

THE  
CARTER CENTER



**Preliminary Nonpartisan Election Observation Statement on Logic and Accuracy  
Testing in Arizona Ahead of 2022 Midterm Election**

The Carter Center congratulates local and state election officials, as well as official political party observers from the Democratic and Republican parties, for working together to ensure rigorous testing of the voting and counting equipment that will be used in the state of Arizona for the 2022 midterm election. Against a backdrop of prolonged political polarization and partisan acrimony over the elections process, Arizonans should take pride in the peaceful and civil environment in which testing took place. Thanks to the combined efforts of all actors, all of the voting and counting equipment in the county office locations where The Carter Center observed ultimately passed logic and accuracy testing, which occurred between Oct. 5 and 11.

Although some errors were noted and addressed in several counties, The Carter Center is not aware of any substantive challenges raised by observers from any of the registered political parties about the testing process or its outcomes. In each of the counties where Carter Center observers were present, errors were caught and corrected. All of the equipment ultimately passed the logic and accuracy testing, which is designed to ensure that the equipment is ready to use and can be expected to function correctly during the election.

Election officials took measures to ensure that the testing processes were accessible and comprehensible to individuals who came to observe. Officials provided handouts on the process and made staff available to field any questions posed by party representatives or members of the public. Such transparency measures are vital to helping the public accurately assess whether they can trust that elections will be secure and fair.

Looking forward, The Carter Center encourages counties to consider taking measures beyond those required by law to raise awareness of this important opportunity for the public to learn more about the conduct of elections in Arizona. To this end, it is important that counties provide public notice of the testing time and location at least 48 hours in advance, in accordance with state statute. In addition, public notice could be provided in multiple languages, particularly in those counties that are covered by Section 203 of the Voting Rights Act. In addition to the legally mandated publication in a newspaper of record for the county, notices also could be publicized on county websites or other locations where they might be more accessible to the public. Signs outside county offices indicating where testing will take place might also make it easier for members of the public to attend.

## **Nonpartisan Election Observation Methods<sup>1</sup>**

As a pilot program to provide increased public oversight of the election process, and in line with *ARS § 16-449: Required test of equipment and programs; notice; procedures manual* — which grants members of the public the right to observe logic and accuracy testing — The Carter Center mobilized impartial citizen observers to monitor the process in nine counties: Apache, Cochise, Coconino, Graham, La Paz, Maricopa, Navajo, Pima, and Pinal. Observers used a standardized checklist of questions about the process and the conduct of key stakeholders to structure their observations. Although Carter Center observers were able to cover only nine of 15 counties during this pilot exercise, the Center welcomes the openness of Arizona’s election officials in all 15 counties, each of which provided information on the date, time, and location for testing and expressed willingness to accommodate a nonpartisan observer.

Of note, Carter Center observers were granted varying levels of access to observe the process. In some counties, observers were invited to witness testing directly behind the political party observers. In others, Carter Center observers witnessed testing from the hallway outside the room where testing took place or observed parts of testing via a livestream. This meant that, in some instances, observers did not have sufficient access to information to make an assessment for every issue on their checklists. This particularly affected observation in Maricopa County, which took place from the lobby of the tabulation center.

In most electoral democracies outside of the United States and Canada, systematic, nonpartisan citizen observation efforts play crucial roles in building public confidence in elections. Nonpartisan citizen observation can assess the degree to which elections are well-administered and help detect and deter systematic efforts to subvert election integrity, while providing data-driven recommendations for reform where warranted. The Carter Center has supported impartial and nonpartisan election efforts in more than 110 elections around the world.

### **What is Logic and Accuracy (L&A) Testing?**

During logic and accuracy testing for federal and statewide elections, the state sends election staff to assist the local elections departments in each of Arizona’s 15 counties to assess whether the voting equipment and counting/tabulation equipment that the county plans to use for the upcoming election is functioning correctly.<sup>2</sup> Voting equipment must be reprogrammed by humans before every new election. Logic and accuracy testing helps ensure that programming errors are identified and corrected before the election takes place. The machines are also subjected to rigorous functionality tests to verify that all the functions a voter may need on Election Day (such as the ability to verify their selections, to raise or lower the volume on audio devices, or to change the color contrast on a screen) are working as expected. The machines also are tested on all the ballot styles (combinations of candidates and ballot initiatives) used in the upcoming election to ensure that they accurately record voters’ choices.

To carry out testing of the tabulation equipment, state election officials prepare a set of premarked ballots, or a test script, which are then tabulated by the same counting equipment that will be used on

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<sup>1</sup> Arizona statute defines nonpartisan observers as observers representing a nonpartisan candidate or ballot initiative. The Carter Center, however, uses nonpartisan observer in the sense in which it is more commonly used, to mean an election observer focused on the quality of the process and who does not represent any particular candidate or party.

<sup>2</sup> County election staff conduct their own separate tests of the equipment that will be used in local elections.

Election Day. The sample ballots include ballots with write-in candidates, ballots that have been over-voted (where the voter has selected more candidates than there are seats available for a particular office, such as voting for two or more candidates for governor), and other fringe cases, such as blank ballots or ballots from a different election. Testing ensures that each of these ballots is correctly processed.<sup>3</sup> State election officials are responsible for bringing the premarked ballots, which the source directly from the ballot vendors so that county elections officials can have no possible interaction with the testing materials before the tests take place. They also bring in a sealed envelope the results that the premarked ballots should yield if properly tabulated. No specific details about the test are communicated to the county election officials ahead of time. County election staff then run the premarked ballots through the tabulation equipment — exactly as they would during a real election. When finished, they produce a summary of results from the test. In the presence of any political party observers who attended testing, state election officials then unseal the anticipated test results, and party observers assist the state officials in confirming that the anticipated test results match the results obtained by the county during their test. If the results match, the logic and accuracy test is passed.

## Key Findings

**General Environment:** Carter Center observers reported that logic and accuracy testing was not disrupted at any point in any of the counties observed. None of the party observers present nor any other members of the public or media attempted to intimidate or otherwise coerce election officials at any stage in the testing process. Carter Center observers did not witness or hear of any instances of violence or intimidation during logic and accuracy testing in any of the counties where they were present. Moreover, Carter Center observers did not observe any of the official political party observers raise challenges or objections to the conduct of the testing.

**Public Notice of L&A Testing:** Per *ARS § 16-449: Required test of equipment and programs; notice; procedures manual*, public notice of the date, time, and location for logic and accuracy testing must be provided at least 48 hours before testing takes place. Through desk research, The Carter Center confirmed that all 15 counties provided public notice of testing. However, in Apache and Navajo counties, the public notices that The Carter Center was able to identify were posted less than 48 hours before scheduled testing on Oct. 6. In addition, while the Center was able to verify that a public notice for logic and accuracy testing was posted for Cochise County, the listing was taken down before The Carter Center could verify the date of the notice. For all other counties, The Carter Center was able to independently verify that public notice of testing was provided in a timely manner.

**Public Access to the L&A Testing:** All 15 counties expressed willingness to welcome Carter Center observers, in line with *ARS § 16-449: Required test of equipment and programs; notice; procedures manual*. In all nine counties where The Carter Center observed, space was made available by the county for public observers. In two counties, Cochise and Graham, signs were posted directing members of the public or party observers to the designated location for logic and accuracy testing. Although it is not a legal requirement for the test to be signposted, observers noted that it made it easier to find the correct

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<sup>3</sup> Over-voted ballots should be set aside or sorted out for additional human scrutiny to determine whether the voter's intent is clear. For example, if a voter accidentally marked two candidates for governor but crossed out one of their choices so that it is clear they intended to vote for the other candidate, their vote as intended should be counted. If a voter instead marked two candidates for governor and there is no way to determine which vote is valid, neither vote should be counted.

location in a timely manner in counties where such signs were provided and is a good practice that could be replicated.

The media was not present during testing in the majority of counties observed.<sup>4</sup> Overall, public engagement with the logic and accuracy process was limited. In Apache, Cochise, Coconino, and Graham counties, one other member of the public<sup>5</sup> was present to observe all or part of the testing. In Pinal and Maricopa counties, more than one additional member of the public was present during all or part of the testing. Coconino County and Maricopa County also livestreamed their logic and accuracy testing process for members of the public who wished to attend online. In La Paz, Navajo, and Pima counties, no other members of the public came to observe the testing.

**Information Provision on the Logic and Accuracy (L&A) Process:** In the majority of counties observed, state election officials proactively shared information about how the logic and accuracy testing process works by providing handouts on testing to any interested individuals who attended testing.<sup>6</sup> They also made themselves available to answer questions posed by the party observers, media, or other members of the public.

**Multipartisan Nature of the Process:** In the counties observed, the political parties played an active role in observing the logic and accuracy process, providing an important transparency measure. In eight out of nine counties observed, the Democratic Party mobilized at least one party observer to participate in the testing process. No Democratic Party observer was present in La Paz County. In eight out of nine counties observed, the Republican Party mobilized at least one party observer to participate in the testing process. In Pinal County, Carter Center observers did not note the presence of any officially appointed Republican Party observers. However, representatives from the county attorney's office watched the testing, and a local election official who is a registered Republican stood in for the party during the verification of zero tapes and test results. In Maricopa County, the party chairs for the Republican and Democratic parties both personally took part in logic and accuracy testing. Carter Center observers did not see any Libertarian party observers in the counties observed.

In all counties observed, election officials with different political registrations (Democrat, Independent, Libertarian, Republican, etc.) helped to carry out testing. This bipartisan approach to the conduct of testing, even where not statutorily mandated, is another important check on the possibility of partisan influence during testing and a further guarantor that logic and accuracy testing was credible and took place in good faith.

**Adherence to Appropriate Procedures:** In every county observed, elections officials tested accessible voting equipment, including voting machines and any built-in or accompanying devices (touch pads, headsets, etc.) designed to facilitate voting by persons living with disabilities and non-native English speakers. In all counties where Carter Center observers had sufficient access to verify this information, zero reports were produced before testing began and were verified by the party observers present. Zero

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<sup>4</sup> Media were present in Maricopa County.

<sup>5</sup> Understood to be an individual not representing the media or observing as an official representative of one of the three registered political parties.

<sup>6</sup> In La Paz and Maricopa counties, the observers were unable to gather this information.

reports demonstrate that no votes have been cast on any of the voting equipment prior to the start of testing. Summary ballots from the accessible voting machines were also proofed to confirm that the correct candidate names and ballot initiatives appeared on the ballots. In La Paz and Maricopa counties, observers were unable to gather detailed information on accessible voting machine testing procedures, due in part to lack of proximity to testing. In every county observed, all accessible voting equipment ultimately passed the functionality testing.

Elections officials also tested central counting equipment, including equipment that uses optical or digital scanning technology to count ballots. In every county observed, this was done on the basis of a test script, or premarked set of ballots. In five out of nine counties observed, the test ballots were transported in a secure container. In Apache, Cochise, Pima, and La Paz counties, the observers were unable to gather this information. In all counties where Carter Center observers had sufficient access to verify the information, election officials tested test ballots that included write-in candidates and over-voted ballots. They also tested the out-stacking functionality of the central count equipment, or its ability to automatically sort out ballots that require additional human scrutiny to be properly adjudicated, such as those that are potentially over-voted or that include write-in candidates. At the end of testing, election officials generated a summary report and asked political party observers to verify that the summary results matched the expected test results. The Carter Center was able to verify that the test ballots were secured and retained by state elections officials at the end of testing in seven out of nine counties observed. This is an important security measure to ensure that test ballots are not accidentally retained and counted by county election staff after the real election begins. In La Paz and Maricopa counties, the observers were unable to gather detailed information on central count equipment testing procedures, due in part to lack of proximity to testing.

All counties observed ultimately passed logic and accuracy testing. Carter Center observers did not see any evidence that procedures were not correctly and consistently followed, even though in some instances they did not have sufficient access or information to verify all information directly.

**Errors Detected During Testing:** Logic and accuracy testing aims to proactively identify errors before they can create a problem on Election Day. Carter Center observers witnessed errors during testing in Coconino, Pima, Pinal, and Maricopa counties. In each instance, officials took corrective action. State election officials then restarted the testing process in each affected county from the beginning. The errors observed and the corrective measures taken in each case are outlined below. Carter Center observers did not observe any of the official political party observers raise challenges or objections to the conduct of the logic and accuracy testing, and all counties observed ultimately passed logic and accuracy testing.

- In Coconino County, the button to select a Hopi language translation appeared in English. Election staff reprogrammed all machines to correct this error. Election officials then restarted the testing process from the beginning, and all equipment ultimately passed the functionality tests.
- In Pima County, accessible voting machines were missing instructions on how to vote. Election staff reprogrammed all machines to include the appropriate instructions, recommenced the testing process from the beginning, and equipment ultimately passed the functionality tests.

- In Pinal County, a county ballot initiative included an error in translation in the Spanish language audio. Whereas the written translation read “1/2,” the audio translation, which is generated automatically by software that is unable to read special characters like the slash mark, instead read “1 2.” County election staff agreed that Spanish language interpreters should be available across the county to assist low-vision Spanish-speaking voters and that they would be stationed so that the nearest translator would never be more than 10 minutes away from any given voting location. Party observers present agreed to this solution.
- Also in Pinal County, staff noted that the order for candidates on the ballot for Congressional District 2 had been randomly rotated rather than following a fixed order. Given that all candidate names and parties appeared correctly on all ballots, and given the impossibility of reprinting all ballots so close to the start of early voting, county election staff proposed to consult with the county attorney on next steps while maintaining the ballots as-is. Party observers present requested that all affected candidates be given appropriate notice but otherwise agreed to this solution. Staff also identified an error during the testing of central count equipment whereby staff accidentally ran a batch of test ballots through the counting machine incorrectly. After identifying this error, staff successfully re-ran the tabulation exercise test, and the equipment passed logic and accuracy testing.
- In Maricopa County, an error for a candidate name occurred in the Spanish language audio translation of the ballot. Election staff reprogrammed all machines to correct this error. Testing then restarted from the beginning. During the testing of tabulation equipment, election officials noted that results for all races on the ballot after the LD22 Senate race were off by one expected vote. After extensive investigation, they determined that this was because a candidate had withdrawn from the race after the ballot was printed and — while the accessible voting machines had been programmed not to display the withdrawn candidate’s name during voting — the tabulation software continued to expect that candidate’s name to appear on the ballot. After identifying the error, election staff codified a revised tabulation procedure to ensure that all votes will be correctly tabulated on Election Day. Election officials then recommenced the testing process from the beginning. Equipment ultimately passed the functionality tests and the overall logic and accuracy test.

### **About Nonpartisan Election Observation**

Nonpartisan election observation is grounded in the idea that elections are by and for the people and that representatives of the public interest should therefore have an opportunity to assess key election processes and determine whether they have been conducted in a manner that the voting public can trust. Unlike political party observers, who monitor elections on behalf of their parties or candidates, nonpartisan observers are concerned with the overall quality of the election process and not with any particular outcome. Nonpartisan observers serve as an important source of trusted, credible information. Through their systematic, fact-based reporting, nonpartisan observers help dispel rumors around elections and can offer data-driven recommendations for reform where needed.