



July 16, 2021

Alicia Chambers  
Executive Secretariat  
National Institute of Standards and Technology  
Department of Commerce  
100 Bureau Drive  
Gaithersburg, MD 20899

RE: Docket ID Number: 210608-0123

Dear Ms. Chambers:

The National Federation of the Blind, the premier membership and advocacy organization of blind Americans, has provided responses to your 20 questions.

1: Describe concerns regarding accessing the right to vote privately and independently for people with disabilities.

- Blind and low-vision voters have many concerns regarding their right to vote privately and independently. The National Federation of the Blind has conducted a blind voter survey following every presidential election since 2008, as well as the 2014 and 2018 midterm elections. The highest percentage of blind and low-vision voters that reported they were able to vote privately and independently was 79% in 2016, and the lowest percentage was 51% in 2008. Poor training of poll workers to set up and operate the accessible voting system has resulted in blind and low-vision voters having to wait, sometimes as much as 4 hours, while poll workers attempted to get the machine up and running; having to vote with assistance because poll workers could not get the machine working, and having to leave the polling place and come back at a later time because they could not wait while the machine was being set up. 87% of respondents to the 2008 blind voter survey said that the accessible voting machine was up and running when they arrived at the polls. This percentage decreased to 63% in 2012, 66% in 2018 and 2016, and 68% in 2020. In 2008, 19% of blind voter survey respondents said that poll workers had problems setting up or activating the accessible voting machine. This percentage increased to 33% in 2012, 2016, and 2018. One-quarter of 2020 survey respondents said that poll workers had problems setting up or activating the accessible machine.
- The lack of at least one accessible voting system in every polling place for state and local elections continues in some jurisdictions in states such as Alaska, New Hampshire, and Missouri. In addition, we have heard from some of our members in Missouri that some polling place locations do not have an accessible voting machine for federal elections.
- About half of the states still do not provide an accessible way to mark an absentee or by-mail ballot. As a result, blind and low-vision voters in these states who wish to vote by-mail

must rely on a sighted assistant to mark and return their ballot. In addition, the majority of states that do provide an accessible way to mark a by-mail ballot require that the ballot be printed out and mailed in or placed in a ballot drop box. Because many blind voters do not own a printer, they must rely on a friend or family member to print their ballot, have the ballot printed at a copy center, or find another computer equipped with screen access software that is connected to a printer. The lack of an accessible way to return a by-mail ballot that has been marked privately and independently using an electronic ballot delivery system prevents some blind and low-vision voters from using electronic ballot delivery, and, as a result, these voters must rely on sighted assistance to mark and return their by-mail ballot.

- Voting-related forms, such as voter registration and absentee ballot request forms are not accessible. Paper forms are inherently inaccessible to blind and low-vision voters, who must rely on sighted assistance to complete them. Frequently, online versions of these forms cannot be used by blind voters because they are not accessible or fillable when using a screen reader.
- The move to a paper-based voting system for in-person voting has resulted in two separate voting systems at most polling places. The majority of voters hand mark a paper ballot, while voters with print disabilities use the accessible ballot marking device (BMD). Many of the BMDs currently in use produce a ballot that is different in size and content from the hand marked ballots. Consequently, these ballots are identifiable as having been cast by a voter with a disability, and the voter does not have a secret ballot.
- The consolidation of local polling places into remote voting centers makes it difficult for blind and low-vision voters in rural areas and small towns without public transportation to travel to their voting center.

2: Describe effective strategies, techniques, and technologies for addressing the barriers faced by voters with disabilities throughout the voting process.

- Online HTML forms for voter registration and to request an absentee ballot that comply with the Web Content Accessibility Guidelines (WCAG) 2.1 AA are accessible with a broad range of access technology including screen readers, screen magnification, and refreshable Braille displays.
- Training of poll workers on the accessible voting system should not rely solely on slide presentations and video but should include training on the actual voting system. At least one poll worker per polling place should receive additional training on the accessibility features of the voting system, and on how to troubleshoot problems. Election officials should recruit individuals with disabilities to serve as poll workers.
- Accessible electronic ballot delivery and return systems that meet the latest WCAG Level AA standards make by-mail voting accessible to blind and low-vision voters. Systems developed by Democracy Live, Enhanced Voting, Five Cedars, and the Maryland State Board of Elections provide an accessible way to access and mark absentee/by-mail ballots. The NV EASE system is an online ballot delivery system, developed by the Nevada Secretary of State, that permits the voter to return their marked ballot as an encrypted email attachment. The Democracy Live system also includes an electronic return option, but the signature process is not yet fully accessible.

3: Describe barriers that people with disabilities encounter in getting useful information about the voting process.

- Elections-related websites maintained by state and local elections offices frequently contain accessibility barriers, such as inaccessible voter registration forms and absentee ballot request forms, despite the requirements of the Americans with Disabilities Act and the widely adopted accessibility standard of WCAG 2.1 AA. A 2015 report by the American Civil Liberties Union found that in 2014, only one state had an online voter registration form that was fully accessible.<sup>1</sup> A 2020 audit of online absentee ballot request forms by Deque Systems found that forty-three states had forms that were not fully accessible,<sup>2</sup> and absentee ballot applications are not accessible to voters with disabilities in 43 states.<sup>3</sup>
- Voter information frequently is not available in alternative formats, such as Braille.

4: Describe barriers that people with disabilities encounter with ballots, and in getting useful information about the items on the ballot

- Frequently the sample ballots provided are inaccessible paper or image PDF documents.
- The ballots produced by many of the accessible BMDs currently in use produce a ballot that is different in size and content from the hand marked ballots. Consequently, when it is only voters with disabilities that are using the BMD, the BMD ballots are identifiable as having been cast by a voter with a disability, and that voter does not have a secret ballot.
- The majority of BMDs currently in use do not provide a way for a voter with a print disability to verify the printed ballot.

5: Provide recommendations for improving voter access for people with disabilities.

- Voter registration forms and absentee ballot request forms must be readable and fillable with screen access technology.
- Poll workers must be adequately trained, using an actual voting machine, on how to set up and operate the accessible voting machine. If the training is provided more than one month before an election, a refresher course on the accessible voting machine must be required.
- For in-person voting, the ideal voting system is one that can be used by all voters. Consequently, for the paper ballot system currently in use in the majority of jurisdictions, the accessible BMD should be the primary ballot marking method for all voters. This would eliminate the separate system for voters with print disabilities currently in use in most jurisdictions and would increase the likelihood that poll workers would know how to set up and operate the accessible BMD.
- At least one accessible voting machine should be available in each polling place for all federal, state, and local elections.
- An accessible way to mark and return an absentee or by-mail ballot must be provided for all federal, state, and local elections.
- Federal guidelines on the accessibility and security of electronic ballot delivery and return systems must be developed.

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<sup>1</sup> (see: Access Denied Barriers To Online Voter Registration For Citizens With Disabilities (aclu.org)

<sup>2</sup> (See: Digital Accessibility in 2020 Election: Progress, But A Long Way To Go (deque.com)

<sup>3</sup> Absentee Ballot Applications Are Not Accessible to Voters with Disabilities in 43 States (Time Magazine)

6: Identify what has had the most impact enabling people with disabilities to vote privately and independently.

- The development of accessible voting systems for in-person voting that include an audio ballot with tactile keypad, and the ability to increase the font size and color contrast have provided blind and low-vision voters with the ability to vote privately and independently that did not exist for them prior to the passage of the Help America Vote Act.
- The implementation of electronic ballot delivery and return will provide blind and low-vision voters in vote by-mail states, as well as blind and low-vision absentee voters, with the ability to mark and return their by-mail ballot privately and independently.

7: Identify gaps that remain in making voting accessible to people with disabilities.

- Some jurisdictions in states such as Alaska, New Hampshire, and Missouri do not provide at least one accessible voting system in each polling place for state and local elections. Consequently, blind and low-vision voters must depend on sighted assistance to vote during state and local elections in these jurisdictions.
- About half of the states did not provide an accessible way to mark a by-mail ballot for the 2020 general election.
- Only five of the approximately 25 states that provided an accessible way to mark a by-mail ballot for the 2020 general election permitted the marked ballot to be returned electronically.
- Voting-related forms and other information found on election agency websites are frequently not accessible to screen reader users. A 2020 audit by Deque Systems found that the online absentee ballot applications in 43 states were not accessible<sup>4</sup> absentee ballot applications are not accessible to voters with disabilities in 43 states.<sup>5</sup>
- Many blind and low-vision voters who use an accessible ballot marking device do not have a secret ballot because the ballot printed by the BMD is different in size and/or content from the hand marked ballot used by the majority of voters.

8: Describe barriers that people with disabilities encounter with completing online forms for the voting process.

- See answer to question 7.

9: Describe barriers that people with disabilities encounter in getting useful information about their eligibility to vote.

- Information is frequently not available in hard copy Braille, digital Braille, or audio format. Information on a website may be in an inaccessible image PDF.

10: Describe barriers that people with disabilities encounter with registering to vote.

- See response to question 3.

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<sup>4</sup> Digital Accessibility in 2020 Election: Progress, But A Long Way To Go (deque.com)

<sup>5</sup> See: Absentee Ballot Applications Are Not Accessible to Voters with Disabilities in 43 States | Time).

11: Describe barriers that people with disabilities encounter using technology for the registration or voting process, whether online, in person, or via mail.

- Data from our blind voter surveys illustrate that many blind and low-vision voters are not aware of, or do not know how to use, the accessibility features of BMDs. Some blind voters are not aware that they can increase the speech rate, while some low-vision voters do not know how to increase the font size and use a handheld magnifier instead. Opportunities for blind and low-vision voters to practice voting before an election are critical, particularly when a new system is being implemented. Elections officials need to do a better job of reaching out to disability organizations to provide practice voting opportunities.

12: Describe the availability of accessible voting equipment.

- Lack of at least one accessible voting system in every polling place for state and local elections continues in some jurisdictions in states such as Alaska, New Hampshire, and Missouri. In addition, we have heard from some of our members in Missouri that some polling place locations do not have an accessible voting machine for federal elections.

13: Describe barriers that people with disabilities encounter with voting by-mail.

- The traditional paper absentee and by-mail ballot is inherently inaccessible to blind and low-vision voters. About half of the states still do not provide an accessible way to mark an absentee or by-mail ballot. As a result, blind and low-vision voters in these states who wish to vote by-mail must rely on a sighted assistant to mark and return their ballot. In addition, the majority of states that do provide an accessible way to mark a by-mail ballot require that the ballot be printed out and mailed in or placed in a ballot drop box. Because many blind voters do not own a printer, they must rely on a friend or family member to print their ballot, have the ballot printed at a copy center, or find another computer equipped with screen access software that is connected to a printer. The lack of an accessible way to return a by-mail ballot that has been marked privately and independently using an electronic ballot delivery system prevents some blind and low-vision voters from using electronic ballot delivery, and, as a result, these voters must rely on sighted assistance to mark and return their by-mail ballot.

14: Describe security considerations relevant to existing and potential technologies used by people with disabilities in the voting process.

- BMDs should not be placed in a separate room but should be placed in the same room where ballots are being hand marked.
- BMDs should be placed so the touchscreen is facing a wall to prevent anyone other than the voter from seeing the selections being made.

15: Describe barriers that people with disabilities face at polling locations.

- The BMD is placed so that the touchscreen is visible to other people in the polling place thus depriving the voter of a private and secret ballot. 27% of blind and low-vision voters who completed our 2020 blind voter survey said they were not given the same privacy that was provided other voters.



- Frequently the BMD is placed near the check-in desk, which is a noisy environment. This makes it difficult for voters who are blind and hard of hearing or deafblind to hear the audio ballot.
- How poll workers treat blind voters can be a barrier. Data from the 2020 blind voter survey shows that 81% of survey respondents said they were treated with the same dignity as other voters, as compared with 71% in 2018.
- Poorly trained poll workers who have problems setting up or operating the accessible voting system result in blind and low-vision voters having to wait, sometimes as much as 4 hours, while poll workers attempted to get the machine up and running; having to vote with assistance because poll workers could not get the machine working, and having to leave the polling place and come back at a later time because they could not wait while the machine was being setup. In 2008, 19% of blind voter survey respondents said that poll workers had problems setting up or activating the accessible voting machine. This percentage increased to 33% in 2012, 2016, and 2018. One-quarter of 2020 survey respondents said that poll workers had problems setting up or activating the accessible machine.
- Accessible voting system not set up and running when a blind or low-vision voter arrives at the polling place. 87% of respondents to the 2008 blind voter survey said that the accessible voting machine was up and running when they arrived at the polls. This percentage decreased to 63% in 2012, 66% in 2018 and 2016, and 68% in 2020. In other words, 32% of the blind voters who participated in the 2020 blind voter survey found that the accessible voting machine was not set up when they arrived at the polls.

16: Describe the accessibility of polling places.

- The most common accessibility barriers encountered by blind and low-vision voters at the polling place are an accessible voting system that is not working, no accessible voting system available, and poll workers who do not know how to set up or operate the accessible voting system.

17: Identify areas where poll worker training can address barriers experienced by people with disabilities.

- Additional emphasis must be given when training poll workers that the accessible voting system must be set up and running when the polls open.
- Training must emphasize that the accessible voting system should be used by voters without disabilities, and that poll workers should encourage nondisabled voters to use it.
- Training of poll workers must provide them with a thorough knowledge of how and where to set up the accessible voting system, and how it operates, as well as a complete understanding of the accessibility features.
- Individuals with disabilities should be included in the training to discuss how to properly interact with voters with disabilities.

18: Identify areas where clearer or better policies can address barriers experienced by people with disabilities.

- A policy of one voting system for all voters would eliminate the segregated voting system currently used by voters with disabilities in many states. This would eliminate the lack of a secret ballot currently experienced by many voters with print disabilities that must use the

accessible ballot marking device. Having one system for all voters would also help to ensure that poll workers know how to set up and operate the system, and that it will be up and running when the polls open.

19: Describe any barriers that people with disabilities face to voting that disproportionately impact communities of color, persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

- Lack of access to the internet and online voting resources such as online voter registration, online voter information, and accessible vote by-mail.
- Lack of access to public transportation to travel to government agencies to register to vote, and to travel to remote voting centers.

20: Of the concerns and barriers noted, identify the most serious and impactful barriers faced by voters with disabilities throughout the voting process.

- A segregated voting system for voters with print disabilities who vote in person. This segregated system results in a ballot that is not secret, and poll workers who do not know how to set up or operate the accessible voting system.
- The lack of an accessible way to vote by-mail in about half of the states' forces blind and low-vision voters to rely on sighted assistance to mark their by-mail ballot for them. In addition, for the 2020 general election, only five states permitted accessible electronic return of by-mail ballots. Consequently, in a majority of the states where blind and low-vision voters were able to mark their by-mail ballots independently, many of these voters had to seek sighted assistance to print and mail the marked ballots.
- Poorly trained poll workers result in lengthy delays at the polls while blind voters wait for poll workers to figure out how to set up and operate the accessible voting system and blind voters having to vote with assistance when the poll workers cannot operate the BMD.
- Some jurisdictions in states such as Alaska, New Hampshire, and Missouri do not provide at least one accessible voting system in each polling place for state and local elections. Consequently, blind and low-vision voters must depend on sighted assistance to vote during state and local elections in these jurisdictions.

If the National Federation of the Blind can be of assistance in any way, especially by utilizing the nonvisual access to voting best practices and innovations we have developed over the past decades, please do not hesitate to contact us. We are fully prepared to help in any way that we can, in order to guarantee that all Americans, especially blind Americans, can confidently participate in our electoral democracy.

Sincerely,



Mark A. Riccobono, President  
National Federation of the Blind