



February 17, 2020

Jasmine Shannon
Elections Division
Office of the Secretary of State
2 Martin Luther King Jr. Drive, S.E.
8th Floor West Tower
Atlanta, GA 30334

Re: Proposed Amendments to SEB Rules 183-1-12 and 183-1-13.

Dear Ms. Shannon:

On behalf of the Brennan Center for Justice at NYU Law and Common Cause on behalf of Common Cause Georgia, we write to provide comment on proposed Rules 183-1-12 and 183-1-13, made available by the State Election Board on January 24, 2020.¹

In our previous public comment submitted on January 13, 2020, we recommended a number of changes that would increase the security and resiliency of Georgia's elections.² Among other changes, we recommended that the State Election Board require polling places to keep enough emergency paper ballots and provisional ballot materials on hand for 2–3 hours of peak voting, prohibit electronic pollbooks from being connected to the public internet, expand pre-election

¹ The Brennan Center is a nonpartisan law and policy institute that works to reform, revitalize—and when necessary—defend our country's systems of democracy and justice.

Common Cause is a nonpartisan, grassroots organization dedicated to upholding the core values of American democracy. We work to create open, honest, and accountable government that serves the public interest; promote equal rights, opportunity, and representation for all; and empower all people to make their voices heard in the political process.

Common Cause Georgia is a non-profit, non-partisan advocacy organization that works to strengthen public participation in our democracy and ensure that public officials and public institutions are accountable and responsive to citizens.

This comment does not reflect the views, if any, of the NYU School of Law.

² Public Comment Re: Proposed Amendments to SEB Rules 183-1-12, 183-1-13, and 183-1-14, Brennan Center for Justice and Common Cause on behalf of Common Cause Georgia (Jan. 13, 2020), https://www.brennancenter.org/sites/default/files/2020-01/Brennan%20Center_Public%20Comment_Georgia%20Proposed%20Election%20Rules.pdf.

testing of voting system components, improve voter verification procedures, and ensure that polling places have an adequate number of voting machines.

The recent proposed amendments take several important steps to improve the resiliency and integrity of Georgia's elections. In particular, we want to express our support of the following proposed amendments.

First, we support the amendments to Rule 183-1-12-.11(8), which would require a poll officer to be stationed at every ballot scanner and issue specific verbal instructions to remind voters to verify their ballot before scanning it.

Second, we support the proposed amendments to Rule 183-1-12-.11(10)(a), which would require poll officers to document and immediately inform the election superintendent whenever one or more ballot marking devices are "associated with a significant number of incidents." However, we recommend replacing this language with "associated with significant incidents," to make clear that poll officers should immediately alert the election superintendent when a significant and obvious ballot marking device issue arises, without needing to wait for the error to arise again subsequently.

Finally, we support the proposed language in Rule 183-1-13-.02, which would allow "an illiterate or disabled elector who is entitled to receive assistance" to use an assistive technology device to help the voter review their paper ballot prior to casting. With this requirement, we stress the importance of proper poll worker training to ensure that the rule is properly implemented to protect voter privacy.

But we also believe that far more resources are required than the proposed rules call for, to ensure that voters are not subject to long lines, delays, and disenfranchisement if and when systems fail. In particular, as our analyses below demonstrate, the rules fall short of providing enough machines, emergency paper ballots, and provisional voting materials, even when taking high usage of early voting methods into account. To advance this goal and build public confidence that Georgia's election outcomes will be true and trusted, we are recommending the following resource levels:

- One machine or voting booth for every 250 registered voters;
- Emergency paper ballots for 25% of registered voters; and
- Provisional voting materials for 25% of registered voters.

I. Require a sufficient number of voting machines on election day to manage historic turnout in 2020.

State statute requires counties to provide at least one voting booth or enclosure for every 250 electors within the jurisdiction.³ Some counties have reported that compliance with this requirement may require rewiring of polling places to accommodate the power demands of new

³ O.C.G.A. § 21-2-367(b).

ballot marking device systems.⁴ But the proposed rule amendments are not a good solution to this problem, as our analysis below shows that they would risk long lines by permitting polling places to have far fewer than one voting machine per 250 registered voters on election day. Below, we show that long lines are likely to occur if counties reduce the minimums and adjust machine allocations based on actual early voting data, which would lead to *fewer resources for those precincts showing high voter enthusiasm during the early voting period*. We further demonstrate that long lines are likely to occur even if counties use county-wide averages of early voting rates to determine minimums, due to high variation in early and election day turnout. Finally, we estimate that long lines would be likely to occur even if the statutory minimum were simply lowered significantly across the board. As a result of this analysis, we recommend instead that counties receive financial and technical assistance to test the capacity of polling place facilities and upgrade where appropriate.

a. Long Lines in Three Different Counties Under the Proposed Rule

The proposed rule defines the term “electors” as “those electors on the official list of electors for the precinct who have not voted as of Election Day.” Using the Line Optimization Tool available from the Voting Technology Project of MIT and Caltech, we performed a simulated analysis of the wait times voters would have experienced under the proposed rule, using 2016 turnout data in Georgia.⁵ Our analysis shows that even if election officials are able to calculate the reduction in number of machines needed for election day and adjust quickly, as the proposed amendment asks them to do, the resulting reduction in voting machines would cause wait times to increase substantially on election day.

Table 1 below shows the effect of allowing counties to, under the proposed rule, go below the statutory minimum of one machine for every 250 registered voters on election day. For this analysis, we used 2016 precinct data on the number of registered voters and the number of voters in each precinct that used early voting options. We assumed no bottleneck at check-in and a voting time of only four minutes. The four minute voting time estimate was calculated with the Voting Time Estimator tool developed by the Center for Technology and Civic Life, and the estimate is based on the length and style of actual 2016 ballots in three Georgia counties.⁶ The tool predicts an approximately 4 minute voting time for such ballots on a Direct Recording Electronic (DRE) system, but ballot marking devices (BMDs) require the added steps of printing, voter verification, and scanning, making the 4 minute estimate a conservative one. Given the expected high turnout in 2020, the ever-present potential for technical malfunction, and the number of voters who will be using the new ballot marking device system for the first time, we

⁴ Jessica Waters, *The Power To Vote Literally Carries a Cost*, Connect News (Feb. 12, 2020), <https://www.connectlocal.news/post/the-power-to-vote-literally-carries-a-cost>

⁵ The Line Optimization Tool is available at <http://web.mit.edu/vtp/calc3.htm>. Because the tool is simulation-based, users attempting to reproduce these results may see slight variations from our output, particularly if different optional settings are chosen. We chose to have the tool run 1000 simulations per precinct rather than the default of 20, in order to obtain more stable results. We set check in stations at the maximum, 35, in order to isolate the effect of too few machines. Otherwise, we chose the tool’s default settings, such as a “composite” arrival pattern, with arrivals randomized around that underlying pattern, and an early arrival rate of 1.2%.

⁶ The Voting Time Estimator tool is available at <https://electiontools.org/tool/voting-time-estimator/>. The tool uses the number of contested races, number of uncontested races, number of multiselect races, number of initiatives, number of yes/no retention votes, and voting styles (paper or electronic) to estimate voting times.

stress that four minutes to vote is likely too low of an estimate. But we used this conservative number to emphasize how risky reducing the minimum number of machines in 2020 would be.

We simulated average and peak wait times for precincts across three Georgia counties — one urban, one suburban, and one with much lower population density. For this, we used two different methods of allocating voting machines on election day. In the first method — the “statutory” method — we allocated one voting machine for every 250 registered voters in each precinct in 2016. In the second method — the “proposed” method — we allocated one voting machine for every 250 registered voters in each precinct *who had not already voted by election day* in 2016. Then, election day turnout from the actual 2016 election was used to simulate wait times. Under the statutory method, no voters in Fulton, Cobb, or Bibb Counties were predicted to experience wait times of over 30 minutes. But under the proposed method to reduce machines based on early voting, voters in 8 precincts in Fulton, 7 precincts in Cobb, and 6 precincts in Bibb would have experienced unacceptable waits at peak times. This is remarkable considering that Bibb County only had 34 precincts total in 2016. In one precinct in Fulton County voters would have experienced these waits *all day* — from 7:30am until the scheduled close of the polls at 7pm. Seven examples are shown in the table.

Table 1: Expected Election Day Wait Times Under Statutory Method and Proposed Method

Precinct	Statutory Method		Proposed Method to Reduce Machines	
	Avg. Wait Time	Peak Wait Time	Avg. Wait Time	Peak Wait Time
Fulton Precinct 01B	0	2	14	49
Fulton Precinct 02J	0	3	141	324
Fulton Precinct 02E	0	2	9	35
Cobb Garrison Mill 01	0	3	12	45
Cobb Sandy Plains 01	0	4	12	46
Bibb Rutland 1	0	1	12	44
Bibb Warrior 1	0	3	12	43

The proposed changes to the minimum number of voting machines required on election day risk lines that exceed thirty minutes, even assuming that counties can perfectly execute the rule and decrease the number of voting machines available on election day based on early voting, as the amendment proposes. However, *actual* early voting data won’t be available until shortly before election day, leaving counties little time to adjust machine allocation plans on this basis, particularly in polling places where the existing electrical system may be stressed by ballot marking devices.

Moreover, by permitting counties to allocate fewer machines to polling places where a large percentage of registered voters are taking advantage of early voting methods, the rule could cause counties to under-resource those very areas where voter excitement is high: High early voting turnout is not a predictor of low turnout on election day. Indeed, the opposite is true.⁷

Ahead of the 2020 election, experts are taking note of the surge in voter turnout in recent elections as well as the enthusiasm for the upcoming presidential race, and predicting turnout levels to be higher than they have been in decades.⁸ These predictions are particularly relevant for Georgia, which saw a historic turnout level of 74% in the 2018 *midterm election*.⁹

In this context, and given the uncertainty of how voters will respond to an entirely new voting system, maintaining a ratio of one voting machine per 250 registered voters on election day will better prepare polling places and help ensure that election day lines do not exceed 30 minutes due to an insufficient number of machines.

b. Long Lines Using a County-Based Estimate of Early Vote Usage

Importantly, the above analysis assumes that counties will have reliable enough data to calculate the number of voting machines required under the proposed amendment. This would likely prove difficult, because the amendment defines “electors” using a number that counties will not have available to them until the weekend before election day — the number of registered voters who, by election day, have not voted using advance in person and mail in methods.

If counties rely instead on *predicted* early voting turnout — especially if a statewide average is used — they would likely underestimate the number of machines needed in some locations due to the variation in early voting rates from county to county. For instance, in 2016, early voting turnout (advance in person and absentee mail) averaged 59% of total turnout in Georgia overall, but was still below 40% in some counties. And although early voting reached record numbers in the 2018 midterm election, the number still varied greatly from county to county and does not guarantee similar early voting turnout in the upcoming presidential election.¹⁰ Even the use of *county-based* predictions could lead to under-resourcing of individual precincts with lower early voting rates. For example, although the county average for early voting in Fulton County was about 47% of registered voters in 2016, many precincts fell far below this average, with early voting turnout as low as 6.7% of registered voters. Our simulations found that relying on the county average would have led to voters in *19 precincts* in Fulton County waiting more than 30 minutes at peak times, voters in 4 of those precincts waiting over an hour, and voters in one precinct waiting over 30 minutes *all day long*, beginning at 7:30am, with waits *exceeding two hours* — the maximum the wait time predictor will show — beginning at 3pm..

⁷ In Fulton County in 2016, the number of voters using early voting methods in a precinct was strongly, and *positively*, correlated with the number turning out on election day, with a correlation coefficient of 0.94.

⁸ Henry Olsen, *We Could Have Record Turnout in the 2020 Election. We're Not Ready for it.*, Washington Post (Oct. 10, 2019), <https://www.washingtonpost.com/opinions/2019/10/10/we-could-have-record-turnout-election-were-not-ready-it/>.

⁹ *Georgia Breaks All-Time Voting Record*, Georgia Secretary of State, https://sos.ga.gov/index.php/elections/georgia_breaks_all-time_voting_record.

¹⁰ Greg Bluestein, *Georgia early voting has passed 1.5M mark. Here's what it says about the race for governor*, THE ATLANTA JOURNAL-CONSTITUTION (Oct. 31, 2018), <https://www.ajc.com/blog/politics/georgia-early-voting-has-passed-mark-here-what-says-about-the-race-for-governor/fchxQGQwzEWIMvnzppGeHO/>.

Table 2: Expected Election Day Wait Times Under Statutory Method and Proposed Method- Using County Based Estimates of Early Voting

Precinct	Statutory Method		Proposed Method to Reduce Machines – County Based	
	Avg. Wait Time	Peak Wait Time	Avg. Wait Time	Peak Wait Time
Fulton Precinct 01B	0	2	22	80
Fulton Precinct 02J	0	3	11	39
Fulton Precinct MP01	3	11	139	334

c. Long Lines Using a Flat Reduction in Required Machines

Changing the statutory ratio significantly across the board may also lead to long lines. As an example, *50 precincts in Cobb County* would be predicted to experience peak wait times of over 30 minutes if one ballot marking device per 400 registered voters were supplied on election day. Table 3 below shows examples of the effect this approach could have had on wait times in 2016, as compared to one machine for every 250 voters. Note that these wait times do not even take into account higher expected turnout in 2020.

Table 3: Expected Election Day Wait Times Under Current Statutory Requirement and a Requirement that Allows for One Machine Per 400 Electors

Precinct	1/250 Registered Voters		1/400 Registered Voters	
	Avg. Wait Time	Max. Wait Time	Avg. Wait Time	Max. Wait Time
Fulton Precinct 01B	0	2	13	48
Fulton Precinct 02J	0	3	10	37
Fulton Precinct 06F	0	1	15	54
Cobb Garrison Mill 01	0	3	12	43
Cobb Sandy Plains 01	0	4	11	41
Bibb Rutland 2	0	3	10	36
Bibb Warrior 1	0	3	12	44

Voters in 2018 experienced wait times of up to 2–3 hours due to a combination of voting machine failure and unexpectedly high turnout. This year will bring new challenges to election administrators with even higher turnout, and a completely new voting system that many voters will be using for the first time. The current statutory level provides much greater clarity for local officials preparing for the challenges of the general election. And having enough equipment at every polling place to manage historic voter enthusiasm is an important step in building public confidence for this year’s election and ensuring that every voter can cast a ballot without undue delay. For this reason, we recommend that at this time, Georgia continue to require one voting booth or enclosure for every 250 registered voters on election day.

d. Supporting Counties in Meeting the Statutory Requirement

Some counties may have difficulty implementing the statutory minimums. We recommend that counties receive assistance in rapidly obtaining grants to upgrade the capacity of their polling place facilities. We also recommend that the State Board work with counties to help them prepare for smooth implementation with emergency plans, such as the use of paper ballots that can be marked by pen, in the case of lines exceeding 30 minutes. Interactive training of poll managers, as well as generous requirements and recommendations for plenty of those ballots, are necessary for these emergency plans to effectively mitigate long lines that may be caused in case of machine misallocation or malfunction.

II. Ensure that polling places have enough emergency ballots to avoid unnecessary delay if voting machines fail.

Requiring a sufficient number of voting machines is not itself enough to ensure that eligible voters are able to cast a vote in a timely manner. Whenever new technology is deployed at a large scale, it is necessary to have a failsafe measure in place to keep voters moving through lines while technical problems are addressed and resolved. Given the high turnout projections for 2020, we recommend that the state develop contingency plans that will ensure that *every* eligible voter can cast a ballot if he or she chooses, despite machine failures and other technical issues that are bound to arise in at least some polling places.

For this purpose, polling places must have a meaningful supply of emergency paper ballots that can be hand-marked by voters. While the State Election Board took an important step to define what “sufficient” means in the proposed amendments, the number chosen — 10 percent of all registered voters — is not enough to operate as an effective backup voting system in the face of historic voter turnout.

For the 2020 general election, we recommend that polling places have enough emergency paper ballots on hand for 25% of all registered voters, which would be enough to continue operations during 2–3 hours of peak voting.¹¹ While we typically recommend a supply of 35% of all

¹¹ While paper ballots for 25% of all registered voters will likely be enough for many Georgia counties, the requirement to have enough paper ballots for 2–3 hours of peak voting helps to clarify that some counties will need significantly more paper ballots to be prepared for machine failures. This will be especially true in counties with low rates of early voting relative to election day voting, or precincts with high turnout concentrated during a small time window on election day in recent elections.

registered voters for the 2020 general election, we understand that high usage of early voting, relative to election day voting, may reduce the necessary supply in some areas. We have taken this into account, and estimate that 10% is still too low a supply to ensure that voters will not be delayed in casting a ballot or denied the opportunity to cast a vote in the event that voting machines become inoperable due to malicious attack or technical failure. Two to three hours will provide enough time for voting machines to be repaired or replaced, or — if a widespread failure causes all voting machines to be inoperable — enough time to deliver more paper ballots to the precinct in need.¹²

During the 2016 general election, about 39% of all Georgia voters who cast a vote in person on election day statewide arrived at their polling place during the busiest three-hour period. In areas where half of voters use early voting methods, polling places would still need emergency paper ballots for 20% of all registered voters to ensure a supply that would cover the busiest three hours of the day. In precincts with lower usage of early and absentee voting relative to election day voting, one could see slightly over 25% of all registered voters show up to the polls during the busiest three hours of the day. In fact, an estimated one of every six precincts would see more than 23% of all registered voters show up to the polls during the busiest three hours of the day.¹³

These estimates are created by multiplying 39% by the number of registered voters who would show up on election day in a situation of 100% turnout and similar uses of early voting and absentee methods as in the 2016 Presidential election. Georgia will almost certainly not see 100% turnout statewide. But with 74% turnout in a *midterm election* and higher turnout expected for 2020, the state must assume that some precincts will have close to 100% turnout. Without knowing which precincts these will be, proper contingency planning calls for *all* precincts to be prepared. Note that use of early voting methods may go down or up in the 2020 election — a proper resiliency plan will account for some variation and unpredictability in voter behavior. An effective contingency plan would therefore require polling places to have enough emergency paper ballots for *at least* 25% of all registered voters, before taking into account variations from county to county in turnout patterns, use of early voting, and rate of ballot spoilage.

We therefore recommend amending Rule 183-1-12-.11(2) to say the following:

(c) . . . For any primary or general election for which a state or federal candidate is on the ballot, a sufficient amount of emergency paper ballots shall be **equal to the number of voters that are expected to arrive during the three hour period in which the highest number of voters arrived at the polling place in recent elections. In no instance shall this number be less than 25%** ~~at least 10%~~ of the number of registered voters assigned to a polling place.

In addition to the emergency ballot supplies on election day, we recommend that advance voting sites also have a sufficient number of emergency paper ballots. In determining how many ballots

¹² Of course, if emergency paper ballots are used to mitigate long lines caused by allocating too few machines to a polling place, then the supply should be increased.

¹³ The estimate of 1 in 6 precincts comes from identifying levels of early and absentee voting that were just one standard deviation lower than the mean in the 2016 Presidential election; this would be approximately 1/6 of precincts under typical distributions of early voting behavior.

and which ballot styles to stock, counties should review previous turnout data and registration numbers for each ballot style.¹⁴

While ideally these emergency ballots would never be used, the reality is that technical failures occur regularly during the course of an election. Voters should feel confident that their election officials have fully considered the potential for these failures and have put in place a contingency plan that will allow every eligible voter to cast a ballot and have their vote counted.¹⁵

We also note that Georgia is expected to receive \$11.6 million in federal HAVA funding in 2020.¹⁶ The state should consider using a portion of this money for a flat fee incentive program that will assist counties with the cost of printing emergency paper ballots.

III. Ensure that polling places have enough provisional voting materials, and that these materials can serve as an effective failsafe for all eligible voters.

Similarly, we recommend that for the 2020 general election polling places have enough provisional voting materials on hand for 25% of all registered voters, or enough to continue operations during 2–3 hours of peak voting. Provisional voting can act as a failsafe when voter registration database or electronic pollbook data is unreliable due to a malicious attack or other technical failure. But insufficient supplies limit the effectiveness of this failsafe — in 2018, some voters reported being denied the opportunity to cast provisional ballots due to shortages of provisional ballots and a delay in printing new ones.¹⁷ Two to three hours will provide enough time for these issues to be resolved, for affected polling places to gain access to accurate voter data, or for counties to deliver additional provisional voting materials to precincts in need.

Moreover, as we argued in our previous public comment, the regulations should clarify provisional voting procedure and ensure that eligible voters are not disenfranchised by malicious attacks on or errors in election systems. We recommend amending 183-1-12-.18(4) to clarify that this subsection applies to voters whose names do not appear on the electors list *or who otherwise appear ineligible to vote a regular ballot at that polling place, based on the pollbook information*. This latter scenario may occur if the electronic pollbook erroneously indicates that a

¹⁴ Guidance issued by the North Carolina State Board of Elections in January 2020 requires early voting sites to emergency hand-marked paper ballots on hand and provides an example of the factors that counties should consider in determining how to allocate these ballots. Numbered Memo 2020-02 Re: Ballot Preparation Instructions, Karen Brinson Bell (Jan. 9, 2020),

https://s3.amazonaws.com/dl.ncsbe.gov/sboe/numbermemo/2020/Numbered%20Memo%202020-02_Ballot%20Preparation%20Instructions.pdf.

¹⁵ Charles Stewart III, 2016 Survey of the Performance of American Elections.

¹⁶ Brennan Center, Federal Funds for Election Security in FY2020 Budget Legislation, by State (Dec. 17, 2019), <https://www.brennancenter.org/our-work/analysis-opinion/federal-funds-election-security-fy2020-budget-legislation-state>.

¹⁷ See, e.g., Arielle Kass, *Thousands of Provisional Ballots Remain Uncounted in Fulton County*, AJC (Nov. 7, 2018), <https://www.ajc.com/news/local-govt--politics/thousands-provisional-ballots-remain-uncounted-fulton-county/XJHEhxb3AZNdqh45SIh4SN/> (“[The Fulton County Director of Registration and Elections] said there were so many people filling out provisional ballots at [one precinct] that the precinct ran out of them and had to print more”).

voter has already cast a ballot. Durham County, North Carolina experienced this exact issue in 2016, and the errors resulted in serious disruptions to the voting process.¹⁸

Consistent with the Help America Vote Act,¹⁹ which states that a registered and eligible voter “shall be permitted to cast a provisional ballot” if their name “does not appear on the official list of eligible voters” or “an election official asserts that the individual is not eligible to vote,”²⁰ regulations must ensure that provisional voting can serve as an effective failsafe in these scenarios.²¹ And training materials should be developed to clearly communicate these procedures to poll workers.

* * *

We encourage the State Election Board to adopt these recommendations, which will help election officials prevent and recover from technology failures and cyberattacks. The right to vote and have your vote accurately counted is fundamental to our constitutional democracy. Georgia must do all it can to ensure that this right is protected.

Sincerely,

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¹⁸ Pam Fessler, *Federal Government to Inspect North Carolina Election Equipment Over Hacking Fears*, NPR (June 5, 2019), <https://www.npr.org/2019/06/05/729920147/federal-government-to-inspect-north-carolina-election-equipment-over-hacking-fea>.

¹⁹ Help America Vote Act of 2002 (HAVA), Pub. L. 107–252, 116 Stat. 1666.

²⁰ 52 U.S.C. § 21082(a).

²¹ See EAC Advisory 2005-006: Provisional Voting and Identification Requirements (Sept. 13, 2005), https://www.eac.gov/sites/default/files/eac_assets/1/1/EAC%20Advisory%202005-006%20Provisional%20Voting%20and%20Identification%20Requirements.pdf.