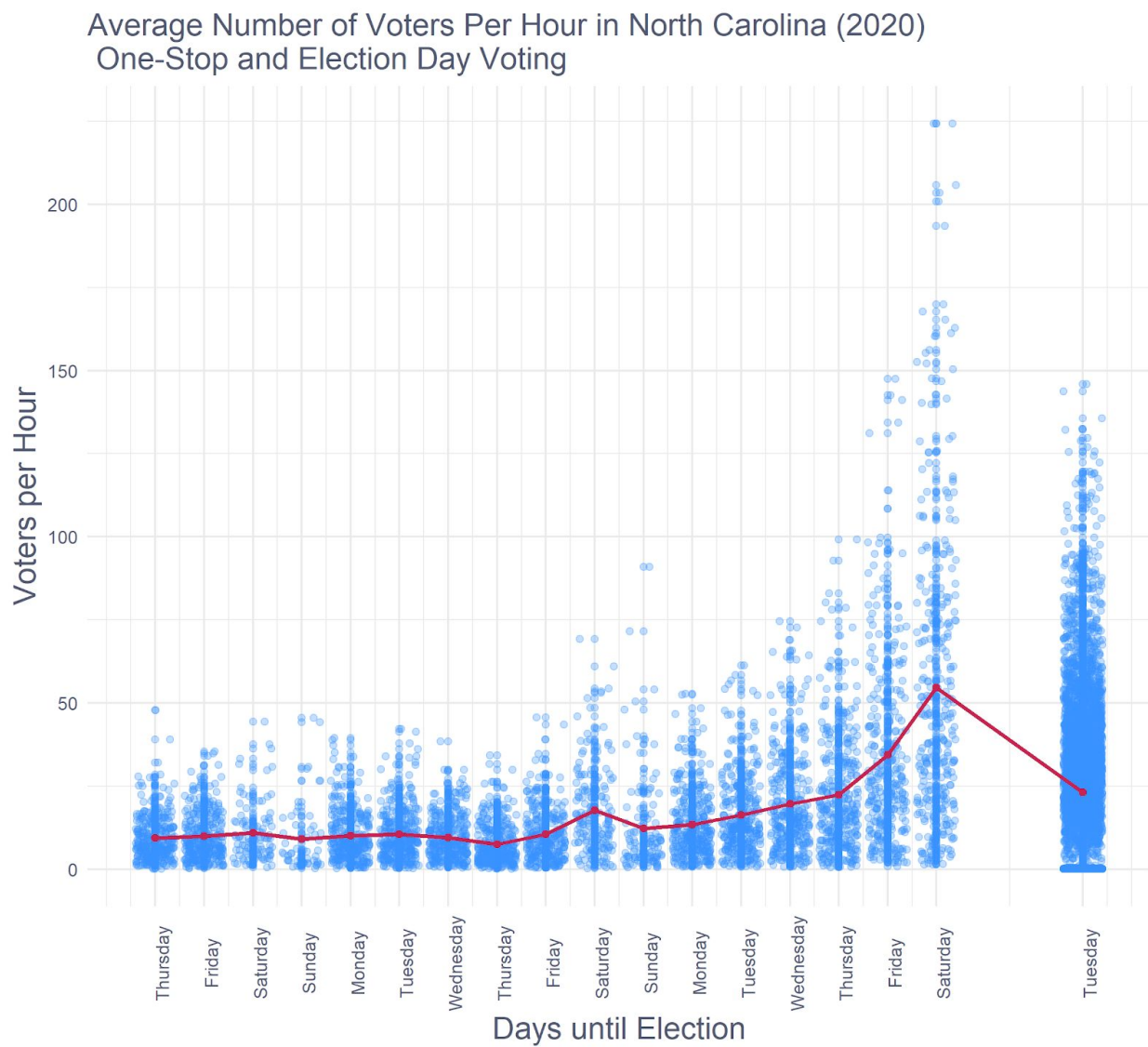
The North Carolina absentee ballot file contains the date on which early voters cast their ballots. Using the voter file, we know the polling place where Election-Day voters cast their ballots. Using these data sources, we can also begin to estimate how crowded polling stations were, both on early voting days, and during election day.

Some of the data we have are not granular enough for precise estimates of crowding. For that we would need not only actual vote times, but also information like the square footage of different polling places, or a proxy such as the number of voting booths. In lieu of that, we can take the average number of people who voted on a particular day in a particular place, and divide it evenly by the number of hours that the voting station was open. (Our examination of the locations of early voting and Election-Day polling sites suggests that, on average, the same types of facilities are used for each in most counties. Therefore, the following analysis should help to inform our understanding of this issue in general, although it will of course not necessarily inform the analysis of particular polling locations.)

### A. Early Voting vs. Election Day

I start by examining hourly voting traffic at early voting sites in 2020 to better understand this dynamic. To construct the hourly voting count, I took the count of how many people voted at a particular site on a particular day, and divided it by the total number of hours that the site was open. This is, of course, an imperfect estimate of hourly voting traffic, since it does not actually take into account when people vote during the day. However, past data suggest that early voting traffic tends to be more consistent throughout the day, making this a reasonable proxy for crowding.

Unsurprisingly, early voting traffic got heavier as the primary date approached. Figure 8 shows the distribution of hourly traffic at each polling station, ordered according to proximity to the election. The average traffic at Early Voting stations in the days leading up to the election was actually *higher* than the average traffic on Election Day, though there is a wide distribution.



**Figure 8: Traffic and Election Proximity**

Although early voting hours were far more plentiful than Election Day hours, early voting stations sometimes were busier than -- or at least as busy as -- the regular Election Day polling stations. For the primary period, the average number of hourly voters in early voting sites was less than the number in Election-Day sites, except for the last two days of early voting. While this was mostly good news for the primary, analysis of similar data for the 2016 general election showed that early voting sites in North Carolina were *more crowded*, on average, than Election Day precincts. Unless North Carolina significantly expands the number of early voting sites for the upcoming general election, or

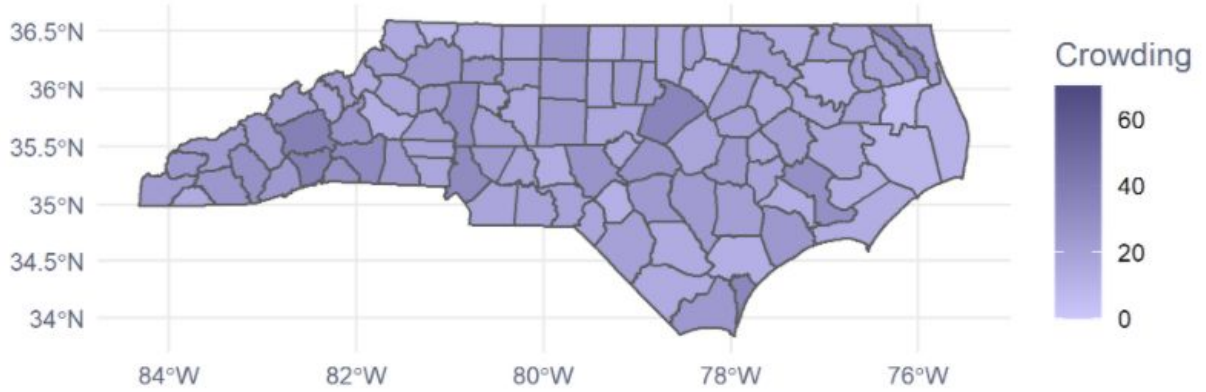
significantly expands hours at early voting sites, the state risks creating a situation in which early voting could pose greater risks than Election Day voting.<sup>10</sup>

Below in Figure 9, I have shown average hourly voting rates, for early voting and on Election Day. Over the whole Early Voting period, some polling stations saw, on average, as much foot traffic as polling stations on Election Day. There is a moderate correlation between traffic in early-voting and Election-Day sites, with greater crowding occurring for the most part in the larger counties.

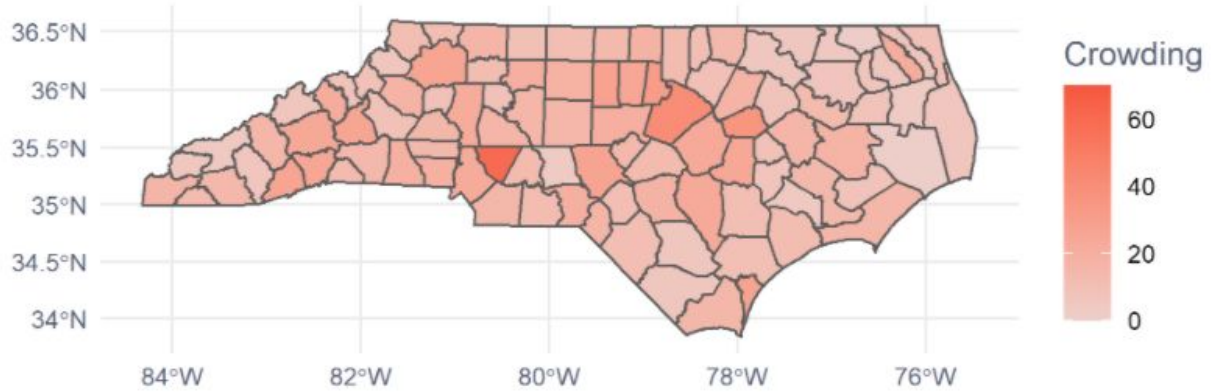
---

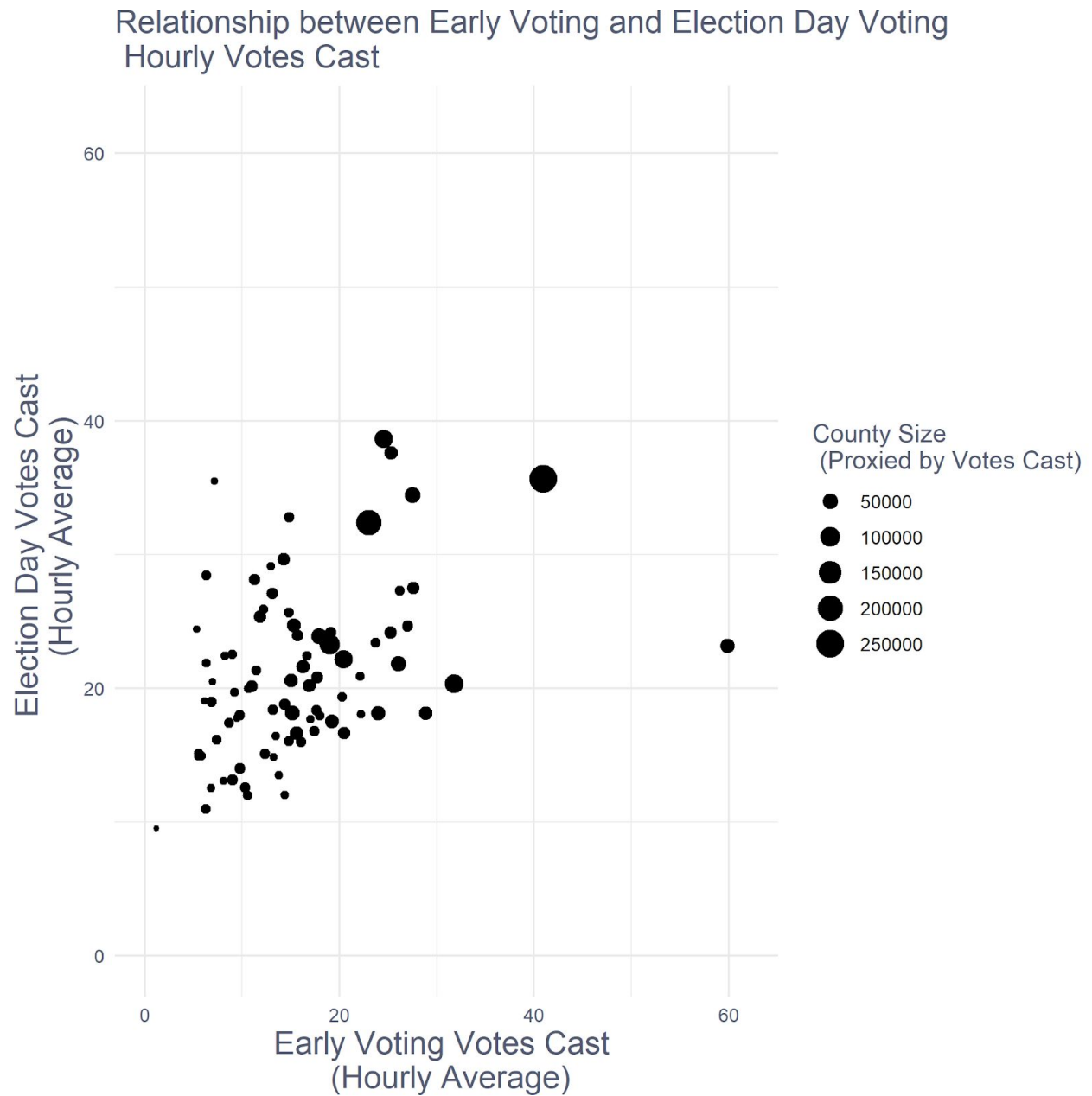
<sup>10</sup> Charles Stewart III, “Will expanded early voting help with social distancing? Maybe not.” *Election Updates*, 25 March 2020, <https://electionupdates.caltech.edu/2020/03/25/will-expanded-early-voting-help-with-social-distancing-maybe-not/>.

Average Hourly Traffic, Election Day



Average Hourly Traffic, Early Voting





**Figure 9: Traffic on Election Days**

## Conclusion

The analysis in this report yields three important take-aways:

1. Growth in the Democratic electorate: Between 2016 and 2020, the size of the Democratic electorate swelled, despite declining overall participation in the primaries. This could suggest an increase in turnout in the General Election, as voters from both parties will have a competitive election in which to participate. The patterns of participation in the polls discussed in this report should therefore be viewed as an underestimate of the potential for traffic and stress on election administration during a pandemic.
2. Potential for substantial crowding at early voting sites: Use of early voting increased in the 2020 Primary Election. This leaves the potential for increased traffic at early voting sites, which already saw a high volume of visitors on some days, particularly the days leading up to an election. While we do not have the data necessary to analyze whether social distancing is possible despite high traffic levels at voting sites, election administrations should be aware of this trend.
3. Potential for a large number of absentee ballot rejections: Absentee ballots are neither widely used, nor universally *correctly* completed in North Carolina. While the number of rejected absentee ballots is low, the proportions of rejected absentee ballots is quite high, particularly among older voters. Should reliance on absentee ballots grow, especially among older voters in the high risk category for COVID-19, there is a latent potential for widespread rejected ballots.
4. Voter registration pace: Voter registration has kept pace with registration in past years, unlike the pattern seen in many states.<sup>11</sup> This appears to be due to robust use of North Carolina's new online voter registration portal.

## Data

The data for this analysis come from the [Elections Results Data](#) that the North Carolina State Board of Elections maintains. To characterize the potential current electorate (all people who could have voted), I use the state voter file, which contains the demographic information for every registered voter in the state, using voters who were registered prior to the 2020 registration deadline of February 7, 2020. To characterize the 2016 electorate, I examine current voters who registered to vote prior to the deadline for the 2016 primary (February 25, 2016). For both elections, I consider registered voters as all those *except* for whose registration was denied, which was 136,177 voters as of February 7, 2020. I generate statistics turnout and voter statistics using the state voter history file.

---

<sup>11</sup> This pattern has been documented in the quantitative studies of Florida and Ohio by the Healthy Elections Project. Also see the June report by the Center for Election Innovation and Research, *New Voter Registrations in 2020*, 10 June 2020, [https://electioninnovation.org/wp-content/uploads/2020/06/New\\_Voter\\_Registrations.pdf](https://electioninnovation.org/wp-content/uploads/2020/06/New_Voter_Registrations.pdf).

Data on absentee voting come from the absentee voter files that North Carolina uploads for each election, rather than the voter history file, because the voter history file does not contain information on the reasons why different ballots were accepted or rejected.

# Appendix. Absentee Application and Certificate

## Absentee Application and Certificate

**Fraudulently or Falsely completing this form is a Class I felony under Chapter 163 of the N.C. General Statutes**

**The following people are PROHIBITED from signing the Witness Certification:**

**For all voters:** a candidate, UNLESS the candidate is the voter's near relative;

**For voters who are patients or residents of a hospital, clinic, nursing home, or adult care home:** (1) an owner, manager, director, or employee of that facility; (2) an individual who holds any federal, State, or local elective office; and (3) an individual who holds office in a State, congressional district, county or precinct political party or organization, or who is a campaign manager or treasurer for any candidate or political party.

<p><b>Voter's Certification (Required)</b></p> <p>I attest that I am currently registered to vote in this county and I will have resided at the address on this application for 30 days immediately prior to this election. I am a United States citizen and I am at least 18 years old, or will be by the date of the general election. I understand that it is a felony to vote more than one time in an election. I have not been convicted of a felony, or if I have been convicted of a felony, I have completed my sentence, including any probation or parole.</p> <p>I further certify that I marked the enclosed ballot (or it was marked for me according to my instructions) <u>in the presence of</u>:</p> <p><input type="checkbox"/> two (2) witnesses who are at least 18 years of age and who are not disqualified by law to witness the casting of my absentee ballot (the witnesses must complete Option 1 of the Witness Certification) <b>OR</b></p> <p><input checked="" type="checkbox"/> a notary public (the notary must complete Option 2 of the Witness Certification)</p> <p><b>X</b> Signature of Voter (Required) _____ Date _____</p> <p>Name (optional) _____</p> <p><b>Voter Assistant Certification (If applicable)</b></p> <p><input type="checkbox"/> I certify that: • the Voter requested my assistance • I assisted by marking the ballot and/or the Absentee Application and Certificate according to the Voter's instruction only • I assisted only while in the Voter's presence • I am the Voter's near relative or verifiable legal guardian, or I am providing assistance because a near relative or legal guardian is unavailable to assist the voter and I am not disqualified from assisting the Voter under G.S. 163-226.3(a)(4) or G.S. 163-237(c).</p> <p><input type="checkbox"/> I certify that: • Due to a disability the Voter requested my assistance placing the sealed absentee return envelope in the closest U.S. Mail depository or mailbox • I mailed the ballot as directed by the Voter • I am not disqualified from assisting the Voter under G.S. 163-226.3(a)(4) or G.S. 163-237(c).</p> <p>Name of Assistant _____ Address of Assistant _____</p> <p><b>X</b> Assistant's Signature _____ Date _____</p>	<p><b>Witness Certification</b></p> <p><b>Option 1: Two (2) Witnesses</b> (Required Unless a Notary Public is the Witness)</p> <p>I certify that: • I am at least 18 years old • I am not disqualified from witnessing the ballot as described in the WARNING on the flap of this envelope • The Voter marked the enclosed ballot in my presence, or caused it to be marked in the Voter's presence according to his/her instruction • The Voter signed this Absentee Application and Certificate, or caused it to be signed • I <b>respected</b> the <b>secrecy of the ballot and the Voter's privacy</b>, unless I assisted the Voter at his/her request (complete Voter Assistant Certification section).</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Witness #1</th> <th style="width: 50%;">Witness #2</th> </tr> <tr> <td>Signature (Required) _____</td> <td>Signature (Required) _____</td> </tr> <tr> <td>Street Address (Required) _____</td> <td>Street Address (Required) _____</td> </tr> <tr> <td>City, State and Zip (Required) _____</td> <td>City, State and Zip (Required) _____</td> </tr> <tr> <td>Date _____</td> <td>Date _____</td> </tr> </table> <p><b>Option 2: Notary Public as Witness</b> (Required Unless Two Witnesses Provided)</p> <p>I certify that on the _____ day of _____, 20____, the Voter: personally appeared before me, was positively identified and in my presence, the Voter marked the enclosed ballot or caused it to be marked in the Voter's presence according to his/her instruction • The Voter signed this Absentee Application and Certificate, or caused it to be signed • I am at least 18 years old • I am not disqualified for witnessing the ballot as described in the WARNING on the flap of this envelope • I <b>respected the secrecy of the ballot and the privacy of the Voter</b>, unless I assisted the Voter at his/her request (complete Voter Assistant Certification section).</p> <p><small>NOTE: A notary may not charge any fee for administering and affixing a notarial seal to an absentee ballot application or certificate. (G.S. § 16B-39)</small></p> <p>STATE OF _____</p> <p>COUNTY OF _____</p> <p>Notary Public _____</p> <p>Commission Expiration Date _____</p>	Witness #1	Witness #2	Signature (Required) _____	Signature (Required) _____	Street Address (Required) _____	Street Address (Required) _____	City, State and Zip (Required) _____	City, State and Zip (Required) _____	Date _____	Date _____	<p>Affix NON-BARCODE Label HERE</p> <p>Affix BARCODE Label HERE</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;">Date Ballot Received: _____</td> <td style="width: 33%;">Voter Certification Signed: <input type="checkbox"/> Yes <input type="checkbox"/> No</td> <td style="width: 33%;"></td> </tr> <tr> <td>Received Mailed: _____</td> <td>Witness Certified Signed: <input type="checkbox"/> Yes <input type="checkbox"/> No</td> <td></td> </tr> <tr> <td>Ballot Mailing Date: _____</td> <td>CDE Received Date: _____</td> <td></td> </tr> <tr> <td>Ballot Signature: _____</td> <td>Return Address: _____</td> <td></td> </tr> </table> <p><b>Second Primary Request or Runoff Request</b></p> <p>In the event that a Second Primary (or Runoff Election) is called, I request that an absentee application and ballot be issued to me and mailed to me:</p> <p>Signature of Voter (if applicable) _____ Date _____</p> <p>Address shown applied on and ballots should be mailed _____</p>	Date Ballot Received: _____	Voter Certification Signed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Received Mailed: _____	Witness Certified Signed: <input type="checkbox"/> Yes <input type="checkbox"/> No		Ballot Mailing Date: _____	CDE Received Date: _____		Ballot Signature: _____	Return Address: _____	
Witness #1	Witness #2																							
Signature (Required) _____	Signature (Required) _____																							
Street Address (Required) _____	Street Address (Required) _____																							
City, State and Zip (Required) _____	City, State and Zip (Required) _____																							
Date _____	Date _____																							
Date Ballot Received: _____	Voter Certification Signed: <input type="checkbox"/> Yes <input type="checkbox"/> No																							
Received Mailed: _____	Witness Certified Signed: <input type="checkbox"/> Yes <input type="checkbox"/> No																							
Ballot Mailing Date: _____	CDE Received Date: _____																							
Ballot Signature: _____	Return Address: _____																							

NCSBE v2020.01