

Harris County Election Evaluation – Final Report

August 31, 2022



Executive Summary

Harris County engaged Fors Marsh Group (FMG) to evaluate the administration of the March 2022 primary election. The evaluation aimed 1) to document issues encountered during the primary election, and 2) to identify underlying factors that contributed to those issues and make recommendations for improving the county's election administration moving forward.

As part of this analysis, FMG interviewed representatives of the Elections Administrator's Office (EAO) and Office of Management and Budget (OMB), the Tarrant County Election Administrator, election technology vendor Hart InterCivic, and representatives from political parties and community groups. Additionally, FMG analyzed survey data and conducted focus groups with poll workers and election judges, and reviewed call log data and communications with EAO before and during the March primary.

EAO acknowledged several challenges ahead of the March primary that substantially affected their preparation and performance. Not only was the 2022 primary the largest election ever administered by the newly created EAO, but it required new or adjusted processes and procedures in response to changes in state election laws, a late redistricting announcement, and the adoption of new election equipment. Most stakeholders contacted during this evaluation process acknowledged that EAO performance suffered from insufficient resources—mainly limited personnel and inadequate space in the EAO warehouse—to successfully execute core tasks before, during, and after the election. This led to understaffing, which in turn resulted in some activities left incomplete or being completed at the last minute, staff burnout, confusion, and errors.

The review also found that insufficient, constantly changing, and poorly communicated internal EAO processes and procedures exacerbated these resource constraints, leaving inadequate time for stakeholders to provide feedback and for administrators to fix potential issues. The result was EAO personnel scrambling to address problems while not being able to attend their other duties, generating downstream effects that set the EAO behind before Election Day even started. Additionally, poor communication between EAO and political parties and other stakeholders created confusion and differing accounts about the source of issues on central tasks, such as poll worker recruitment and equipment calibration.

A few examples of processes that led to problems during the March 2022 primary election:

- *Recruitment, training, and assignment of election judges and clerks.* As a result of poor communication between the EAO and the political parties, there were polling places with no judges or clerks on Election Day. Poll workers reported receiving inadequate training and felt that they lacked enough hands-on training with the new voting equipment, limiting their ability (and confidence) to address certain issues when a malfunction occurred at the polls.
- *Calibration, testing, and preparation of equipment and supplies.* The failure to prepare voting supplies ahead of time resulted in EAO staff being pulled off of other

election planning activities to spend long hours working to complete the task before Election Day even started. Stakeholders reported that in some cases, basic supplies were not ready (e.g., missing cables, wrong-sized ballot paper), and that equipment was not properly calibrated, causing malfunctions on Election Day, which in turn led to delays at polling locations and confusion and frustration among poll workers and voters.

- *Supplies drop-off, ballot duplication, and counting.* Poll judges reported long wait times to return voting equipment. The use of four drop-off locations posed a challenge for the EAO, which lacked the personnel to effectively collect equipment and process it at the Election Technology Center (ETC). This same lack of personnel combined with the high volume of ballots that needed duplication—which might have been avoided by proper calibration of the equipment or training of the poll workers—and a lack of a clear process to duplicate ballots, contributed to a longer than usual count process. All of these issues directly affected the certification process and contributed to the failure to identify the 10,000 misplaced ballots before the first results were released.

In response to the March 2022 primary election, the EAO must:

- Critically assess operational procedures and identify core activities required for a successful election;
- Choose measurable outcomes by which success will be defined, and the resources necessary to achieve these outcomes;
- Clarify chain of command and establish clear lines of responsibility within EAO for each core activity with clearly communicated performance benchmarks;
- Ensure that staff have the training, resources, and bandwidth necessary to define procedures and complete these critical tasks; and
- Improve training for poll workers and community voter outreach efforts.

In support of these efforts, the EAO should also identify and collect appropriate data to support any resource requests to successfully conduct election operations, such as additional temporary personnel during high-volume elections or increased warehouse space in which to conduct pre- and post-election activities. Finally, it is worth noting that since March 2022, the EAO implemented many lessons learned and made substantial improvements to several key processes. Notably, this has included utilization of NRG to facilitate efficient, centralized Election Night materials collection and central count activities, and the implementation of a county-wide election worker program that makes county employees available to support election-related tasks, particularly on Election Night. These efforts and other process changes have greatly improved performance in recent elections and will continue to help ensure successful election administration in Harris County this November and beyond.

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Introduction

On April 12, 2022, Harris County engaged Fors Marsh Group (FMG) to conduct an evaluation of the county's March 2022 primary election. This document is the final comprehensive report containing all the results from analyses, interviews, and focus groups, as well as a series of recommendations based on the results of the assessment.

FMG has undertaken three primary activities as part of this assessment:

First, FMG conducted in-depth interviews (IDI) with representatives of the county's Elections Administrator's Office (EAO), Office of Management and Budget (OMB), the Tarrant County Election Administrator, election technology vendor Hart InterCivic, and representatives from political parties and community groups. These interviews aimed to gather information about different aspects of the March 2022 primary election and the functioning of the EAO within Harris County. The variety of sources interviewed allowed FMG to gather information on the March 2022 primary election from different perspectives. These IDIs were conducted from May to August of 2022.

Second, FMG obtained results from the county's post-election survey of election judges and poll workers following the November 2021 general election and the March 2022 primary election. FMG analyzed the data to identify "pain points" in election administration and determine how these experiences differed across elections. FMG then conducted focus groups with election judges and poll workers to obtain more detail and context about the experiences, concerns, and recommendations of these workers for conducting elections in Harris County.

Third, FMG conducted an assessment of call log data and communications from the EAO from the beginning of early voting (February 14, 2022) through Election Day (March 1, 2022) for the March 2022 primary election and for a similar period for the November 2021 general election. This assessment aimed to find the most common reasons for poll workers and voters to contact the helpline and identify recurrent technical issues during the March 2020 primary election, and how those reasons compared to those of the November 2021 general election.

The result of these assessment efforts is a series of recommendations based on the findings of this evaluation that aim to address the issues identified during the March 2020 primary election and improve the performance of the EAO in future elections.

General Background and Preliminary Interviews

With over 4.5 million residents, Harris County is the most populous county in Texas and the third most populous county in the United States. As of the November 2020 general election, Harris County reported nearly 2.5 million registered voters, making it the third largest voting jurisdiction in the country, only behind Los Angeles County, CA, and Maricopa County, AZ.¹

Since the 2020 general election, Harris County has instituted a number of changes in how it conducts its elections. One of the two most notable changes was the creation of the Election Administrator's Office (EAO) to coordinate and conduct the elections. Elections had previously been conducted jointly by the Tax Assessor-Collector Office, which was responsible for voter registration, and by the County Clerk's Office, which administered elections. The new EAO took charge after the November 2020 general election.

The other major change in how the county conducts its elections was the update of voting equipment. Until December 2020, the county used Direct-Recording Electronic (DRE) devices not equipped with a voter-verified paper audit trail. In May 2021, the county switched to electronic Ballot Marking Devices (BMD) which allow voters to make their choices and then generate a paper ballot that the voter runs through a scanner to cast their vote. The change from DREs to BMDs and scanners is a result of the Texas state legislature's 2021 mandate that Texas counties use voting machines that produce a paper record that allows voters to review their choices and facilitates post-election audits starting no later than August 2026.²

Undergoing a change in voting equipment is always a challenge for election administrators, poll workers, and voters. For **election administrators**, the change of voting equipment raises logistical challenges. In preliminary interviews, one of the challenges mentioned was the space needed for the new equipment in the warehouse. Additionally, technical requirements for equipment operation (e.g., dedicated electricity sources for each voting machine), and the creation of new training materials and protocols for the election were mentioned as some of the processes that needed to be updated in order to implement the new voting system.

Poll worker training is a crucial part of the change in voting equipment, as these temporary workers are responsible for operating the equipment during early and Election Day voting and assisting voters with using the equipment. Preliminary interviews indicated that experienced poll workers had the most challenges, as many of them have been working with the previous election equipment for years and had to learn a completely different system—and “unlearn” the previous one—to conduct an election with very different processes than

¹ Election Assistance Commission (2021). “Election Administration and Voting Survey.” Available at: https://www.eac.gov/sites/default/files/document_library/files/2020_EAVS_Report_Final_508c.pdf

² Texas SB598, 2021.

they had previously used. The COVID-19 pandemic made training even more challenging, as in-person training with hands-on practice with the equipment was not possible for the first election that used these machines in May 2021. In-person training started to be available on a limited basis for the November 2021 and December 2021 elections. For the March 2022 primary election, most of the training was conducted in person, which allowed hands-on practice with the new voting equipment; however, state-level changes necessitated other, late-cycle changes to procedures and training materials.

Finally, **voters** also faced challenges adapting to changes in voting equipment and processes when going to the polls. Voter education and outreach programs can help inform the public about changes and reduce challenges experienced at the polls. However, the EAO was unable to execute planned education and outreach efforts because resources and budget had to be repurposed in order to meet other pressing elections needs.

The 2022 March primary election in Harris County was the sixth election using the new voting equipment, and the one with the highest turnout, with 357,314 ballots cast. The polls were open from February 14, 2022, until February 25, 2022, for early voting, and on March 1, 2022, for Election Day voting. For the March 2022 primary election, there were 90 polling places open during early voting and 375 polling places on Election Day. The Democratic and Republican primary elections were run separately, meaning that they shared polling locations but were assigned different areas to each conduct their own primary election separately. In the interviews, it was pointed out that this system effectively meant setting up and managing 750 polling locations on Election Day, each with its own equipment pick-ups and drop-offs. The March 2022 primary represented a much larger logistical undertaking than previous elections run using the new equipment, which were primarily joint and runoff elections. In the interviews, it was noted that understaffing exacerbated these challenges, with existing staff split between conducting drop-off operations in four sites after the polls closed and managing centralized tabulation of votes.

These factors contributed to one of the main concerns raised about the March 2022 primary election—that reporting of initial results was delayed. By law, counties in Texas are required to report initial results within 24 hours of the closing of the polls, and the initial results of the election were not released until about 30 hours after the close of the polls for the March 2022 primary election. The Elections Administrator in Harris County requested an extension from a court judge, as damaged ballot sheets needed to be duplicated before they could be scanned, delaying the count process. Additionally, there was a failure to include 9,995 mail ballots in the initial results, something that was addressed after noticing that one drive that contained those scanned mail ballots had not been included in the tabulation. Further, this issue was not clearly communicated with the political parties or the public.

Another source of issues during the March 2021 primary election was problems with the voting equipment. Over 1,000 ballot sheets were damaged and needed review. Issues with damaged ballots were reportedly associated with the length of the two-page ballot used for this election. This was the first election in Harris County to use two-page ballots, and a concern raised in interviews was that the lengthy ballots and sensitive equipment led the

scanners to fail to process some ballots on the first attempt. These concerns were also raised by poll workers, who reported problems with election equipment such as machine malfunctions, as discussed in more detail in the next section.

Post-Election Survey and Helpline Call Logs

Key Takeaways

- Nearly one-quarter of poll workers felt training was insufficient ahead of the March 2022 primary election.
- Over 40% of election workers were recruited within 2 weeks of Election Day, while early voting was already underway.
- Election workers reported that voters experienced more issues with voting equipment at the polls in the March 2022 primary election than in the November 2021 general election—including recording vote choices, obtaining a printed ballot, and scanning the printed ballot.
- Election workers reported that Duos and scanners were the pieces of equipment generating the most issues in the post-election survey and in calls to the helpline.
- Poll judges reported long waiting times to pick up supplies before the election, with wait times increasing further during the drop-off process after closing the polls.
- First-time election workers and election workers with 10 or more years of experience reported the highest levels of dissatisfaction with their training.

Poll Judge and Election Worker Surveys

The EAO, in collaboration with Rice University, fielded surveys to election judges and poll workers after both the November 2021 general election and the March 2022 primary election. These surveys cover information on poll workers' and election judges' experiences during the election, feedback on the training and tools provided to conduct the election, and background information on their experience working in elections and demographic information.

The analysis of the surveys includes 727 election judges and 725 poll workers for the November 2021 general election, and 470 election judges and 626 poll workers for the March 2022 primary election. The following analyses focus on the questions covering the topics more directly related to issues identified in the March 2022 primary election. For a complete breakdown of the responses provided to the 2022 survey, please see Appendix I of the report.

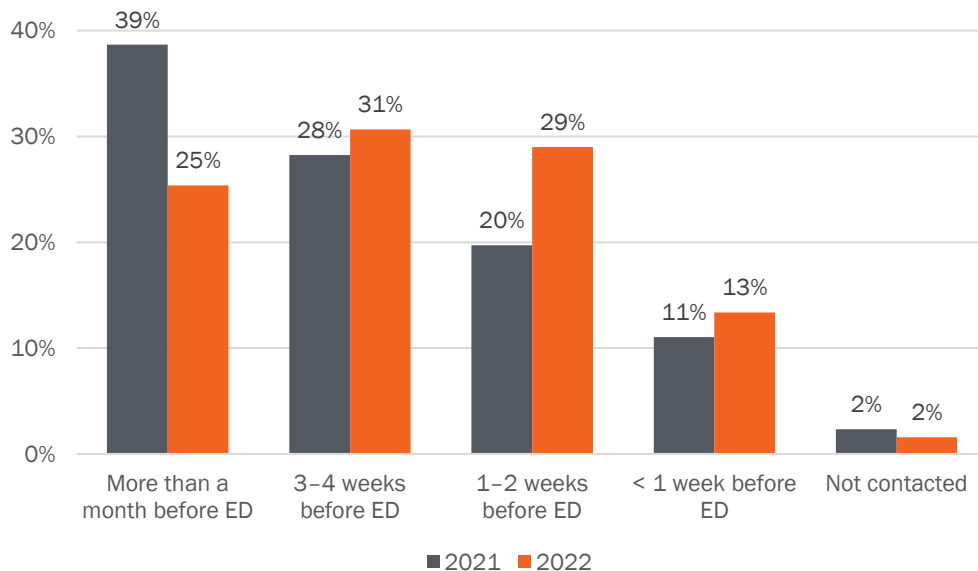
Election Workers Recruitment

Election workers and judges were asked about when they were recruited to work on the polls. For the March 2022 primary election, 25.4% of workers were recruited more than 1 month before Election Day, and 73.0% of were recruited within a month of the election. This

stands in contrast with the results from the November 2021 general election, for which 38.7% of election workers were recruited more than 1 month before Election Day, and 59.0% were recruited within a month of the election (see Figure 1). Interestingly, early voting for the March 2022 primary election began 2 weeks before Election Day (February 14, 2022), meaning that 42.4% of the respondents were recruited during the period of early voting. Comparisons between the recruitment in the November 2021 general election and the March 2022 primary election, however, need to be taken with caution, since the process to recruit election workers was somewhat different. Although the county was in charge of recruitment for the general election, the parties were responsible for recruitment of election workers working on Election Day in the primary election. However, the county did step in to assume responsibility for filling empty positions in the days immediately before Election Day.

Additionally, when looking at the time of recruitment of poll workers and poll judges separately for the March 2022 primary election, the results show that poll judges were recruited slightly earlier than poll workers, with 63.1% of poll judges recruited 3 weeks or more before Election Day, compared to 50.7% of poll workers recruited during the same time frame.

Figure 1. Time of Recruitment for Election Workers in 2021 and 2022

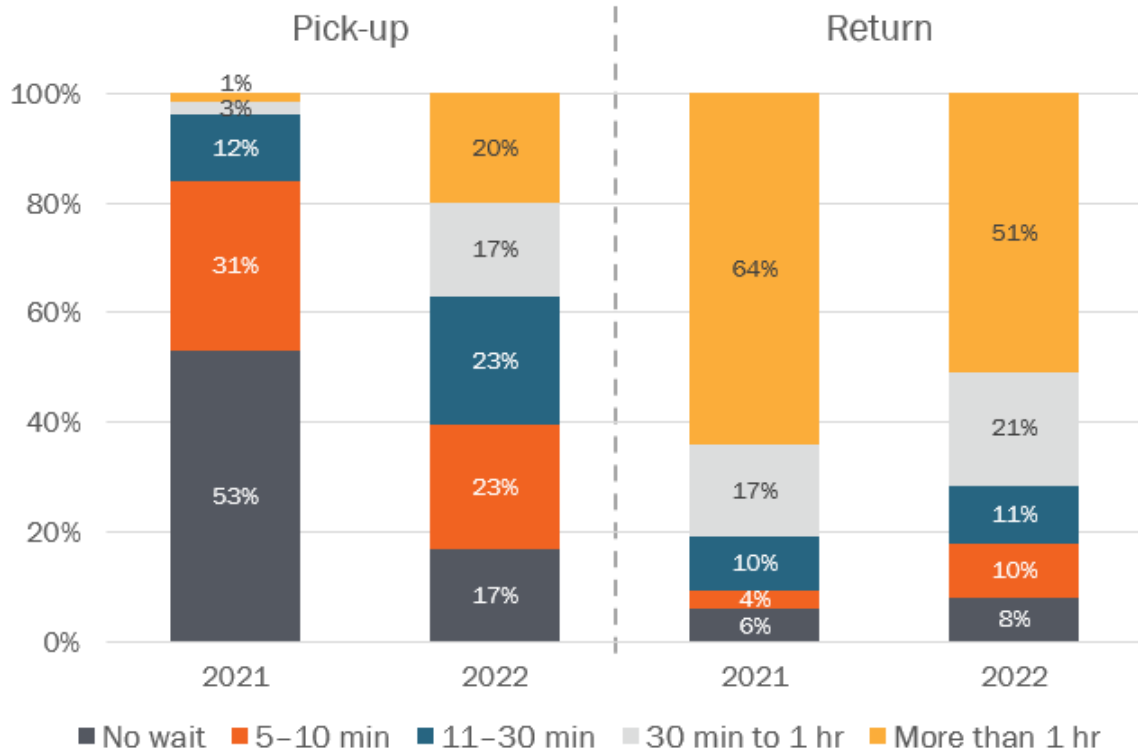


Wait Times

Election judges were asked about waiting times for picking up and dropping off voting equipment, as well as maximum waiting times when calling the phone helpline. For voting equipment pick up, 37.1% of judges reported waiting more than 30 minutes in line to obtain their equipment for the March 2022 primary election, a sharp increase compared to the November 2021 general election, when 4.0% of judges reported waiting more than 30

minutes to obtain their voting equipment (see Figure 2). Over half (50.8%) of judges reported waiting more than one hour to return their voting equipment after the March 2022 primary election, a slight decrease compared to the percentage that reported waiting more than an hour for equipment return after the November 2021 general election (64.2%).

Figure 2. Wait Times Reported by Election Judges for Pick-Up and Return Voting Supplies



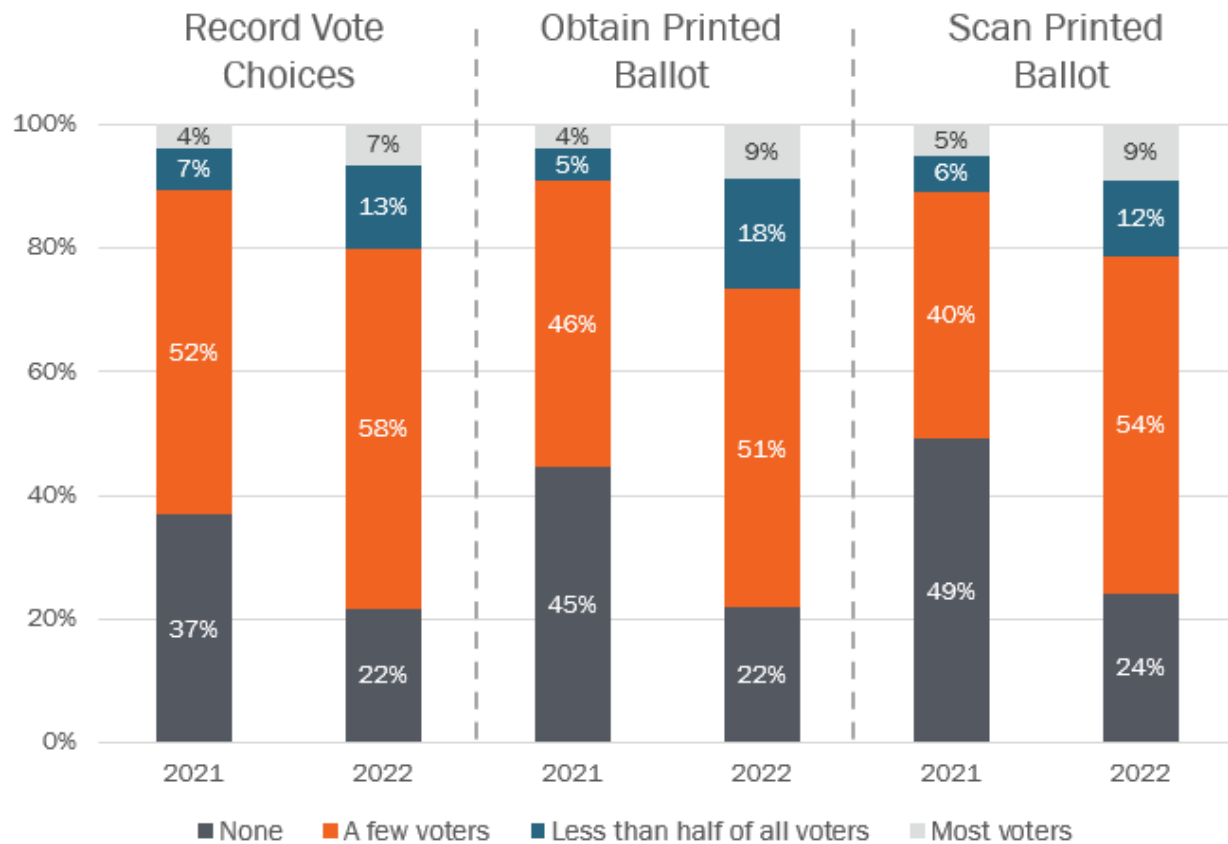
Finally, 52.8% of election workers and judges in the March 2022 primary election reported that the maximum time they waited when contacting the phone helpline was 5 minutes or less, whereas 27.1% reported waiting 15 minutes or more on the line and 1.3% provided comments mentioning that they could not get through. These results are very similar to those for the November 2021 general election.

Difficulties at the Polls

The surveys asked election workers and judges whether voters in their polling location experienced difficulties with different aspects of the voting process. Based on these survey questions, the most frequently reported difficulty in both elections involved voting equipment. Over half of the respondents to the March 2022 primary election survey reported that a few voters experienced difficulties recording their vote choices on the voting machines (58.3%) and 20.0% reported that more than a few voters had these types of difficulties. These rates increased relative to the November 2021 general election, when 52.4% reported that a few voters and 10.7% reported that more than a few voters

experienced difficulties recording their vote choices. Other frequent election issues involved voters having difficulties obtaining a printed copy of their ballots, with 26.7% of the surveyed election judges and poll workers reporting that more than a few voters had such difficulties in the March 2022 primary election compared to 9.2% for the November 2021 general election (see Figure 3). Another voting aspect that respondents identified difficulties with was voters scanning the printed copy of their completed ballots. More than half of respondents (54.5%) reported that a few voters experienced difficulties with this process, and 21.3% of respondents reported that more than a few voters had such difficulties. These results are considerably higher than those reported for the November 2021 general election, when 40.2% of respondents reported that a few voters had experienced difficulties scanning their completed ballots and 10.8% reported that more than a few voters experienced difficulties with that process (see Figure 3).

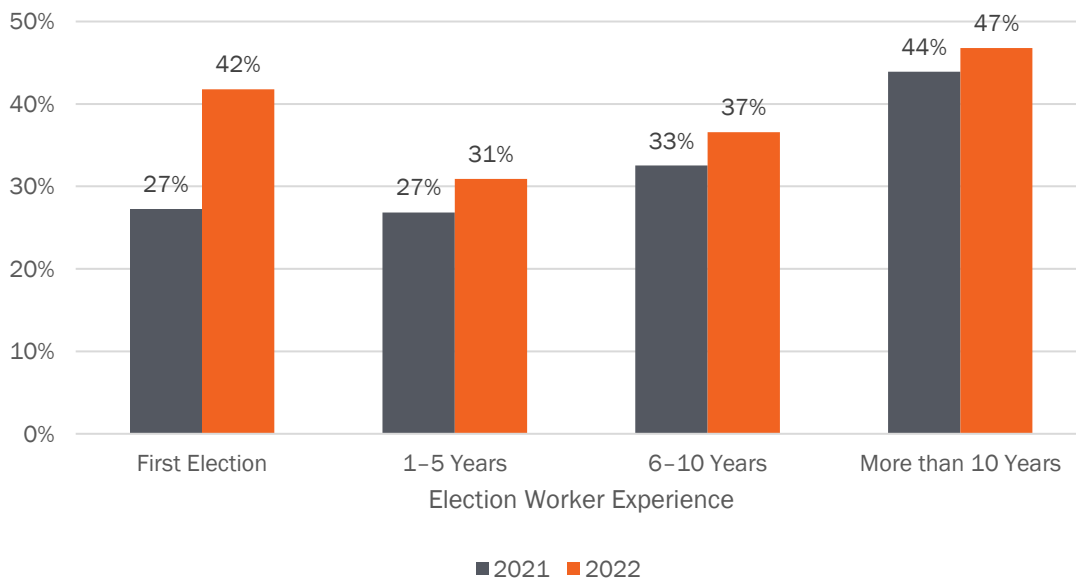
Figure 3. Results for Issues Experienced by Voters with Voting Equipment



The election judges and poll workers who responded to the surveys were also asked if they had any issues setting up or operating the equipment. Results for the March 2022 primary election were very similar to those for the November 2021 general election, with 36.5% of workers reporting issues in 2022 and 32.3% in 2021. Interestingly, the most experienced workers—those with 10 or more years of experience—reported the highest rates of issues

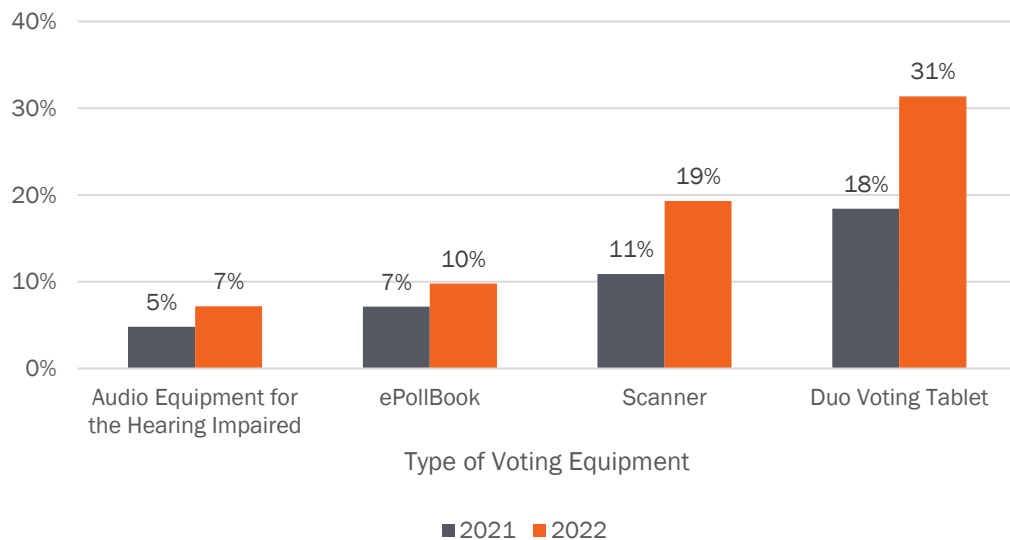
setting up and/or operating the new voting equipment (46.8%), and those that had served for 1–5 years the lowest rates of issues (30.9%) in the March 2022 primary election. When comparing the results with the November 2021 general election, the most experienced election workers also reported having issues with the voting equipment more often than the rest of the groups. Additionally, election workers reported having issues with the equipment at similar rates in both elections, except for the group of respondents who reported working at the polls for the first time. For the March 2022 primary election, first-time workers reported issues with voting equipment at a notably higher rate (41.8%) compared to first-time workers in the November 2021 general election (27.3%) (see Figure 4). Additionally, when comparing how often respondents reported having issues with the equipment, 47.3% of poll judges reported having some issue with the equipment, compared to 28.3% of poll workers. This difference is probably related to the fact that poll judges oversee the whole voting process and are informed whenever there is an incident at the polling location.

Figure 4. Percentage of Election Workers Who Experienced Issues With Voting Equipment by Working Experience for the 2021 and 2022 Elections.



Election workers were asked about the pieces of equipment they experienced problems with between audio equipment for the hearing impaired, ePollBooks, Duo voting tablets, and scanners. Overall, the pieces of equipment for which the respondents reported having the most issues during the March 2022 primary election were the Duo voting tablets (31.4%) and scanners (19.3%). These two types of voting equipment were also flagged as the ones that election workers had the most issues with during the November 2021 general election; however, the percentage of respondents who reported issues was considerably lower than in the 2022 election (see Figure 5).

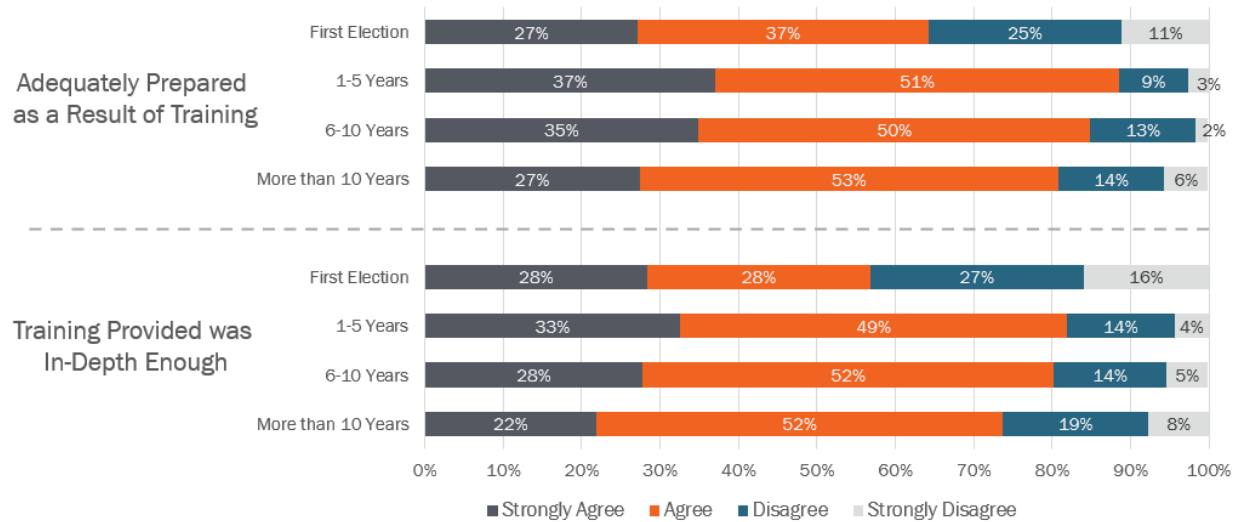
Figure 5. Percentage of Election Workers Who Experienced Issues With Particular Types of Voting Equipment for the 2021 and 2022 Elections



Training

Nearly all respondents (91.5%) of the March 2022 survey agreed that their instructors were knowledgeable and answered their questions thoroughly during training. Also, over 75% of respondents agreed that the training they received was in-depth enough and that it prepared them adequately to serve in the election. However, the reported level of satisfaction with the depth of the training and the feeling of being prepared to serve in the election was different depending on the respondents' experience serving at the polls. First-time election judges and poll workers were more than twice as likely to report that training was not in-depth enough (43.2%) than were non-first-time workers (20.5%). First-time election judges and poll workers were also twice as likely to report that they did not feel adequately prepared to serve in the election (35.8%) than were non-first time workers (14.1%). Interestingly, election judges and poll workers who had been serving for 10 years or more reported not feeling adequately prepared as a result of the training, and that the training was not in-depth enough more frequently than did other, non-first time workers who had fewer years of experience (see Figure 6).

Figure 6. Responses to Training Questions by Workers' Experience Serving at the Polls



Responses to questions about training were relatively similar between respondents of the 2021 November general election and 2022 March 1, primary election except for a few items. Among poll judges, there was a statistically significant increase in the perception that the training was in-depth enough (66.4% in 2022 compared to 58.2% in 2021) Among poll workers, results were also very similar between respondents of the 2021 November general election and 2022 March 1 primary election, except for a few items for which 2022 respondents reported a statistically significant higher agreement with statements regarding instructors' knowledge, feeling prepared for the election, and depth of training.

Assistance and Recruitment

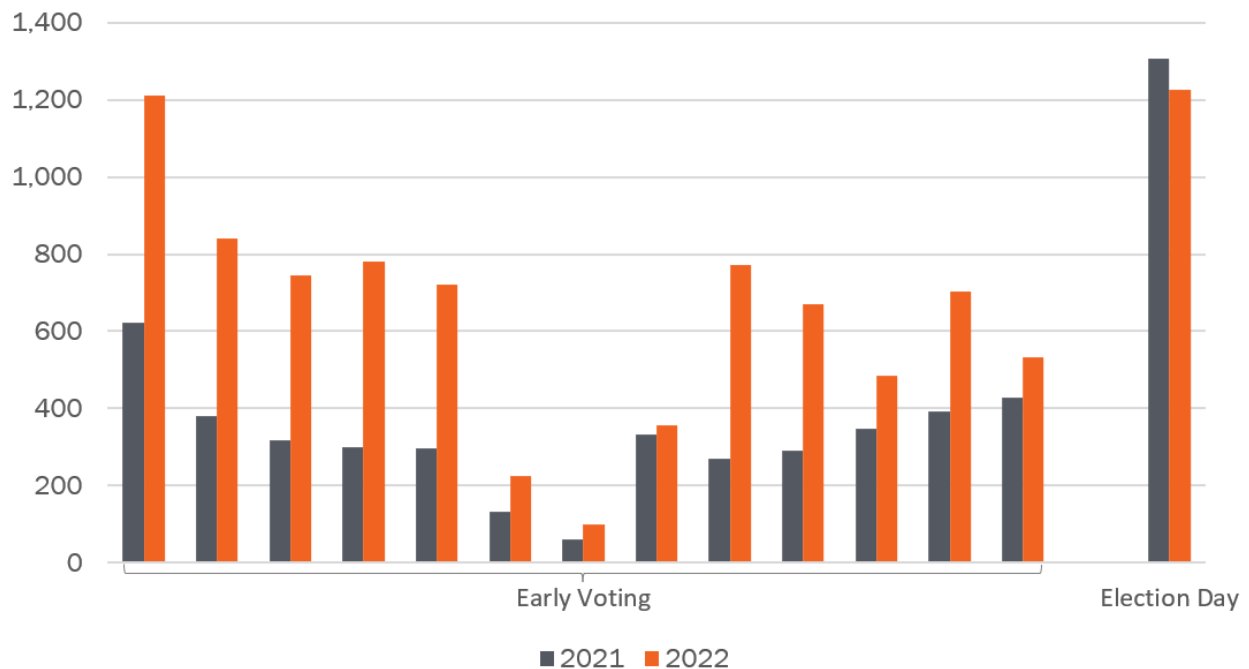
For the March 2022 primary election, 19.5% of election judges reported that recruitment specialists did not work with them to ensure they were signed up for supply handout and drop off, compared to 12.9% of judges in the November 2021 general election. Also, there was more dissatisfaction with the Harris County judge's helpline during the March 2022 primary election, with 24.9% of judges reporting that they did not find it helpful, compared to 14.9% in the November 2021 general election.

Poll workers and election judges were recruited to work the polls closer to Election Day in the March 2022 primary election than they were for the November 2021 general election. In 2022, 36.2% of election judges and 47.0% of poll workers were recruited 2 weeks or less before the election. Nearly all (95.3%) election judges and poll workers who assisted with the March 2022 primary election reported that they will likely work at the polls again.

Helpline Call Logs

A review of the call logs from the helpline show that the EAO responded to 9,367 calls from the beginning of early voting (February 14, 2022) through Election Day (March 1, 2022) for the March 2022 primary election, a sharp increase compared to the 5,467 calls responded to in the period covering from the beginning of early voting (October 18, 2021) to Election Day (November 2, 2021) of the November 2021 general election (see Figure 7).

Figure 7. Helpline Calls Responded to by Day for the November 2021 General Election and March 2022 Primary Election



Although the total volume of calls was notably higher in 2022 compared to 2021, the percentage of calls that were classified as “Technical Issues” was lower for the March 2022 primary election (16.1% of the total calls) compared with the November 2021 general election (24.4% of the total calls). Calls classified as technical issues cover mostly calls by election workers reaching out due to problems with equipment, such as voting equipment not functioning correctly, as well as calls requesting supplies, like ballot paper and connection cables.

For the March 2022 primary election, in addition to calls regarding issues with voting equipment, the helpline attended calls from election judges, poll workers, and voters on a range of other topics. The topic that generated the highest volume of calls to the helpline was vote-by-mail applications and vote-by-mail ballots, with 3,109 calls from the beginning of early voting until Election Day (32.2% of the total calls received). These calls covered different topics on vote by mail, but a preliminary content review reveals that the majority of

these calls were from voters requesting a vote-by-mail ballot, checking on the status of their application, or checking on the status of their ballot.

Voters also reached out to the call center in 2022 for information on the election. A total of 1,552 calls on this topic were responded to during early voting and Election Day (16.6% of the total calls received), a majority of which were logged as questions on voting locations and hours.

To better understand the dynamics of the helpline, FMG’s analysts completed a content coding of 1,304 calls received between the start of early voting until Election Day for the March 2022 primary election. The calls reviewed were those flagged as technological issues that related to pieces of voting equipment or that were categorized as “Other.” The types of calls that were coded are summarized in Table 1. These calls were coded according to whether the issue was fixed during the call, what kind of escalation was needed to fix the issue (in-person assistance or transferring the phone call to another staff member), the cause of the issue (human error, technology error, or something else), whether the call concerned missing equipment, whether an equipment resupply was needed, whether the issue concerned a voting machine connection with other equipment, whether the call concerned an issue with a ballot (unable to scan ballot, ballot jammed, or other), whether the call involved a spoiled ballot, and whether the call related to the use of the emergency slot for a ballot that needed to be scanned later.

Table 1. Types of Helpline Calls That Were Content Coded

Equipment Type	Number of Calls	Percentage of Coded Calls
Duo	322	24.7%
Scanner	243	18.6%
Controller	226	17.3%
ePollBook	196	15.0%
Other	193	14.8%
Duo Go	124	9.5%
Total	1,304	100.0%

The results of the content coding showed that 72.5% of issues were solved during the phone call. Another 19.5% of issues were not successfully solved during the call, and on the remaining 7.9% of calls the description did not make clear whether the issue was solved during the call. Of the 21.2% of calls that required additional assistance, 57.2% required in-person assistance and 42.8% were transferred to another individual via phone. The vast majority (83.5%) of call issues concerned a technological error (such as a software glitch or a machine not working as expected), while 12.1% were the result of human error (such as an individual not setting up a machine correctly or using a machine incorrectly) and 1.2% were caused by other issues (such as a power outage at a voting site or rain affecting voting

machines or ballot paper during curbside voting). Only a small percentage of calls concerned a voting machine connection issue (10.5%), an equipment resupply (5.4%), or missing equipment (3.7%). Less than one-quarter of calls concerned a ballot issue, and of those calls, the most common issues were a ballot being jammed or smudged (55.6%, 174 calls of all the calls analyzed) and a ballot being unable to be scanned correctly (39.3%). Only 15.1% of calls concerned a spoiled ballot and 8.5% of calls concerned an issue with the emergency slot.

FMG also analyzed the content-coded variables by the type of machine the call involved. These analyses used two sample T-tests with equal variances to compare each specific type of equipment against the other equipment in use for the March 2022 primary election. This analysis allowed FMG to determine which types of voting equipment were statistically more or less likely to cause certain types of issues during the primary election. The results of this analysis are summarized in Table 2. Compared to other types of voting equipment, the issues related to ePollBooks were more likely to be fixed during the call and were less likely to require in-person assistance to solve the issue. This could be related to the fact that the ePollBooks used in the March 2022 primary had been in use for several election cycles, indicating that election site personnel were more accustomed to using them. Looking more closely at the issues reported involving ePollBooks, 16.8% related to the process of spoiling a ballot and issuing a new access code to the voter rather than an issue with the machine itself, and in many instances, when the issue was related to the machine, it was solved after restarting or resetting the machine. For calls related to controllers, on the other hand, the issues were less likely to be successfully resolved during the call compared to the other types of voter equipment, with 28.9% of the calls related to controller flagged as not being solved during the call. Of those, almost half of the calls required sending a technician to the polling place and 32.3% of the calls were escalated.

In looking at whether the issue was caused by human error as opposed to another source, Duo Go-related issues were more likely to be caused by human error (e.g., a person doing the set-up steps in the wrong order), whereas scanner-related issues were less likely to be caused by human error (e.g., scanner not reading one of the two pages of the ballot correctly). Duos were the type voting equipment most commonly associated with connection-related issues and spoiled ballots; 78 of the 130 calls (60.0%) that involved a voting machine connection issue were related to Duos and 90 of the 173 calls (52.0%) that involved a spoiled ballot concerned a Duo.

Table 2. Differences in Helpline Outcomes by Type of Equipment³

	Type of Equipment				
	Controller	Duo	Duo Go	Scanner	ePollBook
Was the issue fixed during the call?	<u>Less</u> likely than other equipment				<u>More</u> likely than other equipment
Was in-person assistance required?	<u>More</u> likely than other equipment	<u>More</u> likely than other equipment			<u>Less</u> likely than other equipment
Was the issue caused by human error?			<u>More</u> likely than other equipment	<u>Less</u> likely than other equipment	
Was the issue related to voting machine connection?		<u>More</u> likely than other equipment		<u>Less</u> likely than other equipment	<u>Less</u> likely than other equipment
Did the issue involve a spoiled ballot?	<u>Less</u> likely than other equipment	<u>More</u> likely than other equipment		<u>Less</u> likely than other equipment	

Of the 1,304 calls reviewed, a total of 174 were coded as being related with an issue with the ballot being jammed. Duos accounted for 62.6% of the calls related to a jammed ballot, scanners accounted for 16.1%, and Duo Go for 13.8%. Additionally, 123 calls of those coded (9.4%) were related with ballot scanning issues, and 111 (8.5%) were related to questions regarding the use of the emergency slot—which is used for ballots that cannot be scanned for some reason and need to be kept separately to be scanned after the polls close or duplicated and scanned at the central location.

The results from the coding identify some of the most common reasons for poll workers to reach out to the helpline and reveal frequent issues with certain types of election equipment, such as controllers being more likely to require in-person assistance and poll workers having connection issues with Duos (generally issues with connections between Duos and Controllers or with other Duos). These findings suggest that additional testing of connections between Duo machines, in addition to more training of election workers on how to connect Duos to one another and to Controllers, could reduce such issues. Similarly, of the calls analyzed, 15.1% were related to spoiled ballots. In many cases, the issue involved walking the poll worker through the process of spoiling a ballot and creating a new access code for the voter. This may be another area where additional training on specific real-life

³ In this table, blank cells indicate that there was no statistically significant difference in comparing a particular equipment type to other equipment. The category “Other” for calls regarding technological issues was excluded from the analysis shown in this table because it does not specify a particular type of equipment as the reason for the call. Statistical significance was determined at the $p < .05$ level.

scenarios could coach poll workers to be better prepared when they need to complete the process of spoiling a ballot and issuing a new blank ballot to the voter.

Focus Groups

To provide additional insight into the issues experienced during the March 2022 primary election in Harris County, FMG conducted focus groups with poll workers and election judges who served at polling places during the primary election. The goal of these interviews was to better understand their experience with the training and the new voting equipment, as well as to identify specific challenges they faced during the election and to identify strategies to improve their preparedness for such situations. The following section outlines the key findings of these interviews and the methodology used to select participants.

Key Takeaways

- Election judge groups tended to share more negative experiences and tended to have stronger feelings about not being equipped with sufficient resources during the March 2022 primary election than did poll worker groups.
- The ability to have continuous exposure to election materials, staff, and voting machines during early voting helped both poll workers and election judges familiarize themselves with election materials.
- Pick-up of voting materials was a much smoother process than drop-off during the March 2022 primary election.

Methodology

Interview Guide Development

Based on the preliminary analysis of the helpline call logs, the election judge and poll worker surveys, and initial conversations with election administration officials and Hart InterCivic, FMG developed an interview guide that focused on six key topics:

- Experience with training and reference materials
- Experience with new voting equipment
- The voter experience at the polls on Election Day
- Equipment pickup and drop-off experience
- Poll worker/election judge experience on Election Day
- Communication with the Central Elections Office

Questions asked related to these topics were centered on the experience of poll workers and election judges and aimed to understand any shortfalls within these key areas and how they could be improved in future election cycles. A draft version of the interview guide was shared with Harris County for review prior to implementation.

Participant Outreach and Selection

To recruit the population of interest for these interviews, FMG provided Harris County with an outreach email that included information about the study and a link to the screener that collected key information about the respondents (specifically, their role during the March 2022 primary election, years of experience as an election worker, period when they worked at the polls, the party's primaries they worked on, and an email address to contact them) in addition to a list of six pre-selected interview timeslots for respondents to select their preferred date and time to participate. Harris County distributed the outreach email among the poll workers and election judges that worked in the March 2022 primary election. Any election judge or poll worker who was interested in participating in the study then filled out the screener and indicated their preferred interview dates from the list. Responses were then automatically sent back to FMG.

Participants were randomly selected using specific parameters to ensure an equitable distribution of election judges and poll workers based on years of experience, the party's primary they worked on, and when they volunteered (i.e. early voting, on election day, or both). In total, four focus groups were selected (two with poll workers, two with election judges), consisting of eight participants each.

Participants who were selected to participate in either focus group then received a follow-up email from FMG that notified them of their selection and included the Zoom login information. FMG then followed up with participants 24 hours before their scheduled interview time to remind them of their participation. The table below provides the breakdown of the number of participants that attended each focus group.

Table 3: Focus Group Participation

Focus Group Date	Population	Participants Selected	Participants Who Attended
June 6, 2022	Poll Workers	8	5
June 7, 2022		8	4
June 9, 2022	Election Judges	8	6
June 10, 2022		8	8

Findings

Training and Reference Materials

Overall, poll workers had positive reviews of the training they received prior to Election Day. They felt that the training content covered key information and that the trainers who conducted the training were knowledgeable. Poll workers also generally agreed that hands-on training was the best way to understand the processes and procedures related to the setup and monitoring of voting machines, such as scanners and Duos. When asked about the online trainings that are available to poll workers, respondents reported thinking that the trainings were an excellent supplementary resource to review in the lead-up to Election Day, but that they did not provide enough information for poll workers to do the job well. However,

there were certain resources, such as manuals and checklists, that were noted as a great resource for poll workers to reference while at their polling stations on Election Day. There were multiple participants who indicated that they referred to these materials many times during the day on Election Day.

Although the training was well received, participants did note a few areas in which the training could be improved. Firstly, some respondents noted that there was no training that was conducted near where they were located, which required some poll workers to travel long distances in order to have access to an in-person training. In some instances, the facilities in which the trainings were held were crowded and could not accommodate the number of people who attended the training. This proved to be particularly difficult, because the overcrowded spaces meant that some poll workers did not get any hands-on experience with the voting machines or other voting-related materials. Secondly, participants noted that they would have liked the training sessions to include content related to common “on-the-ground issues” that a poll worker could experience, for example how to correctly fill out an affidavit.

Election judges echoed some of these challenges. Generally, they tended to be more critical of the trainings, citing that they were disorganized and that newer judges experienced the trainings differently from more experienced judges; one participant commented that newer judges were confused and asked several questions about the process, whereas more experienced judges were used to using the older equipment and wanted to know more about the new equipment. Another participant reported feeling that trainings for these two groups should be conducted separately, as much time is devoted to rehashing questions that not everybody has.

The trainings were also criticized for being simultaneously too long and not in-depth enough. This may be due in part to the volume of attendees. For example, one participant noted that the training they attended was not able to cover all content sufficiently due to the number of questions asked. Another commented that although trainers did their best to cover a large amount of content, the trainings did not cover on-the-ground issues, such as paper jams, that can cause problems on Election Day. Several election judges noted that in-person trainings were crowded, that there was minimal physical space, and at least one election judge felt that the trainer did not have sufficient experience.

Another key theme in discussions with election judges was the use of an incomplete, draft equipment manual that did not fully reflect the workings of the new machines. Election judges recalled seeing the word “Draft” on the manuals they used, and reported feeling that the manual should be finalized before training begins. Another suggestion included making the in-person training mandatory, even for judges who feel prepared.

New Voting Equipment

When setting up new voting equipment on Election Day, poll workers found that the setup process went smoothly overall. When asked about what helped make the process go smoothly, some poll workers noted that they were working with a team they had consistently worked with for many election cycles. This made it easier for the team members to know what their role would be and their key responsibilities.

Malfunctioning voting equipment was cited as one of the biggest difficulties that poll workers experienced with the voting equipment. One of the most common malfunctions is that polling places would receive voting machines that simply did not function. For example, one participant noted that “in the runoff, there were 12 machines [at the polling place] and one was working.” The second most common malfunction that participants cited was that the voting machines would consistently have paper jams. As will be described later in this report, voters would attempt to insert both pages of their ballot at once instead of inserting them one at a time, causing the machines to jam. Although poll workers were usually able to rectify these issues with no problem, they caused bottlenecks at polling sites when combined with voting machines that were just not functional at all. One potential solution that poll workers indicated could help with this issue would be to increase the resources or information available to voters so that they are more aware of how to correctly insert their ballots into voting machines.

At the close of Election Day, poll workers did not reference any serious issues with breaking down voting equipment at the polling place. The only issue participants mentioned was that it was difficult to remember how to re-box the materials. Participants mentioned that if Harris County could provide photos or visuals in the training materials outlining how to repack these materials it could help alleviate these issues.

Some election judges described connectivity issues during equipment set-up and overall difficulty getting set up in difficult locations (e.g., lack of space). Because the equipment manual was in draft form, it lacked some information and some election judges had difficulty when trying to resolve time-sensitive issues during polling hours. One participant described having paper feeding difficulties and a lack of instruction in the manual. Several also described having trouble with the tape printing process, as it had changed since the previous election.

Generally, election judges felt that they would have liked more specific guidelines and additional staff to help mitigate the problems of the new voting equipment, particularly when machines were down and there were large crowds of voters. Several election judges attributed equipment issues, such as paper jams and scanning problems, to the use of a two-page, long ballot. One judge suggested there be a dedicated clerk to feed ballots into the voting machines.

After the close of polls, election judges also tended to have difficulties when packing the voting equipment into their storage cages. One judge suggested taking a picture of the storage cages before they are unpacked during set-up to assist in organization at the close of polls.

Voter Experience

When evaluating the voter experience during the March 2022 primary election, poll workers consistently indicated that the voters who tended to have the most difficulty were those who had never used paper ballots before to cast their vote. As mentioned previously, many times the voter would attempt to insert both sheets of their ballot into the machine at the same time, which would cause the machine to jam. As poll workers mentioned, this happened so often that it would lead to delays at their polling stations, which in turn led to increased wait times for the voter. Additionally, poll workers indicated that they did receive some pushback from voters related to the use of electronic devices in the polling place. Most poll workers indicated that this was because voters were not aware that they could not use their cell phones within a certain distance of a polling place. To mitigate this issue in future, poll workers suggested that Harris County develop more signage and messages that could be posted in the polling place to make it very clear to voters that the use of electronic devices is prohibited within a certain distance of a polling place.

Lastly, poll workers provided some insightful strategies that they used to try to keep the voter experience as smooth as possible. For example, some poll workers described how they would approach voters who were in line to cast their vote at the polling station to ask if they needed assistance with voting, or if they were familiar with the recent changes to the voting process. In the event a voter did ask a poll worker for assistance, they would then provide a step-by-step explanation to the voter on how to correctly fill out and cast their ballot. Poll workers who did implement this strategy noted that they saw lines move smoothly at their polling station and decreased the number of technical issues that arose with voting equipment. In other instances, poll workers noted that voters would request to see a sample ballot before they went to cast their vote to understand what the ballot looked like and how to correctly fill it out. One poll worker even indicated that the sample ballot was “the most helpful piece of literature for [the voter].” As Harris County looks to the future, providing resources such as a sample ballot for voters to review could help to mitigate any issues that voters may have when casting their vote.

When reflecting on the voters’ experiences of the election, election judges agreed that there is a need for expanded voter education and outreach prior to elections. For example, voters seemed to be unaware of policies regarding cell phones at the polls, misunderstood the mechanics of voting on party ballots, and some even mistakenly assumed that they were supposed to take their ballots with them when they left the polls. These challenges tended to be observed across different voter age brackets and voting experience levels. However,

one participant noted that as voter turnout increases during an election, so does the prevalence of new and inexperienced voters.

Election judges were quick to offer suggestions for improvement: public information campaigns can be expanded in the month leading up to an election and can cover topics such as how to use new voting machines and how to scan completed ballots. During active polling hours, screens detailing voting guidelines can be set up throughout a polling location. Additionally, one participant described an existing information sheet that contains a small icon explaining to voters that they are not permitted to have their cell phones out during voting. The election judge suggested that a larger and more detailed graphic would have more visibility and be more likely to be noticed by voters.

Supply Pick-Up and Drop-Off

Election judges were asked about supply pick-up and drop-off. Picking up supplies and voting equipment was an overall smooth and well-organized process, with helpful staff and ample options for pick-up appointment times. Election judges reflected that large crowds at pick-up locations were mitigated by there being appointment times. Difficulties experienced during pick-up seemed to be isolated incidents and spoke more to the experience level of pick-up staff than to general disorganization.

However, supply drop-off was described as very difficult. Election judges were typically required to drive long hours late into the night after the close of polls to reach drop-off locations. After arriving, they found that there were long wait times to drop equipment off. Drop-off locations were also described as being difficult to find and difficult to reach, especially late at night. When asked if supply drop-off was always this difficult, election judges reflected that the process in March 2022 was more frustrating than it had been in other elections.

Although some election judges found staff at drop-off locations to be generally courteous and helpful, the long wait times soured the experience. They suggested increasing the amount of space allotted to drop-off locations to be able to accommodate more people at a time and to expand the number of drop-off locations available. Additionally, some election judges were uninformed or confused about the specific materials needing to be dropped off. In some cases, a return to the polls may have been required. Additional clarity on the materials list would be helpful. In some locations, election judges had staff available for extra help during the breakdown and organization of equipment after the close of polls; in these cases, close-out was faster and more efficient, and election judges were able to leave the polling locations sooner. At least one judge explained that the availability of a constable during equipment drop-off was an immense help.

Experience During the March 2022 Primary

Overall, poll workers said they had a positive experience during Election Day and enjoyed the sense of camaraderie that existed among all of them regardless of ideology or political affiliation. However, poll workers who worked both early voting and Election Day noted that they wished they had a better understanding of why voters from both parties could use the same voting booth and e-poll book for early voting, but there needed to be two separate voting areas for each party on Election Day. Participants suggested that clarifying that distinction in the training materials they receive from Harris County would be helpful.

One election judge explained that in some cases, the March 2022 primary election was conducted in different polling locations than previous elections. These changes in location sometimes led to difficulties; voters were confused about the location change and complained of parking difficulties and long walks between the parking lot and the building. For elections staff, the new locations may have been smaller than what they were expecting. Moreover, some election judges recounted unforeseen events like emergency hurricane testing taking place during active polling hours, which greatly disrupted the day's activities.

Several participants experienced both early voting and Election Day voting. Overall, early voting seems to have been the more positive experience; judges noted that early voting is supplied more sufficiently than Election Day voting (e.g., with laminated materials). The continuous exposure to equipment, materials, and staff also offers a sense of continuity to early voting that does not occur on Election Day. Early voting also allows clerks and judges to have the option of a morning or an afternoon shift, which garnered positive feedback. Participants also tended to feel election judges should have prior experience as clerks, although this feeling was not universal.

When reflecting on changes since the March 2022 primary, election judges tended to feel that the May election was an overall better experience, noting conscious positive changes and improvements.

Communication with the Central Elections Office

Generally, most poll workers indicated that they did not have direct communication with the Central Elections Office; it was mostly the responsibility of the election judge to call and communicate with the Central Office if there was an issue. However, when asked about their experience with technical support staff, most poll workers indicated that additional technical support would be helpful in future elections. During the March 2022 primary, many participants noted that there was an extended lag time between when a request was made for technical support and when technical support actually arrived at the polling station to resolve the issue. This created logistical issues at the polling station because many times voting machines and other equipment would remain idle and would result in long wait times for voters to cast their ballot. Additionally, poll workers noted that it would be helpful to have technical support that could provide assistance over the phone for small issues (e.g., paper

jams, iPads not working properly). Poll workers believed that this type of support could free up the resources of mobile technical support workers to address serious issues that required their attention.

When asked about their experience communicating with the Central Elections Office, election judges expressed concerns about the knowledge and experience level of the helpline staff compared to previous elections. The helpline also required longer hold times than it did in previous elections, and used an automated system that participants explained was not used before March 2022. Some participants recalled that they never received an answer or never received follow-up for their requests, with one recalling that they decided to reach out to personal contacts to have their questions answered instead. Overall, there was a general lack of technical support via the helpline. Reasons for calling the helpline included:

- To request additional clerks when staff was unavailable or did not arrive to their assignments
- To ask questions about provisional ballots or voters who brought rejected mail ballots with them to the polling location
- To ask questions regarding voter registration, which is a time-sensitive issue during an election
- To request technical assistance with issues like scanning
- To request additional supplies and voting materials

Election judges were also asked to evaluate the service provided by Protiviti technicians. Some of the judges who recalled interacting with the technicians found them to be unreliable and disliked their lack of identification, badges, or paperwork. Two participants found that, rather than helping, the technicians arrived at the polling location to gather data about defective voting machines; when asked what they would have liked the technicians to provide, the judges expressed frustration that the voting machines were not fixed. On the other hand, one participant who called the technicians for connectivity and paper issues found the technicians helpful and knowledgeable. One participant also had the opportunity to work with the technicians during the May election and found them to be cooperative and helpful.

In-Depth Interviews

In addition to focus groups with poll workers and election judges, FMG conducted a series of in-depth interviews with Hart InterCivic (the county's voting technology vendor), the Harris County Budget office, leadership staff from the EAO, community groups and political parties in Harris County, and the Elections Administrator of Tarrant County, TX. The goals of the interviews were different, as each person covered a different role in the March 2022 primary election (or no role, in the case of the Elections Administrator from Tarrant County). The following sections provide details of the topics discussed and the findings.

Hart InterCivic

FMG spoke with Drew Stewart, Sr. Project Manager, and Peter Lichtenheld, Sr. Vice President of Customer Success, at Hart InterCivic on June 10, 2022, following up on a previous conversation from April 29, 2022. In addition to a teleconference discussion of the issues experienced in Harris County during the March 2022 primary election, Hart InterCivic provided pre-prepared responses to questions provided by FMG to offer additional data, detail, and context.

Hart InterCivic summarized the challenges experienced by Harris County during the March 2022 primary election as primarily stemming from “the transition of electronic to paper-based voting, compounded by the creation of a new Elections Office, the pandemic, and the lack of funding for execution of an effective training and voter education effort,” noting that although the new equipment had been used in previous elections (those held in Harris County in May and November of 2021), the March 2022 primary election was by far the largest since the transition, and this election was the first experience with the new paper-based voting technology for many poll workers and voters. The transition to new technology particularly impacted three main areas: internal election office operations, election judge and poll worker training, and voter education.

As part of their contract with Harris County, Hart InterCivic provided the equipment displayed in Table 4. In addition to this equipment, they provide the county with additional support services, including an assigned project manager to assist Election Office staff in planning and facilitating election project deliverables; though, as the entity ultimately responsible for running elections, it is up to the county to fully implement any training and guidance provided. Operational guidance includes resources and support related to activities like project schedules, equipment delivery and legacy pickups, equipment repairs, warehouse storage requirements, pre-defining equipment, acceptance testing, staff training (review of device and software guides), logic and accuracy testing, voter outreach resource recommendations, labels and forms, best practices from Hart's Knowledge Base Articles, lessons learned workshop facilitation, and support the county's call center and field support operations for elections.

Table 4: Hart InterCivic Voting Equipment Provided to Harris County

Equipment Type	Total Units
Duo	11,209
Duo Go	840
Scanner	1,029
Controller	1,870
Caddies	1,840
Count Software	5
Central Software	4
Build Software	2

A persistent challenge that Hart InterCivic identified, which particularly effected administration of the March 2022 primary election in Harris County, was the lack of adequate storage space for the Election Office. Hart InterCivic reports that they provided detailed storage requirements as part of their response to the county’s RFP, and during deployment of the project provided warehouse-level training based on their Support Procedures Guide. However, the Election Office has, to date, not acquired storage to meet the minimum requirements they provided. According to Hart, “the result of that inadequate storage space is general disorganization and the inability for the Election Office to properly execute pre- and post-election procedures.” Specifically, Harris County has 1,840 caddies, but the Election Technology Center (ETC) only has space for the proper storage of 450 (24.5% of the total), and the limited storage leaves inadequate space for essential pre-election equipment preparation or post-election processing. “Because the facilities at the ETC are inadequate for storage, testing, and pre-election preparation of their Verity voting systems, equipment must be moved in and out as it is prepared before elections and processed after elections. This constant cycling adds to the complexity of election operations.”

Voting Equipment Common Errors and Error Rates

When asked about common errors, error rates of equipment, and whether or not Harris County experienced a higher-than-normal rate of equipment issues during the March 2022 primary election, Hart InterCivic noted that the most common issues were operational errors associated with device set-up or preparation and could be easily resolved through enhanced training and experience using the technology. For example:

- Controller not ready: Controller needs to finish booting up and poll workers need to open the polls.
- No Controller found: Verity cable not properly plugged in.
- Paper jam: skewed paper feed needs to be backed out.
- Battery not charged: poll worker forgets to plug in device or does not plug device into wall outlet (when required)

- Scanner cannot read barcode: in some cases this may be addressed by testing for calibration prior to deploying the scanner for an election
- Tablet not locked into the base station or not seated in cradle properly

Although these issues are often reported as “errors” with the technology, Hart InterCivic noted that most are “user-based issues that could be resolved—or avoided all together—with adequate poll worker training and reliance on the troubleshooting guides we provided the county.” Hart also noted that, “even when poll workers are not adequately trained, the overwhelming number of issues are resolved quickly with a call to Harris County’s Election Day Call Center.” Hart continues to work with Harris County to help ensure proper poll worker training and that these workers and other personnel are able to identify and quickly resolve common operational errors.

Across the 133 jurisdictions using the Hart Verity Duo solution nationwide, Hart reports that true system issues requiring that a device be returned for repair are rare, accounting for between 0.5% and 2.0% of total devices over the last 6 months. In Harris County, Hart InterCivic estimates the return-for-repair rate at less than 1%. The following data was provided by Hart InterCivic to illustrate the number and percentage of devices pulled out of duty and returned to them for repair or replacement due to a technical system issue for the November 2021 and March 2022 primary election.

Table 5: Hart InterCivic Voting Equipment Returned for Repair after the November 2021 and March 2022 Elections

	Nov. 2021	Mar. 2022
Number of voting system devices requiring repair/replacement	44	99
Number of voting system devices used in election	8,388	11,954
Percentage of voting system devices removed for repair/replacement	0.5%	0.8%
Percentage of voting system devices performing as expected	99.5%	99.2%

Sources:

- Number of devices requiring repair: Hart Customer Service/Return Merchandise Authorization records
- Number of devices deployed: Harris County Election Office

Hart reported that they “firmly believe this data indicates the reliability of our technology is among the best in the industry and is consistent with the ownership experience of our other satisfied customers. And, when there is a technical issue with a device, we are committed to repairing or replacing those units to ensure that Harris County has reliable units for future use.”

Issues with Paper Ballots

FMG also asked Hart InterCivic about reported issues stemming from the long (8.5” x 14”) 2-page ballot used for the March 2022 primary election in Harris County. Hart reported that few other jurisdictions using Verity Duo have used two-sheet ballots, but in general, they do not receive more support calls or repair requests from jurisdictions using this ballot type and

are unaware of any notable issues associated with 2-page ballots. They noted that although most jurisdictions strive to use shorter paper if possible, because it is less expensive than longer sheets, legal-size (8.5" x 14") ballots are not uncommon; however, Hart InterCivic does not have data indicating that longer paper is correlated with higher error rates or equipment repairs.

Although Hart InterCivic reported working with Harris County Election Office to determine if it is feasible to use standard 8.5" x 11" paper for the November 2022 General Election, ballot paper size selection will ultimately be determined by the number of contests on the ballot and number of small jurisdictions that join on the county's election. Hart reported that the technology used by their devices, and the relative invulnerability of the system compared to other methods of voter verified paper voting technologies, requires ballots be printed with font sizes that can be read and verified by voters:

"To ensure the highest level of transparency and security, Verity uses Optical Character Recognition (OCR) to read a voter's selections—using the printed words on the ballot that are directly verifiable by the voter him or herself. Verity never stores vote data in a non-human readable barcode/QR code. In order to achieve this, the OCR functionality requires a minimum font size to be effective and readable by all voters. The Harris County ballot is already at the minimum font size to support OCR."

A recent advisory from the Cybersecurity and Infrastructure Security Agency (CISA) of the Department of Homeland Security⁴ and report published by the Center for Democracy and Technology⁵ discuss how voting technology that produces human- and machine-readable text, such as that used by the Hart InterCivic Verity Duo system, helps to protect against election system vulnerabilities.

Furthermore, regarding the issues with ballot jams in the voter equipment, Hart noted that although approximately 1,500 ballot pages from the March 2022 primary election had to be manually duplicated and re-processed, this represented only about 0.2% of the 657,590 total ballot pages for this election. This rate of pre-processing of damaged or unreadable ballot pages is consistent with that from other jurisdictions using similar voting technologies.

Hart suggests that the issues experienced by Harris County during the March 2022 primary election could be mitigated through a more robust voter education and outreach effort, as

⁴ Cybersecurity & Infrastructure Security Agency (2022). "Vulnerabilities Affecting Dominion Voting Systems ImageCast X." Available at: <https://www.cisa.gov/uscert/ics/advisories/icsa-22-154-01>

⁵ Center for Democracy and Technology (2022). "Do Ballot Barcodes Threaten Election Security?" Available at: <https://cdt.org/insights/do-ballot-barcodes-threaten-election-security/>

well as enhanced poll worker education that includes more hands-on experience with voting equipment.

“The county faced significant challenges posed by a combination of the pandemic, the untimely termination of the lead County EO trainer, and the lack of Voting Education and Outreach (VEO) budget dollars that resulted in very little hands-on training or VEO being done prior to March 2022. This was especially relevant for an election with a voting method (paper ballots) and voting devices that were still new to most voters and poll workers. In addition, more troubleshooting and call center training should take place.”

Recommendations to Reduce Voting Equipment Issues

One strategy that Hart InterCivic described as critical to mitigate issues with voting equipment experienced during the March 2022 primary election is additional comprehensive device testing

“Annual and per-election testing of devices is a must with paper-based voting systems. This includes cleaning and routine calibration testing, as well as calibration adjustments when a test indicates that is needed. Paper systems simply require more routine maintenance than DREs as there are more moving parts, paper dust, etc.”

Hart credits the decrease in support calls related to equipment on May 24 and during early voting to the additional run of each device through a series of tests prior to this election.

Some enhanced protocols could improve the performance of election equipment and avoid malfunctions. Although Hart does not perform equipment tests at customer sites, they do provide recommendations and instructions as part of their Support Procedures Manual and cover these activities as part of their on-site training of elections staff. Testing cables before an election may be more resource intensive than feasible given the number of cables in use; however, it was noted that most cable failures are associated with visually noticeable damage, such as bent connector ends. To mitigate cable-related issues, Hart recommends including an extra Verity cable in each vote center supply box so that problematic cables can quickly be identified and replaced on-site.

For most other equipment issues identified during the March 2022 primary election, Hart recommends improved training procedures and voter education outreach. According to Hart, polling place issues associated with connectivity issues can be mitigated by following recommended best practices of booting up the Controller before connecting the Duos or printing reports. Better training of poll workers to understand and follow these procedures would reduce perceived connectivity issues with machines, according to Hart.

Hart InterCivic also reported that they are currently investigating possible technical and hardware enhancements to assist the voter in feeding their ballot into the scanner to reduce paper skews and jams. However, their primary recommendation for reducing these types of errors is to engage in more voter education, which had only been done on a limited basis ahead of the March 2022 primary election due both to lack of funding for these efforts and restrictions on public gatherings associated with county’s social distancing requirements in place ahead of that election. They noted several actions they are currently taking to better support Harris County’s VEO efforts during future elections:

- “We have been consulting with the county on best practices for voter education under the overarching recommendation of “the more, the better!” However, any communication or education efforts on this front must be optimized, targeted, and measured to ensure they are hitting the target audiences. For example, we strongly encourage including social media in outreach efforts, but caution that relying exclusively on social media—or on only a single platform, such as Twitter—may fail to reach large portions of the county’s target audience.”
- To assist with live voter demonstrations, Hart reported that they converted some Duo devices to a standalone model that makes transport and setup easier for the county’s VEO team when they appear at various venues and events. The intent is to provide more opportunities for voters to have hands-on experience with the equipment prior to elections—though Hart was unsure if the county has yet used this “demo” equipment in this way.
- Hart has been working with the Harris County Communications team to improve VEO content and deliverables. They reported providing examples from other similarly sized Hart jurisdictions with successful VEO campaigns, and added that they have also connected the EO staff with a highly regarded former Election Administrator from one of those jurisdictions to do one-on-one coaching and best practice—sharing with the county.
- Hart also mentioned that they have worked extensively with the new poll worker training lead in Harris County to review revamped documentation and to recommend instructional stickers and signage for poll workers.
- Finally, Hart noted that they have emphasized the importance of educating voters on the sequential steps of the voter experience at the polling place, and noted that materials in the polling place should guide voters as they walk through the vote center from check-in, to voting, to printing, to casting the ballot, to exiting.

Tarrant County

FMG looked for other counties that have gone through a similar voting equipment change to learn about the experiences making such a transition, any issues experienced, and lessons learned from the process.

FMG used the Election Administration and Voting Survey (EAVS) data from the 2018 and 2020 general elections and conversations with Hart InterCivic and Harris County to identify counties that had used Direct Recording Electronic (DRE) voting equipment in 2018 and that had transitioned to Ballot Marking Devices (BMD) and scanners for the 2020 General Election. The goal was to identify relatively large counties that had recently undergone a similar transition and might have insight relevant to Harris County.

Though some larger counties, such as Miami-Dade County and Palm Beach County, FL had recently adopted BMDs in their elections, most only use such devices for voters with accessibility needs and generally use paper ballots and scanners for the rest of the voters. Tarrant County, TX, however, uses BMDs as the primary mode of voting equipment for all voters, transitioned from DREs to BMDs and scanners after the 2018 General Election, and uses the same Hart InterCivic equipment as Harris County.

FMG met with Tarrant County's Election Administrator Heider Garcia to ask about the county's experience with the voting equipment transition. Tarrant County transitioned to BMDs and scanners after the 2018 General Election. Before that transition, the county used DREs for early voting, for which voters of Tarrant County could go to any of the available vote centers to cast their ballot, and used hand marked paper ballots were used on Election Day, for which voters were assigned to a specific, precinct-based voting place.

Since the new voting equipment was implemented, Tarrant County has used different types of ballots (one- and two-page ballots) and ballot sizes (8.5" x 11" and 8.5" x 14") depending on the number of races in each given election for a voter. Although the county has had issues with some paper ballots being jammed or not able to be scanned, these have been generally rare and nothing that they have found as a recurring or concerning issue during their elections.

Tarrant County highlighted that for the transition from DREs to BMDs and scanners it was crucial to involve poll workers and judges in the change of equipment and discuss the benefits of the transition. They also stressed the importance of hands-on training for poll workers to get familiar with the equipment, and shared that they tend to do small groups of four workers per voting equipment station during training to ensure that all poll workers have the opportunity to interact with their equipment when they go through the steps of setting up the equipment, run test cases for check-in and voting, do the paperwork and close the polls. They also highlighted the importance of doing focus groups with election workers to learn about processes that can be improved and implementing their feedback for the following elections. For example, election workers requested that videos of the voting equipment assembly, set-up, and tear-down be available so they could use them as resources during the election.

In addition to election worker training, Tarrant County also commented on the importance of voter education, and how media presentations and community events helped give residents a chance to see and even interact with the new voting equipment.

In terms of lessons learned, after the November 2019 election the county identified some processes in need of review, such as supply timing, parts of the training program, and closing the voting equipment. However, they acknowledge that lessons learned will depend on the experience of each county during an election. They also mentioned that with the new equipment and processes they found the need for a larger working space and are in the process of getting a new warehouse for the elections division that meets their needs in terms of storage and operations (e.g., space for training, staff). They also find it necessary to review their election-related processes before elections to reduce unnecessary complexity while conducting their elections

Budget

FMG interviewed Jesse Dickerman (Office of County Administration) and Lindsey Anderson (Office of Management and Budget) on July 21, 2022, to discuss the budget process and the amounts appropriated for the EAO. FMG also reviewed multiple budget documents and a memorandum from the County Attorney Office (CAO) dated August 6, 2020, that outlined the steps for the implementation of the Harris County EAO, and the resources that might be transferred from the County Clerk's and Tax Assessor-Collector Offices, which were previously in charge of elections and voter registration, respectively. FMG reviewed these documents and processes because the topic of limited resources for conducting election operations was mentioned in several interviews, as well as the topic of challenges with the transition from elections being conducted by the County Clerk's Office to the EAO.

Key Takeaways

- In transitioning to the EAO, the county experienced difficulty establishing realistic budgets that took into account the multiple functions consolidated under the independent agency.
- Greater clarity is needed on the fixed and variable costs associated with maintaining the EAO and administering elections across cycles.
- Work is needed to establish a performance measurement framework for the EAO that would clearly specify activities undertaken by the office, specify the anticipated outputs and outcomes, and set performance benchmarks needed for county-level budgetary and policy decision-making.

Transition to Election Administrator Office

Through the November 2020 general election, elections in Harris County were conducted by the County Clerk's Office and voter registration activities were overseen by the office of the Tax Assessor-Collector. A memorandum from the CAO discussing the implementation of the EAO detailed the recommendations for transferring full-time personnel from the offices of

the County Clerk and Tax Assessor-Collector for the operation of the EAO. The recommendations listed the number of employees in each of the offices who worked on election related activities year-round and who should be transferred to the EAO. In total, the memorandum recommended transferring around 130 full time employees to the EAO, including 84 full-time employees from the County Clerk’s Office who worked only in elections, 28 from the office of the Tax Assessor-Collector, 11 full-time positions for IT, and additional personnel from the Clerk’s satellite locations and the Tax Assessor-Collector’s Office who were dedicated to voter outreach.

These recommendations were largely adopted when the EAO was created, with 120 full-time employees transferred from the County Clerk and Tax Assessor-Collector’s Offices or added through full-time positions created within the first year of the EAO operation. Since the creation of the EAO, the number of full-time employees increased to approximately 150 at the time of the March 2022 primary election—including 20 positions created for voter outreach—and will be expanded to about 165 full-time employees as approved in the budget for the fiscal year starting in March 2022 to cover the programs of Administration and Support Services, Communications and Outreach, Elections, Policy and Innovation, and Technology. The CAO memorandum also mentioned, however, that other workers within the offices of the County Clerk and Tax Assessor-Collector performed election-related duties to some extent during the year, particularly on the dates preceding an election and on Election Day; the report identified 214 such employees working on a temporary basis during early voting and Election Day who would not be available to the EAO and would need to be replaced through other sources like temporary workers—for which funds are allocated within the EAO’s budget.

With the creation of the EAO on November 18, 2020, some of the funds approved for elections for the fiscal year 2021 (March 2020 to February 2021—hereinafter FY2021) were transferred from the Office of the County Clerk to the EAO for their operation. The annualized amounts transferred to the newly created EAO were: \$7,303,898 for positions moved from the County Clerk’s Office, \$1,989,516 for positions moved from the Tax Assessor-Collector, \$352,443 of new funding for administrative positions, and \$4,900,000 of new funding, which in addition to other adjustments added up to a total of \$14,679,406 for FY2021. Additionally, about \$2,000,000 was approved for the EAO in Summer 2021 to fund the EAO’s IT department, since the County Clerk’s and Tax Assessor-Collector Offices handle IT needs on their own and were no longer providing these services for elections.

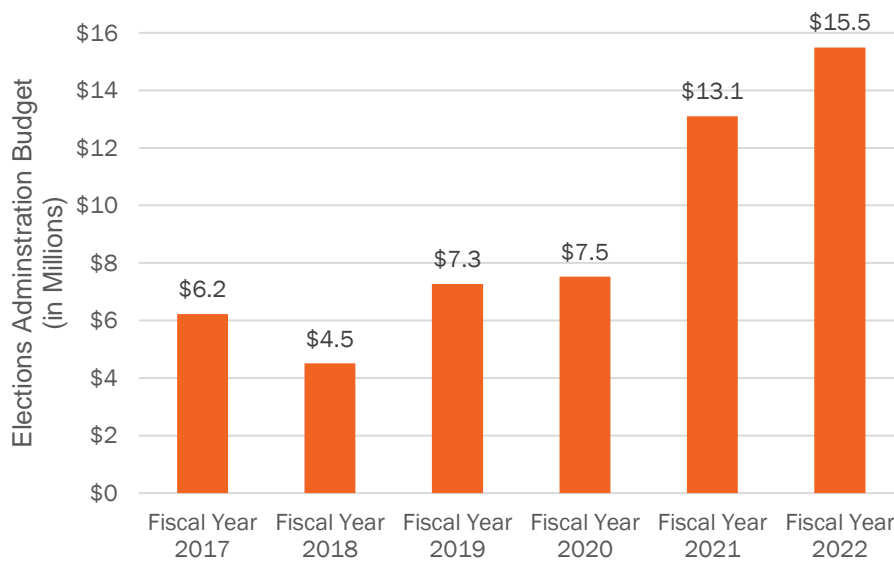
Election Costs

The budget for the EAO is broken down into two departments. One covers the fixed costs of running the EAO (Department 520 – Elections Administration), including the labor costs for EAO employees, supplies, and other related fixed costs that occur independently of the number of elections that happen in a fiscal year. The other department’s budget (referred to as Department 516 – Elections Operations) reflects the costs budgeted for running

elections and varies depending on the number and size of elections anticipated during a given fiscal year.

Figure 8 shows the evolution of the budgeted funds allocated to run elections in the last 6 fiscal years. The figure shows the increase in funds to administer elections that happened in FY2021 compared to the previous years. It is important to note that because the Elections Operations department was new for FY2021 when the EAO was created, the budget shown in the figure for FY2017 to FY2020 is an estimate based on costs from the Clerk's Office in non-labor election-related costs.

Figure 8: Budget for Elections Operations from Fiscal Year 2017 to Fiscal Year 2022



Part of the increase in the budget for running elections between FY2021 and FY2022 can be attributed to the increase in the number of early voting locations and their associated costs. In the March 2018 primary election, for example, there were about 45 locations for early voting; this number approximately doubled to 90 locations available for the March 2022 primary election. Another item within the Elections Operations budget that was included for FY2021 was \$998,850 in funds destined to election-related ADA enhancements.

Moreover, an increase in wages for election judges and clerks, which was unanimously approved by the Commissioners Court and was effective starting with the March 2020 primary election (which corresponds to the beginning of FY2021), had a direct effect on the need to increase the funds destined to run an election. The wage increase for election positions is shown in Table 6. Depending on the type of election and the position, the increases ranged from \$2/hour to \$12/hour. The costs associated with the wage increase vary depending on the number of elections run in a given fiscal year. As presented to the

Commissioners Court, the estimated financial impact of the wage increase would range from \$920,000 to \$2,599,000, depending on the number of elections conducted in a year.

It is important to note that Figure 8 does not include additional funds that were approved to deal with the COVID-19 emergency situation during FY2021. These approved emergency funds that amounted to about \$15 million dollars were destined to increase the number and size of voting locations to allow for social distancing, allow for drive through voting, and purchase personal protective equipment, among other expenditures.

Table 6: Wage Increase for Election Workers, Effective Starting in the 2020 Primary Election

Type of Election	Position	Previous hourly wage	Updated hourly wage	Increase
Primary Election	Presiding Judge	\$8	\$20	\$12
	Alternate Judge	\$8	\$15	\$7
	Election Clerk	\$8	\$15	\$7
Non-Primary Election	Presiding Judge	\$12	\$20	\$8
	Alternate Judge	\$10	\$15	\$5
	Election Clerk	\$10	\$15	\$5
Early Voting for all Elections	Presiding Judge	\$13	\$20	\$7
	Alternate Judge	\$13	\$15	\$2
	Election Clerk	\$11	\$15	\$4

The Budget Process Challenges and Next Steps

During the interview with Jesse Dickerman and Lindsey Anderson, some challenges related to the creation of the budget for the EAO and for Election Administration were noted. One of the challenges was that since the EAO was new and the appointed Elections Administrator had just started the position, there were difficulties finding what services the office needed to provide and estimating their associated costs. At that point, senior officials from the budget department projected spending based on previous elections conducted by the County Clerk’s Office. Additionally, for the March 2022 primary election, Election Day fell during the short fiscal year 2022 (SFY2022; March 2022–September 2022) while early voting occurred during FY2021. Since the actual date for the election was not known until after the approval of the FY2021 election, funds for the March 2022 primary election were added to SFY2022, creating some challenges in appropriately allocating funds to conduct the March 2022 primary election.

As the EAO approaches 2 years of operation, there are some activities that need to be reviewed and standardized to adjust the costs of the department. For example, while the EAO runs all elections in Harris County, only the County-wide and federal elections are fully funded with the approved budget, and other entity elections are paid, at least in part, by the entity requesting the election. For these elections, a strategy is needed to establish a standardized way of identifying the services provided by the EAO and the associated costs

for running an election beforehand to create greater transparency and clear expectations about reimbursement and the services to be provided.

This need applies not just to smaller elections run by EAO for other entities, but also to elections in Harris County, more generally, where the method for adjusting the cost of elections based on variable requirements associated with the size and type of upcoming elections remains unclear to the budget office and other entities outside of the EAO. Harris County's Office of Management and Budget (OMB) has adopted a vision of a program and service budget that focuses on finding the appropriate performance measures for each department. These measures would assist the county in understanding the need for resources and the goals achieved and better estimate the variable costs for elections. For example, detailing the need for the number of poll workers per polling location, number of polling locations for a given election, or number of full-time employees in the EAO would allow for an increase in resources where necessary based on the inputs established and metrics collected by the EAO. These measures would also provide the OMB with an understanding of what is needed in the EAO and Election Operations to successfully conduct elections in Harris County. During the past 2 years, there has not been enough quality-data shared with the OMB to provide a good understanding and justification of the resources requested by the EAO. For SFY2022 and FY2023, OMB added some performance measures for most departments, including the EAO in the Harris County Adopted Budget document. However, they recognized that this is a first step, and the measures may need to be adjusted in collaboration with the EAO as they more clearly articulate organizational activities and the anticipated outcomes associated with those efforts.

Finally, it was noted in the interview that when the elections were conducted by the County Clerk's Office, they had help from non-election personnel within the Clerk's office during early voting and on Election Day. An initiative is currently in place that seeks for county employees to provide assistance to the EAO on a volunteer basis during the periods of an election when they experience the highest volume of work, such as on Election Day.

Isabel Longoria

FMG spoke with Isabel Longoria, Election Administrator (EA) of Harris County on June 14, 2022, following up on a previous conversation from May 3, 2022, for which Beth Stevens (Harris County's Director of Voting) was also present. In the first conversation, discussion questions centered election processes and issues during the March 2022 primary election; the June interview focused on some specific portions of the election processes in the county as well as background on the creation of the Elections Administrator Office (EAO) and their goals.

New Voting Equipment and Creation of the Elections Administrator Office

During FMG's conversations with EA Longoria, FMG asked about the creation of the EAO and the implementation of new voting equipment to provide the background about these

transitions before discussing the March 2022 primary election. EA Longoria took office as the first Elections Administrator in Harris County after the November 2020 General Election, although she had been preparing for the transition in the preceding months. Before the creation of the EAO, election responsibilities were distributed between the County Clerk's Office, which oversaw election administration, and the Harris County Tax Assessor-Collector, which mainly focused on voter registration. The newly created EAO would combine these functions and be responsible for all activities related to elections and voter registration.

EA Longoria noted that the transition to an EAO was challenging, as the newly created office lacked some resources. For example, they could not dispose of their own budget and needed the authorization from the Clerk's office for expenditures. Additionally, in the first months, they lacked personnel responsible for functions like IT or human resources, and they also lacked sufficient office furniture and computers. During the transition, some workers from the Clerk's office were transferred to the EAO; however, it was only those workers that did election-related work full time while in the Clerk's Office who were transferred. The many staff members who worked on election part time in addition to their primary job responsibilities were not transferred, creating a shortage of personnel in the EAO. Additionally, they needed to create an organizational chart, assign roles and responsibilities, and create goals and a culture for the office, which EA Longoria mentioned that was centered in kindness, professionalism, and accuracy.

The creation of the EAO was approved on July 14, 2020, and Harris County finalized the purchase of new voting equipment from Hart InterCivic and replaced their DREs with Ballot Marking Devices and scanners on January 26, 2021. The new voting equipment fully replaced the older voting equipment. The first challenge the EAO experienced with the new voting equipment was a lack of space in their facilities to store the new equipment, which required a larger storage area than previous voting equipment did. This change in election equipment started in February and March of 2021, with the next election being the May 2021 joint election. In addition to the challenge of the short period of time to provide training to the staff on the new voting equipment and then to election workers for the May 2021 joint election, EA Longoria mentioned that they were unable to provide in-person training due to COVID-19 restrictions on social distancing. During the rest of the year 2021 they held another three elections: two small runoff elections and the November 2021 general election. For the last elections of the year, they were able to provide in-person training for poll judges but had to continue with virtual training for poll workers. Fully in-person training for all election workers would not be conducted until the training sessions for the March 2022 primary election.

The March 2022 Primary Election

EA Longoria noted some challenges they faced ahead of the March 2022 primary election, such as the re-districting process at the beginning of 2022, which affected the boundaries of election precincts for the upcoming election, and the passing of Senate Bill 1, which

involved changes in several of the election processes, such as ID requirements for voting by mail. Additionally, there were some internal challenges during the preparation for the March 2022 primary election. One of the challenges was a failure by the former director of training to have training materials ready by the end of January 2022, which led to last-minute review and update of the training materials before the start of the training sessions in February 2022. These trainings were conducted by EAO staff, and according to EA Longoria were conducted in several different locations and hosted about 75 to 100 election workers. Training took about 4 to 6 hours, including formal training on procedures and ADA requirements, questions, and break-out groups of 10 to 20 people for hands-on training with the equipment.

Another challenge the county faced ahead of the March 2022 primary election arose just before Election Day—the corresponding manager had not prepared the necessary supplies, causing EAO staff to work overtime to get the equipment ready for pick up by election judges. EA Longoria reported that they were able to have the equipment ready almost in time (only the first scheduled pick-ups needed to be re-scheduled). As a result, staff had been working long hours before Election Day even began. For equipment drop-off, Harris County made four locations available for election judges to drop the equipment. EA Longoria mentioned that they had to deploy staff to the drop-off sites to process equipment and have trucks to take the equipment from the drop-off sites to the central location where the counting would take place. EA Longoria reported that limited EAO staff were spread across the drop-off locations, delaying the start of the counting process. Because of this shortage of staff and the long hours, EA Longoria mentioned that a few workers became sick due to exhaustion, and some had to go to the hospital. The fact that her staff had to fulfill multiple roles during the elections, was the main reason in the misplacement of the V-Drive with 10,000 by-mail ballots that was not recorded during Election Night and had to be entered afterwards.

When asked about the issues with ballots jammed in the voting equipment and ballots that could not be scanned, EA Longoria noted that Harris County is probably the only county using a two-page paper ballot with legal-size sheets (i.e., 8.5" x 14"). She noted that this probably led to more chances for the ballots to be damaged or otherwise not scanned. In the November 2021 general election, the ballot was only one page—the March 2022 primary election was the first one with two-page paper ballots, which was challenging for election workers and voters. EA Longoria mentioned that they are working with Hart InterCivic in the design of the ballots for the November 2022 midterm election to test ballot designs that may reduce these issues, as well as working on how to improve the reliability of the equipment. When asked about how often they test the equipment, she mentioned that equipment is tested before every election, and that Hart had to re-supply calibration materials around May 2022 because the materials they had were not working properly.

Beth Stevens

FMG interviewed Beth Stevens, Interim Election Administrator of Harris County—and Director of Voting during the March 2022 primary election—on July 22, 2022. This interview centered on the processes in place for measuring performance of the EAO and the processes for the March 2022 primary election after the close of the polls. This interview followed up on topics that had initially been raised in the interview with EA Longoria prior to her departure from the office.

Performance Measurements for the EAO

When asked about performance measures currently in place in the EAO, Stevens noted that, to her knowledge, the draft measures included in the Harris County Adopted Budget document for SFY2022 and FY2023 had been constructed by the previous Chief of Staff in collaboration with the OMB. From her perspective, performance metrics constructed in collaboration between the OMB and the EAO would be useful to get a clear sense of what is being evaluated and have clear goals.

She also discussed some of the strategies used to create important performance estimates for some key performance indicators (KPIs) currently used at the EAO. For example, to find the appropriate number of polling locations and the areas where the polling locations need to be placed, the EAO uses a tool provided by the Center for Inclusive Democracy from the University of Southern California that helps to calculate the optimal number of early voting and Election Day locations per registered voter. The EAO then begins discussion with political parties to determine the actual locations that will host polling locations, particularly in primary elections, which use jointly situated polling locations (i.e., the same location will host the primary for the Republican party in one area and the primary for the Democratic primary in another) that both parties need to agree on.

Stevens also described frustration created by the disconnect between the metrics established by the county and those on which the office was ultimately evaluated for the March 2022 primary election. In particular, although concerns about the time it took to report election results arose after the election, and prompt reporting was recognized as an important metric, it was not included among the KPIs utilized as part of budget planning and performance benchmarking processes. Had prompt reporting been more clearly prioritized, it might have allowed them to work backwards ahead of the election to identify the resources needed and to establish processes necessary to achieving that goal.

Election Night Activities in the March 2022 Primary Election

As noted in previous sections, for the March 2022 primary election, Harris County had four drop-off locations, whereas the November 2021 and May 2022 elections used NRG as the sole drop-off location. The use of four drop-off locations for the March 2022 primary meant that the staff were dispersed to ensure that all locations were running efficiently and that voting materials could reach the ETC as early as possible. At the ETC, however, there were

too few staff to process the incoming materials, causing a bottleneck when the bulk of voting equipment was received after polls had closed. Stevens noted that about 10 to 20 people were doing the voting equipment processing work that during the May elections were processed by 50–100 people. When the drop-off locations received the final materials from all polling locations, staff members had been working for about 20 hours (in addition to overtime worked in previous days) and few staff from the drop-off locations went to the ETC that night, with the majority of them instead going back to the ETC the next morning to help with the equipment processing. The lack of personnel at the ETC to process the equipment on Election Night and the level of exhaustion among staff members made it impossible to process the equipment until early in the morning the day after the election. Additionally, the limited space at the ETC made it hard to process the incoming voting equipment.

From this experience, the EAO further developed specificity of teams for the elections in May 2022, which allowed staff members to have a clear understanding of their team assignments and required tasks after polls closed on Election Day. The March 2022 primary election had a similar plan in place, but it was not as meticulously detailed and lacked enough feedback from the staff on whether the assigned personnel were sufficient for the tasks assigned. Additionally, the use of NRG in May 2022 made it easier for staff to transition from drop-off duties to processing incoming equipment, making the process more streamlined.

In terms of improvement for Election Night activities, Stevens mentioned that the enhancement of the county-wide volunteer program will make more people available to process equipment. She also mentioned that with the use of NRG, there are some trade-offs depending on when they move to that location, pointing out that if they move during early voting, that means that a large portion of resources are destined to move equipment and systems to NRG that could be used performing other critical tasks. Long-term, there might need to be a different solution that allows for a space where the EAO can perform not only their day-to-day activities but also have the capacity to process elections material after polls close.

Elections Administrator’s Office Directors

The FMG team spoke with directors from several of divisions of the EAO about the roles and responsibilities of their team, experiences during the March 2022 primary election, challenges faced, and what they might need to continue improving election administration in Harris County.

Several themes emerged from the discussions held with division directors:

- Staffing and space are tight immediately before and during elections. Most divisions operate with the bare minimum staff necessary to execute processes and activities, and when issues emerge or processes are delayed, staff quickly get stretched beyond capacity. Shared space can become chaotic and hinder operations.

- Many missteps and issues in the March 2022 primary election were associated with changes in equipment, organizational structure, and election policy that required updates to tried and true processes, many of which are still being refined and improved to meet new conditions and needs.
- Directors across the organization had internal goals tied to accuracy and ensuring all activities necessary to run a successful election were accomplished; however, directors had little or no involvement in establishing performance metrics used for county-level budget planning.
- Since the March 1, 2022 primary election, directors have worked to incorporate lessons learned and to refine and improve core processes and procedures.

Warehouse – Election Technology Center

FMG met with Bryan Schouten, Director of Election Technology Center (ETC) on July 26, 2022. Mr. Schouten and his team are responsible for all election equipment and the warehouse that stores the election equipment for Harris County. Mr. Schouten has served in this role for 10 years and worked in Harris County elections for more than 2 decades. The ETC team prepares all election equipment before each election, including performing the required tasks of equipment testing and configuration as directed in the Hart Manual (e.g., calibration of equipment, speed tests, pixel tests). The team is also responsible for the delivery of election equipment to polling locations, and during early voting they serve as the technical support team responsible for troubleshooting and resolving any equipment issues that emerge at voting locations during this 2-week period. On Election Day, the ETC team is supported by third-party contractor Protiviti, which provides technical assistance and in-person support for equipment deployed to voting locations across the county. The ETC team coordinates with the logistics manager to train all of the Protiviti technicians during a 3-day training before each election. At the conclusion of each election, the ETC team is responsible for picking up all equipment, returning it to the warehouse, storing it, and preparing it for the next election.

Among the challenges the ETC team faces is simultaneous management of early voting, for which approximately 10 ETC staff technicians provide all technical support, and pre-Election Day activities. The technical support team is deployed in the field during early voting and demand is typically highest on the final days of early voting. This substantially slows the work being done at ETC to prepare Election Day voting equipment, much of which cannot be entrusted to temporary staff and requires a full-time lead to run the task.

During the March 2022 primary, manpower shortages were the biggest challenge for the ETC team. This was exacerbated by the use of four satellite drop-off locations, which spread staff into smaller groups across the county. The ETC team was responsible for transporting equipment from each of the satellite locations to the ETC for certification and count, which added drive time and lead to a backlog that slowed the certification process. Moreover, the

team had been working 40-hour shifts through supply hand out, followed immediately by Election Day, which started for the team at 5:00 AM through close of polls and then moved directly to coordinating equipment pick-up activities. This created not just exhaustion but potentially dangerous conditions loading and driving large trucks to facilitate transfer of equipment from drop-off locations to central count late at night after the election. Currently, the ETC team has been approved to hire nine full-time employees who will help with these tasks in future elections.

The ETC director also mentioned space constraints in storage facilities as hindering the team's work. Whereas legacy voting equipment had been stored in caddies, the newer equipment is palletted, making space a greater concern. A rental space approximately 4 miles from ETC helps with storage, but because it is not climate controlled there are limits to the types of materials that can be housed there. The overlapping functions at ETC not only make it difficult to spread out and complete work projects within elections, but also create parking issues and prevent critical election procedures from operating centrally. The multiple teams working at ETC and the limited space available make it difficult to spread out and give people space to work and do projects within elections (e.g., processing voting equipment, conducting ballot counts), it also creates parking issues and prevents critical election procedures from operating centrally. When asked how much additional space would be needed, Mr. Schouten mentioned that probably a space around twice the size of the ETC would help them to conduct operations, house the EAO teams, and store the voting equipment.

Although Mr. Schouten did not perceive substantially more equipment issues during the March 2022 primary election, he acknowledged that the newness of the equipment and relative inexperience using it at scale created difficulties. Even though the team had been well trained and equipment had been tested and was in working order when it left ETC, there were issues in field deployment that the team had to figure out how to troubleshoot and resolve. After each election, the team documents trends and attempts to understand the root cause of any issues identified so that solutions can be created and incorporated into procedures and support materials for future elections. The team now recognizes common user errors that can be avoided or quickly resolved to prevent problems with equipment.

Logistics and Training

FMG had an interview on July 27, 2022, with Rachelle Obakozowa (Director of Logistics) and Benjamin Bannon (Manager of Training). The Director of Logistics has worked in several roles in Harris County elections over the past decade, including overseeing recruitment, training, and election locations. The Director of Logistics is responsible for identifying and securing polling locations, including arranging any contracts required for use, coordinating the placement of election judges and clerks, and ensuring election workers complete required training programs. The design of training courses and materials, including the election manual provided to all election workers, is the responsibility of the manager of

training, who reports to the Director of Logistics. The current manager of training is relatively new to elections, having taken over this role in Harris County immediately following the March 2022 primary election.

Insufficient training was a common complaint of election workers following the March 2022 primary, and the new training manager was hired after the previous manager failed to update training materials ahead of that election. As part of the effort to overhaul how election workers are trained, the training team recently conducted focus groups with election clerks and judges to find out how they might improve training procedures materials. Among the steps being taken to improve training are:

- Revision of materials to ensure consistency of language and guidance;
- Simplification of the manual to reduce text, provide visuals and checklists, and more targeted guidance for commonly experienced situations;
- Use of the manual as the primary content tool in training courses ;
- Greater consistency between training given to judges and clerks, including mixed break-out groups;
- Providing judges with more hands-on training with forms and increasing clerk training on end-of-night tear-down procedures;
- Increasing the time spent on hands-on activities during training;
- Reducing the number of election workers per breakout group during hands-on training with voting equipment; and
- Strengthening the training of the trainers.

In Harris County, election workers, including both clerks and judges, are required to participate in a 4-hour training ahead of each election. There are different rules for different types of elections, and the manual must be updated each time. Although updating and printing new manuals is a large undertaking and investment, poll workers and judges want a new paper copy of the manual, and receiving one serves as a motivator for them to sign up for and attend training sessions.

The size of trainings remains a challenge because the team must conduct all trainings within 1 month of the election to ensure retention of information and that all guidance and materials are up to date. More workers tend to sign up for the later sessions than for earlier sessions. As an estimate, the interviewees report that about 7,000 election workers need to be trained for a mid-term election and about 11,000 for a presidential election. Locations and timing of trainings are selected to make sure there is at least one training available in each commission district, within each timeslot, each week. There are approximately 14 trainers needed for each training, including the breakout sessions. To cover training sessions, the training team hires up to 40 temporary workers.

Currently, there is no budget for training facilities, so the team relies on maintaining good relationships with the community in order to secure large locations (e.g., churches and colleges) that can accommodate seating for up to 240 people and have space for the equipment. Additionally, 12 caddies have to be transported from one training location to the next for each training session to facilitate hands-on breakout session activities. The interviewees mentioned that it would be optimal if they could have eight training stations so that voting equipment does not need to be moved constantly by the EAO staff, and ideally have the same training locations for every election so election workers are familiar with the training locations and can find their most convenient location easily.

Information Technology (IT)

FMG met with Lee Tankersley (IT Director) and Jason Bruce (Central Count) on July 27, 2022. As a background, the IT Director commented that prior to the formation of the EAO, the County Clerk and Tax offices each had their own IT infrastructure, with their own processes, applications, and configurations related to elections. The Tax office had its own dedicated servers within the County's larger data center and networks managed by Universal Services. The County Clerk's Office had a separate server and dedicated IT department. When the EAO was formed, it initially contracted with Universal Services as part of Universal Services' broader contract with the county to manage elections-related IT. In 2021, the EAO moved its IT systems in-house, creating an EAO IT department. The Director of IT manages teams responsible for providing frontline IT support, a small coding team that creates applications used for ancillary solutions within elections, and another in charge of central count (e.g. tabulation and processing results) that also sets up and provides some oversight of the elections helpdesk and monitors systems for performance issues, responding to any technical issues or outages when necessary. The IT team also works closely with Universal Services on activities like cybersecurity and network topography and coordinates across the third-party vendors who created and manage the election management, voter registration, and e-pollbook systems used in Harris County elections.

There were two IT-related incidents that occurred during the March 2022 primary election. The first occurred early in the morning after polls opened, when the HarrisVotes website, which has a polling location map and shows approximate wait times, received an unexpectedly large volume of traffic, exceeding the volume seen on Election Day in the November 2021 general election. The construction of the page created large volumes of queueing data, creating a queueing traffic jam and causing the database server to time out. The IT team was able to work with Universal Services, which hosted the webpage on its servers, and get this issue under control before 10:00 AM on Election Day.

The second issue related to the equipment drop-off locations. For the March 2022 primary election, the IT team stood up secure wireless networks in the parking lots of the four equipment drop-off locations. These secure networks were used to support the custom iPad application used by clerks to check in voting equipment as it was returned by poll judges to

each of the locations. Given the geographic size of Harris County, these satellite drop-off locations were conveniently located to most polling sites but created complexity from an IT perspective as the system spread resources and staff across different locations. On Election Night, all four locations reported intermittent errors being given by the application used to check in materials. After a brief work stoppage of about 5 minutes, personnel were instructed to keep working. The IT department quickly determined it was intermittent and not a network issue; restarting the application solved the problem temporarily at some locations, whereas others transitioned to paper filing to keep supply check-in moving. The team has since identified a scaling issue within the application that had not shown up or been reported previously and they were able to resolve the problem before the next election. Further, the application has since been improved to implement an alert for partial returns (meaning one or more pieces of equipment required to be returned at the end of the night is missing) which alerts a team dedicated to tracking down missing equipment so that they can respond and begin locating materials within moments.

Operations and Election Supplies

FMG interviewed Lauren Smith (Director of Operations) and Chelsea Willett (Election Supply Manager) on July 27, 2022. The Director of Operations is responsible for overseeing supplies, locations, and accessibility departments and is the primary point of contact for the drop-off initiative on Election Night. After joining the EAO in August 2020, the current Director and has served in this role since April 2022. The Election Supply Manager provides direct oversight of the elections supply team and has served in this role since April 2022. The supplies team coordinates creation and updates of any forms, supply inventory, procurement, supply hand-out and receiving after the election. In addition to the supplies team, the Director of Operations also works with the locations manager to select, contract, and prepare polling locations and coordinates with commissioner court for approval of precincts and locations. The Director of Operations also works with the accessibility department in assisting the manager to ensure elections operate under the standards set by the settlement agreement, train surveyors in the field, and assist with temporary and permanent remediation arrangements. Finally, the Director of Operations plans and oversees all drop-off procedures in their entirety.

Supply issues for the March 2022 primary election were related to the number of last-minute changes to forms and paperwork resulting from SB1 and guidance being issued by the Secretary of State's Office related to that legislation. The operations and supplies team lacked resources to manage the volume of changes required immediately ahead of the election, and the former Director of Operations and Election Supply Manager were unable to effectively manage the process of implementing changes and preparing materials ahead of supply handout.

For the March 2022 primary election, the operations team was responsible for coordinating the logistics of the four drop-off locations, including laying out the flow of traffic, entry/exit

paths, and how the receiving team would intake equipment. The operations team also worked out detailed transportation plans, estimating how long it would take to transport materials from each location to the central count at the ETC and the schedule for each pick-up and delivery. Previous managers also left the team insufficiently trained on new procedures related to drop off and retrieval of V-Drives for processing and certification, which for the first time was managed by the supply team. The operations and supply teams felt insufficiently staffed to manage the four drop-off locations. As a comparison, during the November 2020 general election—conducted by the County Clerk’s Office—these teams had about 400 employees working on Election Night, compared to about half of that number for the March 2022 primary election. The staff deficit was exacerbated by the last-minute need to prepare supplies for pick-up, which meant staff had to work long hours for several days before Election Day. The Director of Operations also mentioned that stretching the staff in the four locations limited the resources available at each drop-off point and that the failure of the app they used for checking in voting equipment delayed the process for about an hour, causing a domino effect of trucks driving to the ETC on schedule but almost empty with little equipment to be processed and V-Drives to be counted at the ETC.

To mitigate the lack of personnel, particularly on Election Day, the operations and supply teams have started a county volunteer program that reaches out to county employees and offers incentives to help the EAO conduct Election Night operations, like receiving equipment, and fill the existing personnel gaps.

In addition to staff limitations, the interviewees mentioned that the space constraints at the ETC affect the supply team’s activities, as work preparing paperwork and supplies is limited to one aisle of the warehouse during Election Day. This means the team is working in close quarters, and maintaining organization is difficult in a situation with a high volume of supplies in a small space.

Political Parties and Community Groups

To obtain a broader view on the March 2022 primary election in Harris County and collect impressions from outside the county’s offices, FMG had conversations with the chairs of the Republican and Democratic parties in Harris County, the chairman of the Republican Party Ballot Security Committee, the alternate judge for the Republican Party in central count, and with representatives from the League of Women Voters and Houston in Action.

Democratic and Republican Parties

FMG conducted separate interviews with Odus Evbagharu (Chair of the Harris County Democratic Party) and Cindy Siegel (Chair of the Harris County Republican Party) on August 15, 2022. There were common topics brought up in both interviews by the party representatives involving lack of communication with leadership in the EAO and issues during the process of election workers recruitment for the March 2022 primary election. They mentioned that after weeks of conversations with the EAO to create the lists for

election workers—who are recruited by the political parties for the primary elections—they learned that the document they had been using to fill the positions was not the one that the EAO was working on and were informed the evening before Election Day that there were polling locations with vacant positions, leaving little time to react to fill those vacancies.⁶

Additionally, GOP’s Siegel pointed out multiple issues experienced during the March 2022 primary election. She noted that election workers for the Republican primary were changed from their assigned polling location without her knowledge, that judges from the Republican party informed her that supplies were not available on time for pick-up, and in some cases that voting machines had not been delivered to polling locations by Monday evening. Additionally, she received complaints from election workers for the Republican party primaries that supplies, such as cables, were missing from the equipment delivered, and in some cases, short paper, rather than the appropriate legal-sized ballot paper, was delivered to voting locations, causing problems with accounting for all the races in the ballot.

Both GOP’s Siegel and Dems’ Evbagaru mentioned that the EAO did not communicate to the parties the challenges that the EAO was experiencing during the election (such as the 10,000 misplaced ballots and the expected delay on the first election results)—party leaders learned about these issues from other sources. In general, the party chairs each noted a deficit of information coming from the EAO that only generated more frustration and confusion about what was happening. Many of the issues might have been avoided or their impact mitigated had the parties been forewarned, and they emphasized the need for proactive communication from the EAO so that setbacks do not become crisis situations, as they perceived to be the case during the March 2020 primary election.

Both chairs commented on the fact that they believe the EAO is understaffed and was overwhelmed during the election. Mrs. Siegel pointed out that staff members were getting pulled off their duties to fill in for other tasks and were unable to complete their jobs, causing a domino effect of unfilled positions. Also, she mentioned that there were not enough people for counting at ETC on Election Night during the March 2022 primary election, and criticized the previous administrator for letting go of workers with vast experience in elections.

⁶ The EAO Director of Logistics noted that the office and parties had regular meetings regarding poll worker recruitment in the weeks leading up to the March primary and that the parties released responsibility for recruiting to the county during the emergency period immediately before Election Day. Additionally, much of the perceived last-minute adjustment to assignments was in direct response to workers dropping out and needing to back-fill those positions, and the shared AirTable used to track judges and clerks was intended as a coordination tool separate from the system used to manage worker assignments.

Dems' Evbagharu also mentioned that there is a need for voter education to ensure that voters are aware of the new voting procedures. He mentioned that, for example, the fact that the BMD showed only one race per page in the screen had people confused at first and fatigued many voters who had to view up to 90 pages on the screen to complete the ballot. He recommended better communication with the community about the use of the new voting equipment and encouraged the creation of a citizen advisory board to ensure that communities are involved in the election process and are better informed.

GOP's Siegel emphasized the long wait-times at drop-off during the March 2022 primary election and the need to improve training and instructions to ensure that judges are well informed about what materials they need to return on Election Night.

Finally, both party leaders emphasized the importance of the non-partisan role of the EAO. As Dems' Evbagharu explained, the nature of the Elections Administrator position fundamentally changed with the creation of the EAO. Whereas the County Clerk is an elected position, the EAO is an administrative office. Although changes in laws and a contentious political environment surrounding elections create some real challenges that both parties acknowledged, each pointed to the role of the EAO in informing the public of changes and communicating the impact that changes might have on the voting process but avoiding direct involvement in policy making debates.

Republican Party's Ballot Security and Central Count representatives

As suggested by GOP's Cindy Siegel, FMG met with Alan Vera (chairman of the Harris County Republican Party Ballot Security Committee) and Colleen Vera (alternate judge for the Republican Party in Central Count) to collect in-the-field impressions from people directly involved in the March 2022 primary election.

Ms. Vera, as a judge for the Republican Party in Central Count, had a direct experience with the counting and tallying process for the March 2022 primary election. She shared that in the past, the processes involving logic and accuracy testing and early voting reconciliation were known ahead of time by the judges involved, and there were no issues. However, for the March 2022 primary election, she mentioned that those processes had been changed without notification, creating confusion and leading to delays. As an example, she mentioned the logic and accuracy testing for early voting, where they kept finding errors and it took a while to realize that the test results had not been printed with a printer of high enough quality, causing the scanner to continuously read errors. Additionally, for the March 2022 primary election, the logic and accuracy testing was done by precinct rather than cumulatively, which caused it to take considerably longer than it had in the past.

Regarding reconciliation of the early voting machines, Ms. Vera mentioned that a new process had been implemented in which the tickets from each machine were printed individually in front of party representatives. With only two representatives per party (a judge

and an alternate judge) and many races on the ballot, this process was unreasonably time-consuming, leading to delays and ultimately interruption of the reconciliation until more representatives were available to assist with processing. Ms. Vera stated this as an example of a process that, had the EAO shared it in advance, the parties would have flagged as problematic and worked with the EAO to make necessary adjustments.

Ms. Vera cited the need to duplicate ballots that could not be read by the scanner at the polls as an example of a process that had not been properly planned beforehand. As she shared, on Election Night, they identified a large number of ballots that needed to be duplicated. This process required duplication of *all* races on the long, two-page ballot—not just those on the page that could not be read. Guidance from the Secretary of State also mandated that each ballot had to be independently reviewed to confirm that it had been accurately duplicated. As shared by Ms. Vera, there was not an established protocol for doing this, and they had to develop a process as they went.

On the topic of the 10,000 misplaced ballots, Ms. Vera shared that the reconciliation form provided by the EAO had combined Republican and Democratic ballots, but that each party only tallied those for their own party, making it impossible to confirm whether results matched. Additionally, there was confusion about how rejected ballots had been recorded. Had results been presented by the county, separating both parties, they might have been able to spot that ballots were missing from the count.

Finally, Ms. Vera mentioned a general sense of confusion and chaos at the ETC, and that although everyone was doing their best to keep up with the tasks at hand, the lack of space and appropriate coordination led to disorganized voting materials and staff being continuously interrupted and pulled to perform different tasks.

Mr. Vera, as the chairman of the Harris County Republican Party Ballot Security Committee, stated that he is the person Republican judges and election workers contact when they have an issue at the polling place. Mr. Vera noted that he received a multitude of calls during the March 2022 primary election, and he provided FMG with a comprehensive list of recurrent issues grouped by category. Among those in the logistics category, Mr. Vera emphasized the need for consistent maintenance of the Harris County voting equipment, as machines not being clean or properly calibrated led to errors during the voting process. He also mentioned that multiple judges reached out to inform him that when they contacted the county's helpline, they were put on hold for a long period of time and that in-person assistance had taken hours to arrive to their polling location.

Mr. Vera also received calls from voters who were not given the ballot corresponding to their precinct. As he states, there were issues with ballot styles, resulting in multiple cases of voters who were not given the correct ballot and therefore were unable to vote in all of the races that applied to them. Another issue raised was that some polling locations did not

have the correct sized paper—they had received letter sized paper instead of legal sized paper—causing ballots to be printed missing races. Similarly, Mr. Vera mentioned reports from judges who did not receive ballot paper when they collected their voting supplies, leaving them unable to open their polling place on the morning of Election Day.

League of Women Voters and Houston in Action

On August 10, 2022, the FMG team met separately with Nancy Kral (member of the Board of the League of Women Voters in Harris County) and Juan Carlos Cardoza-Oquendo (Director of Policy and Elections for Houston in Action.)

Both Ms. Kral and Mr. Cardoza-Oquendo focused on the voting issues affecting their communities and acknowledged the improvement on voting registration outreach conducted by the EAO. However, Ms. Kral pointed out that there are still ways to improve registration processes, such as making more locations available for voters to submit registration applications. Both Ms. Kral and Mr. Cardoza-Oquendo agreed there were issues during the March 2022 primary election, but that some of the criticism was a product of the political climate. Additionally, both interviewees pointed out that the public focus directed to the timing of election results was excessive, and that there is a need from the EAO and the county in general to set realistic expectations on when results can be released and to inform the public of the steps involved in the counting process.

Mr. Cardoza-Oquendo pointed out that his group had identified areas in which the EAO needs to improve and had already shared this feedback with the EAO and with the Commissioners. Improvement areas include having more hands-on and in-person training opportunities for election worker's, increasing voter education to explain what happens in elections, and establishing the Citizen Election Advisory Committee to allow for community engagement with the election administration.

Ms. Kral and Mr. Cardoza-Oquendo also agreed on the negative effects they consider SB1 has on the voting process, and Ms. Kral expanded on other state-wide policies that have negative effects in the electoral process, such as online voter registration not being available in Texas. Finally, Ms. Kral suggested that primary elections in Harris County should be conducted jointly to reduce the costs of the election and the burden on the administration.

Recommendations

Identified Issue: Insufficient resources to successfully execute core EAO tasks before, during, and after the election led to incomplete or late task completion, staff burnout, confusion, and frustration, both inside the organization and among parties and the public.

Recommendation: Critically assess EAO operations to identify the core activities required for successful administration of each election, the measurable outcomes by which success will be defined, and the resources necessary to achieve these outcomes.

Recommendation: Establish clear lines of responsibility within EAO for each core activity with clearly communicated performance benchmarks. Ensure that staff have the training, resources, and bandwidth necessary to define procedures and complete these critical tasks.

Recommendation: Set guidelines and establish service expectations for activities associated with elections of different types and sizes. Clearly define how activities will be scaled to meet the needs of each election type. Ensure there is mutual understanding of fixed and variable cost estimates for elections within the county and with the outside entities for which EAO administers elections.

Recommendation: Formalize post-election review reports that provide key data points for each election, detail activities undertaken and key performance measures, identify challenges experienced and lessons learned, and articulate any organizational needs or planned actions by EAO for improvement in future elections.

Rationale: There remains a disconnect between perceptions of those outside, who note a substantial increase in the investment in elections, and those inside EAO who cite a lack of resources as key barrier to success. Although EAO, on the whole, collects large volumes of data, the office has not been able to successfully use that information to effectively secure needed resources or demonstrate administrative performance. Moving forward, EAO can more successfully and effectively administer elections and meet expectations across stakeholder groups by establishing clear objectives, defining performance measures and benchmarks, planning and prioritizing processes, and allocating resources to align with stated objectives.

Identified Issue: Voter confusion regarding voting procedures, flow through the polling locations, and how to print and scan ballots resulted in unnecessary calls to the county helpline and reduced the efficiency of the election.

Recommendation: Engage in intensive and continuous voter education and outreach programs that are targeted and budgeted for each election. Develop an integrated marketing and communications strategy that includes plans to leverage paid, earned,

and owned media as well as partner engagement activities. Improve polling place communications, including signage or other physical collateral, and provide clear and consistent language for poll workers to use when assisting voters.

Recommendation: Establish and formalize engagement with a citizen advisory council consisting of representatives from community groups within Harris County. Use relationships with this group to gather feedback and recommendations about how to better serve the voters of Harris County and to establish channels for dissemination of information about the voting process with members of the community.

Rationale: Data analysis and in-person interviews identify the lack of voter education during the March 2022 primary election and in Harris County more generally. This was especially problematic due to the change from electronic to paper-based voting, which came with new processes, procedures, and devices. EAO must establish itself as a trusted source of reliable information and ensure that consistent and accurate messages reach voters through multiple channels.

Identified issue: Election judges and clerks' lack of familiarity with voting equipment setup, device operations, common issues experienced by voters, and basic trouble-shooting techniques resulted in unnecessary calls to the county helpline and led to malfunctions that hindered polling place operations and voter experience.

Recommendation: Focus on more hands-on training with small groups to ensure familiarity with equipment and adequate time for troubleshooting. Ensure that in-person training sessions have enough equipment and small enough breakout groups so that every individual gets personal, hands-on experience learning and practicing each element of equipment set-up, operations, voter assistance, troubleshooting, and end-of-night procedures.

Recommendation: Align the training given to poll workers, elections staff, field technicians, and helpdesk support staff to ensure consistency of language used in materials, trouble-shooting processes, and other protocols for commonly experienced issues. Ensure that all the relevant information shared with the EAO staff during Hart InterCivic staff training sessions makes its way into the training curriculum and materials used to manage training of support staff and poll workers.

Recommendation: Revise the content and materials used in training courses to ensure alignment with the poll worker manual, help desk protocols, and other materials deployed on Election Day. Ensure that training materials are thorough and complete before training begins.

Recommendation: Implement an online learning management system (LMS) that is repeatedly and consistently used for refresher training to supplement in-person training

requirements. Critically assess requirements for training before each election and, if possible, reduce the overall training burden placed on EAO staff and poll workers by combining in-person, online, and refresher courses to meet training needs when judges or clerks are involved in multiple elections within a short period of time.

Rationale: Calls to the county helpline and the lack of hands-on training noted in the in-person interviews indicate a lack of adequate field- and phone-support personnel training. Interviews with poll workers and EAO staff indicate that personnel changes and large online classes impacted the effectiveness of the training. Poll worker and election judge training is especially important due to the change from electronic to paper-based voting, with the resulting new processes, procedures, and new devices.

Identified issue: The lack of sufficient warehouse space impaired EAO's ability to be efficient and effective in storing, preparing, testing, managing, distributing, supporting, and receiving voting equipment and polling place materials for smooth election operations.

Recommendation: Assess current EAO warehouse spaces and evaluate alternatives to expand interior work and storage space and improve exterior parking and traffic flow. These may include consolidated storage facilities, reconfigured or expanded workspace in the ETC, or alternative facilities that better meet operational requirements.

Rationale: In-person interviews revealed that the county's inadequate warehouse space generates significant down-stream issues across multiple areas of election operations, including preparation of equipment and supplies ahead of Election Day, coordination of transferring equipment and materials for processing, and effectively allocating staffing resources needed to complete election-related tasks.

Identified Issue: Confusion about processes, roles, and responsibilities of the EAO and the political parties for poll worker recruitment and assignment, identification of polling locations, communications, and equipment drop off.

Recommendation: Establish real-time information-sharing processes with the parties to align understanding of poll worker lists and assignments, locations of polling places, and drop-off procedures. Establish shared channels of communications to ensure consistency of messaging coming from the EAO and the parties, particularly related to any issues or changes to assignments or procedures that occur immediately before or during Election Day.

Recommendation: Refine and formalize the County volunteer program with formal guidance and buy-in from each party in advance so that the procedures are understood, particularly those related to chain of custody for voting equipment at close of polls. Clearly define the tasks that will be performed by county volunteers and ensure the program is adequately staffed and that consistent expectations can be set and met.

Rationale: Both Democratic and Republican Party chairs cited a lack of consistent communication from the EAO as a primary cause of problems during the March 2022 primary election. Party leadership expressed concern that they were not informed of critical changes to staffing and assignment of polling locations until the night before the election and only learned of delays in results reporting from external sources and news reports.

Identified issue: Long lines and waits associated with election judges' return of equipment, materials, V-Drives, and ballots after the close of polls contributed to later-than-desired results reporting and frustrated election workers.

Recommendation: Consider the advantages and disadvantages of using satellite drop-off locations, centralizing drop-off and central count operations at NRG or using the ETC for these operations, and the conditions under which each option might best serve the needs of a specific election. Establish and optimize procedures for using these alternatives in advance and clearly communicate established procedures and requirements with internal OEA staff, poll workers, and each party so that expectations, roles, and responsibilities are well understood ahead of the election.

Recommendation: Provide checklists to guide close-of-polls activities and clearly label supplies and equipment that must be returned to the designated drop-off location at the end of the night. Emphasize these processes and requirements as part of poll worker training.

Recommendation: Visit facilities and work with Tarrant County to observe their best practices, including how that county has successfully implemented the voting system currently in place in Harris County, including two-sheet ballot use. Partner and confer with other large voting jurisdictions across the country to identify best practices and process improvement opportunities in critical areas, including strategies for management of materials distribution, end-of-night collection, and central count across a widely distributed geographic area. Best practices might include voter education and outreach, poll worker training, warehouse organization and management, processes and responsibilities for early voting and Election Day preparation, workflow of equipment and data return, and addressing challenges with multi-sheet ballots.

Rationale: Late (or later than desired) reporting has been an ongoing problem noted in the media in several recent elections, with the March 2022 primary election being the most visible example. A more scalable, efficient process for returning V-Drives, equipment, and other supplies after the close of polls on Election Day would reduce complexity for poll workers and part-time staff, resulting in more resources available to focus on timely tabulation and reporting. There is value in sharing best practices with other jurisdictions across the country that are of a similar scale and have effective

strategies to overcome challenges associated with long ballot content, a large pool of poll workers to train, diverse communities of voters, large amounts of equipment to store and process, and large amounts of data that must be collected and reported in a timely manner.

Identified issue: Understaffing and unclear roles and responsibilities related to various EAO functions impacted the EAO's ability to effectively and efficiently execute critical pre-election and Election Night functions (e.g., preparing supplies and supplies for pick-up and delivery, support of returning equipment, V-Drives, ballots, equipment, and supplies).

Recommendation: Assign individual managers responsible for key elements of election preparation and Election Night returns and enhancement of procedures. Ensure that these managers have the training, resources, and bandwidth necessary to define procedures and complete these critical tasks.

At a minimum, EAO needs documented processes covering responsibility and chain of command for:

- Equipment testing, calibration, and cleaning;
- Polling place supplies preparation and distribution;
- Collecting and processing equipment and vote tallies in central count, including:
 - Polling place equipment return tracking
 - V-Drive tracking from early voting and Election Day polling places
 - By-mail processing and V-Drive tracking
 - Polling place reconciliation log return
 - Polling place ballot return
 - Election night reporting to the media, the public, and the state

Rationale: Problems surrounding the equipment supply hand-out for the March 2022 primary election were noted as precursors to several additional downstream issues due to the strain it caused on the timeline and on staff attention to detail. These issues continued into Election Night, when there were issues tracking ballots, V-Drives, equipment, and Election Night reports accurately, efficiently, and in a timely manner.

Appendix I – Post-Election Survey Toplines

The following tables provide the responses that poll workers and poll judges provided to the survey regarding the March 2022 primary election that was fielded from April 18, 2022, to April 26, 2022. A total of 470 poll judges and 626 poll workers responded the survey.

Two different surveys were shared, one for poll workers and one for poll judges, with the same questions except for few items that were specific to poll judges and did not appear in the poll worker survey. For the purposes of classifying the respondents between poll judge and poll worker in these tables, we used the response of the participants to Q5 that asked about their role in the election instead of the original survey they completed. There were some small discrepancies in terms of respondents reporting that their role was different than the role they completed the survey for (e.g., respondents that were given the poll worker survey and reported being Poll Judges).

For the age categories represented in the tables, there were some poll workers under the age of 18 who were likely student workers. These were not separated into their own category because they represented a very small portion of the respondents ($n = 8$).

Q2. How long have you worked as an election worker?

Experience as Election Worker				
	First Election	1 – 5 Years	6 – 10 Years	More than 10 Years
Respondents (n=1,093)	7.9%	50.7%	17.9%	23.5%
Election Worker Type				
Poll Judge (n=468)	6.0%	42.1%	17.5%	34.4%
Poll Worker (n=621)	9.2%	57.2%	18.4%	15.3%
Election Period Worked				
Early Voting Only (n=134)	6.7%	56.0%	20.9%	16.4%
Election Day Only (n=449)	12.5%	47.7%	17.1%	22.7%
Early Voting and Election Day (n=510)	4.1%	52.0%	17.8%	26.1%
Election Worker's Age				
16–35 Years (n=64)	15.6%	70.3%	10.9%	3.1%
36–45 Years (n=44)	11.4%	61.4%	11.4%	15.9%
46–55 Years (n=104)	11.5%	64.4%	9.6%	14.4%
56–65 Years (n=297)	6.4%	54.9%	14.5%	24.2%
66–70 Years (n=190)	8.4%	47.4%	18.4%	25.8%
71+ Years (n=260)	6.2%	34.6%	25.8%	33.5%
Party Identification				
Republican (n=414)	8.0%	50.5%	16.2%	25.4%
Democrat (n=537)	6.7%	47.1%	21.2%	25.0%
Independent / Other (n=94)	12.8%	66.0%	10.6%	10.6%

Q3. Did you work at the polls in this past March 1, 2022, Primary Election?

Election Period Worked			
	Early Voting Only	Election Day Only	Early Voting and Election Day
Respondents (n=1,100)	12.3%	41.0%	46.7%
Election Worker Type			
Poll Judge (n=470)	3.6%	52.8%	43.6%
Poll Worker (n=625)	18.6%	32.2%	49.3%
Experience			
First Election (n=86)	10.5%	65.1%	24.4%
1-5 Years (n=554)	13.5%	38.6%	47.8%
6-10 Years (n=196)	14.3%	39.3%	46.4%
More than 10 Years (n=257)	8.6%	39.7%	51.8%
Election Worker's Age			
16-35 Years (n=64)	15.6%	46.9%	37.5%
36-45 Years (n=44)	11.4%	45.5%	43.2%
46-55 Years (n=106)	8.5%	46.2%	45.3%
56-65 Years (n=298)	8.7%	40.6%	50.7%
66-70 Years (n=191)	12.0%	44.0%	44.0%
71+ Years (n=262)	15.3%	34.7%	50.0%
Party Identification			
Republican (n=415)	10.6%	44.3%	45.1%
Democrat (n=542)	12.4%	37.5%	50.2%
Independent / Other (n=94)	13.8%	44.7%	41.5%

Q4. When were you recruited to work the polls on Election Day?

Recruitment to Work the Polls					
	< 1 Week before Election Day	1 – 2 Weeks before Election Day	3 – 4 Weeks before Election Day	More than 1 month before Election Day	Not contacted to work the polls
Respondents (n=1,076)	13.4%	29.0%	30.7%	25.4%	1.6%
Election Worker Type					
Poll Judge (n=464)	11.9%	24.4%	33.4%	29.7%	0.6%
Poll Worker (n=607)	14.5%	32.5%	28.8%	21.9%	2.3%
Experience					
First Election (n=84)	14.3%	28.6%	35.7%	19.0%	2.4%
1-5 Years (n=542)	15.9%	31.7%	28.6%	22.9%	0.9%
6-10 Years (n=190)	7.9%	27.9%	36.8%	24.2%	3.2%
More than 10 Years (n=253)	12.3%	23.7%	29.6%	32.8%	1.6%
Election Period Worked					
Early Voting Only (n=131)	6.9%	35.1%	26.7%	22.9%	8.4%
Election Day Only (n=447)	15.0%	21.3%	30.2%	32.4%	1.1%
Early Voting and Election Day (n=498)	13.7%	34.3%	32.1%	19.7%	0.2%
Election Worker's Age					
16-35 Years (n=64)	10.9%	21.9%	32.8%	29.7%	4.7%
36-45 Years (n=41)	19.5%	41.5%	19.5%	19.5%	0.0%
46-55 Years (n=102)	13.7%	25.5%	30.4%	30.4%	0.0%
56-65 Years (n=290)	15.5%	28.3%	30.3%	24.5%	1.4%
66-70 Years (n=188)	12.2%	30.9%	30.9%	25.0%	1.1%
71+ Years (n=259)	10.4%	30.1%	34.0%	23.6%	1.9%
Party Identification					
Republican (n=406)	15.5%	26.4%	32.5%	24.4%	1.2%
Democrat (n=529)	10.8%	29.3%	30.6%	27.2%	2.1%
Independent / Other (n=92)	18.5%	37.0%	26.1%	17.4%	1.1%

Q5. For the March 1, 2022, Primary Election, did you serve as a...?

Role in the Election			
	Presiding Judge	Alternate Judge	Poll Worker
Respondents (n=1,096)	26.3%	16.6%	57.1%
Experience			
First Election (n=85)	14.1%	18.8%	67.1%
1-5 Years (n=552)	18.8%	16.8%	64.3%
6-10 Years (n=196)	26.0%	15.8%	58.2%
More than 10 Years (n=256)	46.5%	16.4%	37.1%
Election Period Worked			
Early Voting Only (n=133)	7.5%	5.3%	87.2%
Election Day Only (n=449)	32.1%	23.2%	44.8%
Early Voting and Election Day (n=513)	26.1%	13.8%	60.0%
Election Worker's Age			
16-35 Years (n=64)	17.2%	7.8%	75.0%
36-45 Years (n=44)	29.5%	22.7%	47.7%
46-55 Years (n=106)	42.5%	20.8%	36.8%
56-65 Years (n=296)	28.0%	19.3%	52.7%
66-70 Years (n=189)	24.9%	14.3%	60.8%
71+ Years (n=261)	23.0%	14.2%	62.8%
Party Identification			
Republican (n=414)	26.3%	20.3%	53.4%
Democrat (n=540)	29.6%	13.1%	57.2%
Independent / Other (n=94)	12.8%	20.2%	67.0%

Q6. How were you recruited to work?

Recruitment to Work the Polls				
	Democratic Party	Republican Party	Election Administrator's Office	Other
Respondents (n=1,095)	23.4%	25.4%	28.7%	22.6%
Election Worker Type				
Poll Judge (n=469)	29.0%	26.2%	29.4%	15.4%
Poll Worker (n=622)	19.1%	24.8%	28.1%	28.0%
Experience				
First Election (n=86)	20.9%	31.4%	17.4%	30.2%
1-5 Years (n=551)	21.1%	26.0%	30.5%	22.5%
6-10 Years (n=196)	27.6%	20.9%	26.5%	25.0%
More than 10 Years (n=254)	26.0%	26.4%	30.3%	17.3%
Election Period Worked				
Early Voting Only (n=134)	23.9%	24.6%	34.3%	17.2%
Election Day Only (n=451)	22.2%	26.2%	21.1%	30.6%
Early Voting and Election Day (n=509)	24.2%	25.0%	34.0%	16.9%
Election Worker's Age				
16-35 Years (n=63)	39.7%	22.2%	25.4%	12.7%
36-45 Years (n=44)	27.3%	22.7%	34.1%	15.9%
46-55 Years (n=106)	34.0%	16.0%	37.7%	12.3%
56-65 Years (n=295)	23.1%	25.1%	29.2%	22.7%
66-70 Years (n=191)	18.8%	22.0%	30.4%	28.8%
71+ Years (n=261)	19.9%	31.4%	27.2%	21.5%
Party Identification				
Republican (n=413)	1.2%	59.1%	20.8%	18.9%
Democrat (n=539)	41.9%	2.0%	34.5%	21.5%
Independent / Other (n=94)	20.2%	10.6%	33.0%	36.2%

Q7. How long did you wait in line at the supply handout location?

Supply Handout Wait Time					
	No wait	5 – 10 minutes	11 – 30 minutes	30 minutes to 1 hour	>1 Hour
Respondents (n=397)	28.7%	20.2%	20.4%	14.1%	16.6%
Election Worker Type					
Poll Judge (n=310)	16.8%	22.9%	23.2%	17.1%	20.0%
Poll Worker (n=86)	70.9%	10.5%	10.5%	3.5%	4.7%
Experience					
First Election (n=31)	51.6%	12.9%	3.2%	25.8%	6.5%
1–5 Years (n=163)	30.7%	20.9%	20.2%	12.3%	16.0%
6–10 Years (n=71)	29.6%	18.3%	22.5%	11.3%	18.3%
More than 10 Years (n=130)	20.0%	21.5%	23.8%	15.4%	19.2%
Election Period Worked					
Early Voting Only (n=39)	56.4%	17.9%	15.4%	0.0%	10.3%
Election Day Only (n=179)	23.5%	17.3%	22.9%	18.4%	17.9%
Early Voting and Election Day (n=179)	27.9%	23.5%	19.0%	12.8%	16.8%
Election Worker's Age					
16–35 Years (n=28)	53.6%	14.3%	10.7%	3.6%	17.9%
36–45 Years (n=16)	18.8%	12.5%	37.5%	12.5%	18.8%
46–55 Years (n=54)	25.9%	24.1%	22.2%	14.8%	13.0%
56–65 Years (n=102)	32.4%	15.7%	12.7%	16.7%	22.5%
66–70 Years (n=63)	11.1%	25.4%	28.6%	15.9%	19.0%
71+ Years (n=85)	27.1%	21.2%	24.7%	15.3%	11.8%
Party Identification					
Republican (n=141)	18.4%	18.4%	22.7%	17.7%	22.7%
Democrat (n=212)	33.0%	22.2%	18.9%	12.3%	13.7%
Independent / Other (n=30)	40.0%	20.0%	23.3%	10.0%	6.7%

Q8. How long did you wait in line to return your supplies on Election Night?

Supply Return Wait Time					
	No wait	5 – 10 minutes	11 – 30 minutes	30 minutes to 1 hour	>1 Hour
Respondents (n=413)	18.6%	9.7%	10.4%	18.9%	42.4%
Election Worker Type					
Poll Judge (n=323)	8.0%	9.9%	10.5%	20.7%	50.8%
Poll Worker (n=89)	56.2%	9.0%	10.1%	12.4%	12.4%
Experience					
First Election (n=31)	45.2%	6.5%	3.2%	16.1%	29.0%
1–5 Years (n=169)	21.9%	11.2%	10.7%	19.5%	36.7%
6–10 Years (n=74)	18.9%	4.1%	18.9%	16.2%	41.9%
More than 10 Years (n=138)	8.7%	11.6%	7.2%	20.3%	52.2%
Election Period Worked					
Early Voting Only (n=34)	52.9%	11.8%	8.8%	5.9%	20.6%
Election Day Only (n=190)	13.2%	7.9%	10.0%	20.5%	48.4%
Early Voting and Election Day (n=189)	18.0%	11.1%	11.1%	19.6%	40.2%
Election Worker's Age					
16–35 Years (n=31)	35.5%	12.9%	9.7%	12.9%	29.0%
36–45 Years (n=16)	12.5%	18.8%	12.5%	31.3%	25.0%
46–55 Years (n=55)	14.5%	14.5%	7.3%	14.5%	49.1%
56–65 Years (n=113)	15.0%	4.4%	8.8%	18.6%	53.1%
66–70 Years (n=63)	11.1%	9.5%	11.1%	22.2%	46.0%
71+ Years (n=86)	22.1%	9.3%	14.0%	25.6%	29.1%
Party Identification					
Republican (n=145)	9.0%	8.3%	10.3%	21.4%	51.0%
Democrat (n=221)	23.5%	9.0%	11.8%	18.6%	37.1%
Independent / Other (n=33)	21.2%	21.2%	6.1%	15.2%	36.4%

Q9. What is the longest you waited on hold for assistance on the phone helpline?

Longest Wait Time for Assistance on Phone Helpline						
	No wait	1 – 5 minutes	6 – 15 minutes	15 – 30 minutes	>30 minutes	Could not get through
Respondents (n=521)	22.3%	30.5%	18.8%	12.7%	14.4%	1.3%
Election Worker Type						
Poll Judge (n=375)	14.1%	30.9%	20.5%	15.5%	17.3%	1.6%
Poll Worker (n=145)	42.8%	29.7%	14.5%	5.5%	6.9%	0.7%
Experience						
First Election (n=45)	40.0%	24.4%	13.3%	8.9%	13.3%	0.0%
1–5 Years (n=229)	23.1%	33.2%	20.1%	10.9%	10.9%	1.7%
6–10 Years (n=89)	19.1%	30.3%	20.2%	5.6%	22.5%	2.2%
More than 10 Years (n=156)	17.9%	28.2%	17.3%	20.5%	15.4%	0.6%
Election Period Worked						
Early Voting Only (n=50)	40.0%	32.0%	18.0%	6.0%	2.0%	2.0%
Election Day Only (n=237)	19.4%	23.2%	20.7%	16.0%	19.0%	1.7%
Early Voting and Election Day (n=234)	21.4%	37.6%	17.1%	10.7%	12.4%	0.9%
Election Worker's Age						
16–35 Years (n=38)	36.8%	23.7%	23.7%	5.3%	10.5%	0.0%
36–45 Years (n=22)	9.1%	45.5%	27.3%	9.1%	9.1%	0.0%
46–55 Years (n=67)	10.4%	28.4%	25.4%	14.9%	17.9%	3.0%
56–65 Years (n=146)	19.9%	31.5%	19.2%	11.6%	17.1%	0.7%
66–70 Years (n=79)	20.3%	34.2%	11.4%	22.8%	10.1%	1.3%
71+ Years (n=107)	32.7%	28.0%	15.0%	9.3%	14.0%	0.9%
Party Identification						
Republican (n=192)	12.5%	31.8%	14.6%	18.2%	21.4%	1.6%
Democrat (n=273)	29.3%	28.6%	21.2%	9.2%	11.0%	0.7%
Independent / Other (n=36)	19.4%	41.7%	25.0%	11.1%	2.8%	0.0%

Q10a. How many voters at your polling location had difficulty with the following: Recording their vote choices on the new voting machines [N = 1,075]

Voter Issues Recording Choices in Voting Equipment				
	None	A few voters	Less than half of all voters	Most voters
Respondents (n=1,075)	21.7%	58.3%	13.5%	6.5%
Election Worker Type				
Poll Judge (n=462)	24.0%	57.4%	13.6%	5.0%
Poll Worker (n=609)	20.0%	58.8%	13.5%	7.7%
Experience				
First Election (n=85)	25.9%	61.2%	9.4%	3.5%
1–5 Years (n=544)	22.4%	57.9%	12.7%	7.0%
6–10 Years (n=187)	21.4%	58.8%	12.8%	7.0%
More than 10 Years (n=254)	18.9%	58.3%	16.9%	5.9%
Election Period Worked				
Early Voting Only (n=130)	22.3%	51.5%	15.4%	10.8%
Election Day Only (n=440)	24.3%	57.3%	12.3%	6.1%
Early Voting and Election Day (n=505)	19.2%	61.0%	14.1%	5.7%
Election Worker's Age				
16–35 Years (n=64)	23.4%	42.2%	20.3%	14.1%
36–45 Years (n=44)	29.5%	56.8%	6.8%	6.8%
46–55 Years (n=106)	33.0%	54.7%	5.7%	6.6%
56–65 Years (n=290)	23.8%	56.2%	15.5%	4.5%
66–70 Years (n=186)	19.4%	64.5%	12.9%	3.2%
71+ Years (n=255)	17.6%	62.0%	11.8%	8.6%
Party Identification				
Republican (n=405)	20.5%	58.0%	14.3%	7.2%
Democrat (n=530)	23.8%	58.3%	12.5%	5.5%
Independent / Other (n=93)	17.2%	58.1%	15.1%	9.7%

Q10b. How many voters at your polling location had difficulty with the following: Obtaining printed copy of their completed ballot

Voter Issues Obtaining Printed Ballot				
	None	A few voters	Less than half of all voters	Most voters
Respondents (n=1,076)	21.8%	51.5%	18.0%	8.6%
Election Worker Type				
Poll Judge (n=464)	19.8%	52.4%	18.8%	9.1%
Poll Worker (n=608)	23.5%	50.7%	17.4%	8.4%
Experience				
First Election (n=85)	30.6%	48.2%	9.4%	11.8%
1-5 Years (n=544)	20.8%	54.4%	17.1%	7.7%
6-10 Years (n=188)	24.5%	48.9%	18.6%	8.0%
More than 10 Years (n=254)	19.3%	48.4%	22.4%	9.8%
Election Period Worked				
Early Voting Only (n=129)	28.7%	44.2%	16.3%	10.9%
Election Day Only (n=445)	22.7%	53.9%	16.9%	6.5%
Early Voting and Election Day (n=502)	19.3%	51.2%	19.5%	10.0%
Election Worker's Age				
16-35 Years (n=60)	18.3%	43.3%	16.7%	21.7%
36-45 Years (n=44)	31.8%	43.2%	13.6%	11.4%
46-55 Years (n=106)	24.5%	58.5%	9.4%	7.5%
56-65 Years (n=293)	21.5%	49.8%	22.9%	5.8%
66-70 Years (n=185)	16.8%	60.5%	19.5%	3.2%
71+ Years (n=257)	26.5%	51.0%	14.0%	8.6%
Party Identification				
Republican (n=408)	17.9%	50.0%	22.1%	10.0%
Democrat (n=528)	24.2%	54.2%	15.3%	6.3%
Independent / Other (n=93)	26.9%	45.2%	16.1%	11.8%

Q10c. How many voters at your polling location had difficulty with the following: Scanning the printed copy of their completed ballot

Voter Issues Scanning Printed Ballot				
	None	A few voters	Less than half of all voters	Most voters
Respondents (n=1,079)	24.2%	54.5%	12.3%	9.0%
Election Worker Type				
Poll Judge (n=459)	23.1%	56.0%	13.1%	7.8%
Poll Worker (n=615)	25.0%	53.2%	11.9%	9.9%
Experience				
First Election (n=85)	32.9%	49.4%	9.4%	8.2%
1-5 Years (n=545)	23.7%	56.0%	11.0%	9.4%
6-10 Years (n=190)	23.2%	57.9%	13.2%	5.8%
More than 10 Years (n=252)	23.8%	50.4%	15.5%	10.3%
Election Period Worked				
Early Voting Only (n=132)	27.3%	48.5%	13.6%	10.6%
Election Day Only (n=443)	24.2%	53.0%	14.0%	8.8%
Early Voting and Election Day (n=504)	23.4%	57.3%	10.5%	8.7%
Election Worker's Age				
16-35 Years (n=63)	25.4%	38.1%	7.9%	28.6%
36-45 Years (n=44)	25.0%	52.3%	18.2%	4.5%
46-55 Years (n=105)	21.0%	65.7%	7.6%	5.7%
56-65 Years (n=290)	26.9%	50.3%	16.2%	6.6%
66-70 Years (n=187)	22.5%	60.4%	12.8%	4.3%
71+ Years (n=258)	26.7%	56.2%	8.5%	8.5%
Party Identification				
Republican (n=406)	20.9%	55.2%	13.8%	10.1%
Democrat (n=533)	26.1%	55.9%	11.1%	6.9%
Independent / Other (n=93)	34.4%	43.0%	7.5%	15.1%

Q10d. How many voters at your polling location had difficulty with the following: Checking in to vote with the proper voter identification

Voter Issues Checking in with Proper Identification				
	None	A few voters	Less than half of all voters	Most voters
Respondents (n=1,072)	39.6%	52.9%	3.1%	4.4%
Election Worker Type				
Poll Judge (n=460)	44.1%	50.2%	2.0%	3.7%
Poll Worker (n=607)	36.4%	54.7%	4.0%	4.9%
Experience				
First Election (n=85)	41.2%	55.3%	2.4%	1.2%
1-5 Years (n=541)	37.2%	53.4%	4.4%	5.0%
6-10 Years (n=191)	43.5%	50.8%	2.1%	3.7%
More than 10 Years (n=248)	42.3%	52.0%	1.2%	4.4%
Election Period Worked				
Early Voting Only (n=132)	37.9%	52.3%	1.5%	8.3%
Election Day Only (n=443)	42.0%	53.0%	2.3%	2.7%
Early Voting and Election Day (n=497)	38.0%	52.9%	4.2%	4.8%
Election Worker's Age				
16-35 Years (n=63)	50.8%	31.7%	7.9%	9.5%
36-45 Years (n=44)	52.3%	43.2%	0.0%	4.5%
46-55 Years (n=104)	46.2%	50.0%	1.0%	2.9%
56-65 Years (n=286)	39.5%	53.8%	3.8%	2.8%
66-70 Years (n=187)	37.4%	58.8%	0.5%	3.2%
71+ Years (n=256)	37.9%	53.9%	3.1%	5.1%
Party Identification				
Republican (n=404)	37.4%	55.2%	3.2%	4.2%
Democrat (n=528)	43.2%	50.6%	2.3%	4.0%
Independent / Other (n=93)	31.2%	54.8%	7.5%	6.5%

Q10e. How many voters at your polling location had difficulty with the following: Completing a provisional ballot

Voter Issues Completing a Provisional Ballot				
	None	A few voters	Less than half of all voters	Most voters
Respondents (n=1,048)	47.7%	45.8%	4.0%	2.5%
Election Worker Type				
Poll Judge (n=451)	59.2%	35.5%	3.1%	2.2%
Poll Worker (n=592)	38.9%	53.7%	4.7%	2.7%
Experience				
First Election (n=81)	51.9%	39.5%	4.9%	3.7%
1-5 Years (n=532)	45.3%	47.4%	4.7%	2.6%
6-10 Years (n=186)	51.6%	46.2%	1.6%	0.5%
More than 10 Years (n=242)	49.2%	43.8%	4.1%	2.9%
Election Period Worked				
Early Voting Only (n=127)	38.6%	52.0%	3.9%	5.5%
Election Day Only (n=429)	56.2%	41.0%	1.4%	1.4%
Early Voting and Election Day (n=492)	42.7%	48.4%	6.3%	2.6%
Election Worker's Age				
16-35 Years (n=62)	56.5%	30.6%	4.8%	8.1%
36-45 Years (n=44)	54.5%	43.2%	0.0%	2.3%
46-55 Years (n=105)	58.1%	36.2%	3.8%	1.9%
56-65 Years (n=278)	51.4%	42.8%	4.7%	1.1%
66-70 Years (n=184)	46.7%	48.9%	3.8%	0.5%
71+ Years (n=247)	43.3%	50.6%	3.6%	2.4%
Party Identification				
Republican (n=394)	48.7%	44.9%	3.3%	3.0%
Democrat (n=521)	48.0%	45.7%	4.2%	2.1%
Independent / Other (n=88)	46.6%	44.3%	5.7%	3.4%

Q10f. How many voters at your polling location had difficulty with the following: Poll watchers representing candidates or political parties

Voter Issues with Poll Watchers				
	None	A few voters	Less than half of all voters	Most voters
Respondents (n=1,018)	78.1%	18.0%	2.2%	1.8%
Election Worker Type				
Poll Judge (n=437)	87.9%	10.5%	0.7%	0.9%
Poll Worker (n=577)	70.5%	23.7%	3.3%	2.4%
Experience				
First Election (n=78)	79.5%	11.5%	3.8%	5.1%
1-5 Years (n=518)	74.9%	19.7%	3.1%	2.3%
6-10 Years (n=178)	79.8%	19.1%	0.6%	0.6%
More than 10 Years (n=239)	83.7%	15.1%	0.8%	0.4%
Election Period Worked				
Early Voting Only (n=126)	67.5%	23.0%	3.2%	6.3%
Election Day Only (n=415)	85.8%	12.3%	0.5%	1.4%
Early Voting and Election Day (n=477)	74.2%	21.6%	3.4%	0.8%
Election Worker's Age				
16-35 Years (n=62)	75.8%	11.3%	4.8%	8.1%
36-45 Years (n=42)	78.6%	16.7%	0.0%	4.8%
46-55 Years (n=101)	83.2%	13.9%	1.0%	2.0%
56-65 Years (n=276)	81.2%	15.9%	2.5%	0.4%
66-70 Years (n=177)	75.1%	22.6%	1.1%	1.1%
71+ Years (n=236)	78.4%	20.3%	0.8%	0.4%
Party Identification				
Republican (n=376)	82.7%	14.4%	1.3%	1.6%
Democrat (n=508)	76.2%	19.9%	2.2%	1.8%
Independent / Other (n=90)	70.0%	20.0%	6.7%	3.3%

Q10g. How many voters at your polling location had difficulty with the following: Voting machine accessibility features

Voter Issues with Voting Machine Accessibility Features				
	None	A few voters	Less than half of all voters	Most voters
Respondents (n=1,056)	53.6%	33.3%	7.4%	5.7%
Election Worker Type				
Poll Judge (n=453)	60.0%	26.9%	7.7%	5.3%
Poll Worker (n=599)	48.6%	38.2%	7.2%	6.0%
Experience				
First Election (n=82)	56.1%	32.9%	7.3%	3.7%
1-5 Years (n=535)	53.8%	32.9%	7.3%	6.0%
6-10 Years (n=189)	51.9%	37.6%	6.9%	3.7%
More than 10 Years (n=245)	53.9%	30.6%	8.2%	7.3%
Election Period Worked				
Early Voting Only (n=126)	48.4%	35.7%	7.1%	8.7%
Election Day Only (n=434)	59.4%	30.0%	5.3%	5.3%
Early Voting and Election Day (n=496)	49.8%	35.7%	9.3%	5.2%
Election Worker's Age				
16-35 Years (n=63)	58.7%	19.0%	4.8%	17.5%
36-45 Years (n=44)	61.4%	31.8%	2.3%	4.5%
46-55 Years (n=104)	65.4%	27.9%	4.8%	1.9%
56-65 Years (n=283)	58.7%	25.8%	10.6%	4.9%
66-70 Years (n=188)	53.2%	39.4%	4.8%	2.7%
71+ Years (n=246)	48.0%	40.7%	5.3%	6.1%
Party Identification				
Republican (n=397)	51.4%	34.8%	7.6%	6.3%
Democrat (n=524)	56.9%	31.7%	6.7%	4.8%
Independent / Other (n=91)	45.1%	35.2%	11.0%	8.8%

Q11. Did any individuals or voters with disabilities complain or raise disability-related concerns at your polling location?

Complains or Concerns Disability-Related		
	Yes	No
Respondents (n=958)	8.6%	91.4%
Election Worker Type		
Poll Judge (n=445)	10.8%	89.2%
Poll Worker (n=509)	6.7%	93.3%
Experience		
First Election (n=70)	17.1%	82.9%
1–5 Years (n=479)	6.3%	93.7%
6–10 Years (n=180)	8.3%	91.7%
More than 10 Years (n=226)	11.1%	88.9%
Election Period Worked		
Early Voting Only (n=115)	4.3%	95.7%
Election Day Only (n=404)	9.4%	90.6%
Early Voting and Election Day (n=439)	8.9%	91.1%
Election Worker's Age		
16–35 Years (n=61)	11.5%	88.5%
36–45 Years (n=38)	10.5%	89.5%
46–55 Years (n=97)	9.3%	90.7%
56–65 Years (n=255)	8.6%	91.4%
66–70 Years (n=170)	7.1%	92.9%
71+ Years (n=225)	8.0%	92.0%
Party Identification		
Republican (n=358)	10.3%	89.7%
Democrat (n=485)	6.4%	93.6%
Independent / Other (n=76)	14.5%	85.5%

Q12. Which of the following problems relating to voters with disabilities did you observe? Check all that apply.

Problems Observed Related to Voters with Disabilities						
	Curbside Voting	Door Entrance	Duo Go	Parking	Voter Access Route	Other
Respondents (n=1,103)	12.1%	4.8%	11.1%	7.3%	4.7%	1.7%
Election Worker Type						
Poll Judge (n=470)	13.4%	4.5%	15.3%	6.8%	5.3%	1.3%
Poll Worker (n=626)	11.3%	5.1%	8.0%	7.7%	4.3%	2.1%
Experience						
First Election (n=86)	11.6%	4.7%	8.1%	4.7%	2.3%	4.7%
1-5 Years (n=554)	10.8%	3.6%	7.9%	6.7%	4.0%	1.6%
6-10 Years (n=196)	14.3%	4.6%	13.8%	7.1%	5.1%	2.6%
More than 10 Years (n=257)	13.6%	7.4%	16.7%	9.3%	6.6%	0.4%
Election Period Worked						
Early Voting Only (n=135)	12.6%	4.4%	8.9%	6.7%	1.5%	3.7%
Election Day Only (n=451)	10.2%	3.5%	8.4%	4.9%	4.0%	1.3%
Early Voting and Election Day (n=514)	13.8%	6.0%	14.0%	9.5%	6.2%	1.6%
Election Worker's Age						
16-35 Years (n=64)	20.3%	7.8%	10.9%	12.5%	9.4%	4.7%
36-45 Years (n=44)	15.9%	9.1%	6.8%	11.4%	6.8%	0.0%
46-55 Years (n=106)	12.3%	6.6%	14.2%	7.5%	2.8%	3.8%
56-65 Years (n=298)	10.7%	3.4%	13.8%	7.7%	5.4%	1.3%
66-70 Years (n=191)	10.5%	3.1%	9.9%	5.8%	2.6%	1.6%
71+ Years (n=262)	11.8%	6.1%	8.4%	6.5%	5.0%	0.8%
Party Identification						
Republican (n=415)	12.8%	6.0%	12.3%	7.2%	5.8%	2.2%
Democrat (n=542)	11.4%	4.1%	11.1%	7.4%	3.7%	1.1%
Independent / Other (n=95)	13.7%	6.3%	7.4%	8.4%	5.3%	2.1%

Q13a. The following questions ask you about efforts to comply with the American with Disabilities Act. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The new Americans with Disabilities Act (ADA) checklist app on the ePollBook with instructions and photos specific to my location was effective in helping me implement the ADA remedies correctly.

ADA Checklist App Was Useful				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=842)	36.7%	52.4%	6.8%	4.2%
Election Worker Type				
Poll Judge (n=374)	30.5%	50.8%	11.5%	7.2%
Poll Worker (n=464)	41.6%	53.7%	3.0%	1.7%
Experience				
First Election (n=58)	41.4%	41.4%	8.6%	8.6%
1-5 Years (n=423)	40.0%	52.0%	4.3%	3.8%
6-10 Years (n=155)	33.5%	54.8%	8.4%	3.2%
More than 10 Years (n=200)	30.5%	54.5%	10.5%	4.5%
Election Period Worked				
Early Voting Only (n=106)	43.4%	51.9%	3.8%	0.9%
Election Day Only (n=324)	32.4%	53.1%	8.3%	6.2%
Early Voting and Election Day (n=412)	38.3%	51.9%	6.3%	3.4%
Election Worker's Age				
16-35 Years (n=54)	55.6%	38.9%	3.7%	1.9%
36-45 Years (n=35)	42.9%	51.4%	0.0%	5.7%
46-55 Years (n=82)	36.6%	47.6%	13.4%	2.4%
56-65 Years (n=219)	33.8%	53.9%	7.3%	5.0%
66-70 Years (n=146)	37.7%	54.8%	4.8%	2.7%
71+ Years (n=203)	31.5%	56.7%	7.9%	3.9%
Party Identification				
Republican (n=316)	29.1%	54.7%	9.8%	6.3%
Democrat (n=429)	42.0%	50.6%	4.7%	2.8%
Independent / Other (n=66)	40.9%	50.0%	7.6%	1.5%

Q13b. The following questions ask you about efforts to comply with the American with Disabilities Act. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The ADA training clearly explained the requirements relating to the Americans with Disabilities Act.

ADA Training Clearly Explained the Requirements				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=997)	41.3%	52.0%	5.0%	1.7%
Election Worker Type				
Poll Judge (n=433)	38.1%	51.7%	8.1%	2.1%
Poll Worker (n=559)	43.8%	52.1%	2.7%	1.4%
Experience				
First Election (n=71)	39.4%	43.7%	12.7%	4.2%
1-5 Years (n=500)	44.4%	49.2%	4.6%	1.8%
6-10 Years (n=181)	42.0%	54.7%	2.8%	0.6%
More than 10 Years (n=239)	34.3%	58.6%	5.4%	1.7%
Election Period Worked				
Early Voting Only (n=124)	44.4%	51.6%	4.0%	0.0%
Election Day Only (n=403)	39.7%	51.1%	6.0%	3.2%
Early Voting and Election Day (n=470)	41.9%	52.8%	4.5%	0.9%
Election Worker's Age				
16-35 Years (n=55)	61.8%	34.5%	1.8%	1.8%
36-45 Years (n=41)	41.5%	43.9%	9.8%	4.9%
46-55 Years (n=95)	44.2%	46.3%	8.4%	1.1%
56-65 Years (n=271)	38.7%	54.6%	5.5%	1.1%
66-70 Years (n=177)	45.8%	52.5%	1.1%	0.6%
71+ Years (n=240)	33.3%	59.6%	5.4%	1.7%
Party Identification				
Republican (n=372)	34.7%	56.7%	5.6%	3.0%
Democrat (n=502)	45.2%	50.4%	3.6%	0.8%
Independent / Other (n=81)	46.9%	43.2%	7.4%	2.5%

Q13c. The following questions ask you about efforts to comply with the American with Disabilities Act. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The curbside buzzer at my location worked throughout the voting period.

Curbside Buzzer Worked Throughout the Voting Period				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,006)	58.3%	37.5%	2.9%	1.3%
Election Worker Type				
Poll Judge (n=439)	57.6%	37.8%	2.7%	1.8%
Poll Worker (n=564)	58.9%	37.2%	3.0%	0.9%
Experience				
First Election (n=68)	58.8%	38.2%	0.0%	2.9%
1-5 Years (n=515)	61.0%	34.6%	3.3%	1.2%
6-10 Years (n=178)	52.8%	44.9%	1.7%	0.6%
More than 10 Years (n=240)	56.3%	38.3%	3.8%	1.7%
Election Period Worked				
Early Voting Only (n=123)	61.0%	36.6%	1.6%	0.8%
Election Day Only (n=399)	53.6%	41.1%	3.5%	1.8%
Early Voting and Election Day (n=484)	61.6%	34.7%	2.7%	1.0%
Election Worker's Age				
16-35 Years (n=57)	71.9%	26.3%	1.8%	0.0%
36-45 Years (n=42)	73.8%	21.4%	4.8%	0.0%
46-55 Years (n=99)	61.6%	37.4%	1.0%	0.0%
56-65 Years (n=278)	58.3%	35.3%	3.6%	2.9%
66-70 Years (n=177)	58.2%	37.9%	4.0%	0.0%
71+ Years (n=234)	52.1%	44.0%	2.1%	1.7%
Party Identification				
Republican (n=382)	52.4%	43.7%	2.6%	1.3%
Democrat (n=507)	61.3%	34.3%	3.4%	1.0%
Independent / Other (n=77)	66.2%	28.6%	2.6%	2.6%

Q13d. The following questions ask you about efforts to comply with the American with Disabilities Act. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The polling location was adequate for our ADA voting needs.

Polling Location was Adequate for ADA Needs				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,029)	50.5%	41.0%	5.0%	3.5%
Election Worker Type				
Poll Judge (n=447)	47.2%	40.7%	6.9%	5.1%
Poll Worker (n=577)	53.0%	41.2%	3.5%	2.3%
Experience				
First Election (n=76)	51.3%	36.8%	5.3%	6.6%
1-5 Years (n=520)	52.9%	38.8%	5.2%	3.1%
6-10 Years (n=184)	48.9%	45.1%	2.7%	3.3%
More than 10 Years (n=243)	46.1%	44.0%	6.2%	3.7%
Election Period Worked				
Early Voting Only (n=126)	57.9%	38.9%	2.4%	0.8%
Election Day Only (n=418)	45.2%	43.8%	7.2%	3.8%
Early Voting and Election Day (n=485)	53.2%	39.2%	3.7%	3.9%
Election Worker's Age				
16-35 Years (n=57)	57.9%	35.1%	3.5%	3.5%
36-45 Years (n=43)	60.5%	30.2%	4.7%	4.7%
46-55 Years (n=101)	52.5%	34.7%	9.9%	3.0%
56-65 Years (n=279)	51.3%	39.8%	5.4%	3.6%
66-70 Years (n=185)	48.6%	44.9%	4.9%	1.6%
71+ Years (n=243)	46.1%	47.7%	2.5%	3.7%
Party Identification				
Republican (n=391)	45.0%	45.8%	4.9%	4.3%
Democrat (n=512)	54.1%	38.5%	4.7%	2.7%
Independent / Other (n=83)	51.8%	37.3%	6.0%	4.8%

Q13e. The following questions ask you about efforts to comply with the American with Disabilities Act. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: Our location had enough equipment to adequately address the demand for curbside voting.

Enough Equipment at Polling Location to Meet Demand of Curbside Voting				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,027)	47.2%	43.1%	5.9%	3.7%
Election Worker Type				
Poll Judge (n=445)	45.2%	42.7%	7.6%	4.5%
Poll Worker (n=578)	48.6%	43.6%	4.7%	3.1%
Experience				
First Election (n=74)	54.1%	40.5%	4.1%	1.4%
1-5 Years (n=517)	49.9%	42.0%	4.8%	3.3%
6-10 Years (n=185)	42.2%	43.8%	9.7%	4.3%
More than 10 Years (n=246)	42.7%	46.3%	6.1%	4.9%
Election Period Worked				
Early Voting Only (n=124)	57.3%	36.3%	4.0%	2.4%
Election Day Only (n=419)	43.9%	45.3%	7.2%	3.6%
Early Voting and Election Day (n=484)	47.5%	43.0%	5.4%	4.1%
Election Worker's Age				
16-35 Years (n=57)	52.6%	38.6%	3.5%	5.3%
36-45 Years (n=43)	65.1%	27.9%	4.7%	2.3%
46-55 Years (n=101)	44.6%	41.6%	10.9%	3.0%
56-65 Years (n=279)	48.4%	39.1%	6.5%	6.1%
66-70 Years (n=184)	48.4%	45.1%	4.9%	1.6%
71+ Years (n=243)	42.0%	50.6%	4.1%	3.3%
Party Identification				
Republican (n=386)	39.9%	49.5%	6.5%	4.1%
Democrat (n=515)	51.3%	39.4%	6.0%	3.3%
Independent / Other (n=84)	53.6%	36.9%	6.0%	3.6%

Q14a. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The training instructors were knowledgeable and answered questions thoroughly.

Training Instructors were Knowledgeable				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,065)	37.4%	54.1%	6.0%	2.5%
Election Worker Type				
Poll Judge (n=461)	32.8%	55.1%	7.8%	4.3%
Poll Worker (n=600)	40.8%	53.3%	4.7%	1.2%
Experience				
First Election (n=79)	31.6%	57.0%	7.6%	3.8%
1-5 Years (n=537)	42.8%	51.0%	3.7%	2.4%
6-10 Years (n=190)	34.7%	56.3%	6.8%	2.1%
More than 10 Years (n=253)	29.6%	58.1%	9.5%	2.8%
Election Period Worked				
Early Voting Only (n=132)	37.9%	55.3%	4.5%	2.3%
Election Day Only (n=432)	38.7%	49.5%	8.1%	3.7%
Early Voting and Election Day (n=501)	36.1%	57.7%	4.6%	1.6%
Election Worker's Age				
16-35 Years (n=61)	57.4%	34.4%	1.6%	6.6%
36-45 Years (n=43)	51.2%	39.5%	7.0%	2.3%
46-55 Years (n=102)	39.2%	54.9%	4.9%	1.0%
56-65 Years (n=287)	36.9%	53.0%	7.0%	3.1%
66-70 Years (n=189)	36.5%	57.7%	3.7%	2.1%
71+ Years (n=255)	31.0%	61.6%	7.1%	0.4%
Party Identification				
Republican (n=403)	29.3%	58.1%	9.4%	3.2%
Democrat (n=527)	43.1%	52.2%	3.4%	1.3%
Independent / Other (n=88)	45.5%	48.9%	3.4%	2.3%

Q14b. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The training provided is in-depth enough.

Training was In-depth Enough				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,061)	28.9%	48.7%	16.1%	6.2%
Election Worker Type				
Poll Judge (n=456)	22.8%	43.6%	23.7%	9.9%
Poll Worker (n=601)	33.4%	52.7%	10.3%	3.5%
Experience				
First Election (n=81)	28.4%	28.4%	27.2%	16.0%
1-5 Years (n=540)	32.6%	49.3%	13.7%	4.4%
6-10 Years (n=187)	27.8%	52.4%	14.4%	5.3%
More than 10 Years (n=247)	21.9%	51.8%	18.6%	7.7%
Election Period Worked				
Early Voting Only (n=131)	31.3%	56.5%	9.2%	3.1%
Election Day Only (n=434)	28.8%	41.9%	19.8%	9.4%
Early Voting and Election Day (n=496)	28.4%	52.6%	14.7%	4.2%
Election Worker's Age				
16-35 Years (n=62)	50.0%	27.4%	14.5%	8.1%
36-45 Years (n=43)	39.5%	37.2%	14.0%	9.3%
46-55 Years (n=102)	27.5%	47.1%	18.6%	6.9%
56-65 Years (n=283)	30.0%	46.3%	17.3%	6.4%
66-70 Years (n=186)	28.0%	49.5%	18.8%	3.8%
71+ Years (n=255)	21.6%	58.0%	14.9%	5.5%
Party Identification				
Republican (n=402)	22.6%	47.0%	20.1%	10.2%
Democrat (n=523)	33.3%	50.3%	13.4%	3.1%
Independent / Other (n=89)	32.6%	49.4%	15.7%	2.2%

Q14c. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: As a result of training, I was adequately prepared to serve as an election worker for this election.

I Felt Adequately Prepared as a Result of Training				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,063)	33.7%	50.4%	12.1%	3.8%
Election Worker Type				
Poll Judge (n=458)	27.3%	47.4%	19.0%	6.3%
Poll Worker (n=602)	38.4%	52.8%	7.0%	1.8%
Experience				
First Election (n=81)	27.2%	37.0%	24.7%	11.1%
1-5 Years (n=539)	37.1%	51.4%	8.9%	2.6%
6-10 Years (n=186)	34.9%	50.0%	13.4%	1.6%
More than 10 Years (n=251)	27.5%	53.4%	13.5%	5.6%
Election Period Worked				
Early Voting Only (n=131)	38.9%	52.7%	6.1%	2.3%
Election Day Only (n=434)	31.1%	45.2%	17.3%	6.5%
Early Voting and Election Day (n=498)	34.5%	54.4%	9.2%	1.8%
Election Worker's Age				
16-35 Years (n=61)	57.4%	26.2%	14.8%	1.6%
36-45 Years (n=44)	56.8%	27.3%	9.1%	6.8%
46-55 Years (n=101)	30.7%	48.5%	18.8%	2.0%
56-65 Years (n=289)	33.2%	49.5%	14.5%	2.8%
66-70 Years (n=182)	28.6%	57.7%	9.9%	3.8%
71+ Years (n=256)	29.3%	57.4%	9.0%	4.3%
Party Identification				
Republican (n=401)	26.2%	50.6%	17.0%	6.2%
Democrat (n=525)	38.3%	52.0%	8.2%	1.5%
Independent / Other (n=90)	38.9%	45.6%	14.4%	1.1%

Q14d. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: I was able to easily find information I needed in the Elections Reference Manual.

Easy to Find Information in Reference Manual				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,025)	31.5%	49.9%	14.3%	4.3%
Election Worker Type				
Poll Judge (n=460)	26.5%	45.0%	21.7%	6.7%
Poll Worker (n=561)	35.5%	53.8%	8.4%	2.3%
Experience				
First Election (n=78)	25.6%	47.4%	20.5%	6.4%
1-5 Years (n=511)	34.1%	50.1%	12.3%	3.5%
6-10 Years (n=182)	32.4%	52.2%	11.0%	4.4%
More than 10 Years (n=248)	27.4%	48.4%	19.0%	5.2%
Election Period Worked				
Early Voting Only (n=126)	33.3%	53.2%	11.1%	2.4%
Election Day Only (n=421)	29.2%	43.9%	20.4%	6.4%
Early Voting and Election Day (n=478)	33.1%	54.2%	9.8%	2.9%
Election Worker's Age				
16-35 Years (n=60)	51.7%	30.0%	8.3%	10.0%
36-45 Years (n=42)	42.9%	47.6%	9.5%	0.0%
46-55 Years (n=99)	32.3%	46.5%	16.2%	5.1%
56-65 Years (n=271)	30.6%	49.1%	14.4%	5.9%
66-70 Years (n=183)	26.2%	59.6%	11.5%	2.7%
71+ Years (n=247)	26.3%	55.9%	15.8%	2.0%
Party Identification				
Republican (n=386)	23.8%	50.8%	18.7%	6.7%
Democrat (n=509)	36.1%	50.7%	11.6%	1.6%
Independent / Other (n=86)	38.4%	44.2%	12.8%	4.7%

Q14e. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: When being confirmed as an Election Worker through Harris County, I was provided with clear instructions of what was expected of me.

Clear Instructions were Provided				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,058)	40.2%	48.9%	7.7%	3.3%
Election Worker Type				
Poll Judge (n=451)	35.3%	48.3%	11.3%	5.1%
Poll Worker (n=604)	43.7%	49.3%	5.0%	2.0%
Experience				
First Election (n=81)	32.1%	39.5%	21.0%	7.4%
1-5 Years (n=539)	42.9%	47.5%	5.9%	3.7%
6-10 Years (n=187)	41.7%	50.8%	5.3%	2.1%
More than 10 Years (n=245)	35.9%	53.5%	8.6%	2.0%
Election Period Worked				
Early Voting Only (n=130)	40.0%	53.1%	5.4%	1.5%
Election Day Only (n=431)	36.0%	47.3%	10.9%	5.8%
Early Voting and Election Day (n=497)	43.9%	49.1%	5.4%	1.6%
Election Worker's Age				
16-35 Years (n=60)	61.7%	23.3%	8.3%	6.7%
36-45 Years (n=42)	54.8%	26.2%	11.9%	7.1%
46-55 Years (n=104)	37.5%	48.1%	13.5%	1.0%
56-65 Years (n=285)	40.4%	48.1%	8.4%	3.2%
66-70 Years (n=184)	39.7%	53.8%	4.9%	1.6%
71+ Years (n=255)	33.3%	57.3%	6.3%	3.1%
Party Identification				
Republican (n=398)	30.2%	53.8%	9.5%	6.5%
Democrat (n=526)	47.3%	46.2%	5.7%	0.8%
Independent / Other (n=88)	46.6%	39.8%	11.4%	2.3%

Q14f. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: Harris County staff (Recruitment Specialists) helped me fill the positions at my voting location.

Recruitment Specialists Helped Fill the Positions at Voting Location				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=315)	26.3%	41.9%	20.6%	11.1%
Election Worker Type				
Poll Judge (n=304)	26.3%	41.4%	21.4%	10.9%
Poll Worker (n=11)	27.3%	54.5%	0.0%	18.2%
Experience				
First Election (n=20)	10.0%	45.0%	25.0%	20.0%
1-5 Years (n=131)	26.0%	47.3%	16.0%	10.7%
6-10 Years (n=53)	28.3%	41.5%	17.0%	13.2%
More than 10 Years (n=111)	28.8%	35.1%	27.0%	9.0%
Election Period Worked				
Early Voting Only (n=10)	20.0%	70.0%	0.0%	10.0%
Election Day Only (n=167)	22.2%	35.3%	28.1%	14.4%
Early Voting and Election Day (n=138)	31.9%	47.8%	13.0%	7.2%
Election Worker's Age				
16-35 Years (n=11)	45.5%	36.4%	9.1%	9.1%
36-45 Years (n=16)	31.3%	50.0%	18.8%	0.0%
46-55 Years (n=46)	32.6%	47.8%	8.7%	10.9%
56-65 Years (n=96)	27.1%	41.7%	21.9%	9.4%
66-70 Years (n=45)	26.7%	42.2%	20.0%	11.1%
71+ Years (n=62)	21.0%	38.7%	33.9%	6.5%
Party Identification				
Republican (n=132)	18.9%	37.1%	30.3%	13.6%
Democrat (n=152)	34.9%	44.1%	13.2%	7.9%
Independent / Other (n=19)	21.1%	52.6%	21.1%	5.3%

Q14g. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: Harris County staff (Recruitment Specialists) worked with me to make sure that I was signed up for supply handout, and knew the details of Election Night supply drop off.

Recruitment Specialists Helped to Sign up for Supply Handout and Drop Off				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=334)	35.3%	44.9%	13.2%	6.6%
Election Worker Type				
Poll Judge (n=323)	35.3%	45.2%	13.3%	6.2%
Poll Worker (n=11)	36.4%	36.4%	9.1%	18.2%
Experience				
First Election (n=18)	11.1%	50.0%	22.2%	16.7%
1-5 Years (n=134)	36.6%	42.5%	13.4%	7.5%
6-10 Years (n=58)	37.9%	43.1%	15.5%	3.4%
More than 10 Years (n=123)	35.8%	48.0%	10.6%	5.7%
Election Period Worked				
Early Voting Only (n=10)	30.0%	40.0%	20.0%	10.0%
Election Day Only (n=175)	26.9%	49.7%	15.4%	8.0%
Early Voting and Election Day (n=149)	45.6%	39.6%	10.1%	4.7%
Election Worker's Age				
16-35 Years (n=11)	72.7%	18.2%	0.0%	9.1%
36-45 Years (n=16)	37.5%	43.8%	12.5%	6.3%
46-55 Years (n=48)	37.5%	47.9%	6.3%	8.3%
56-65 Years (n=105)	36.2%	41.9%	15.2%	6.7%
66-70 Years (n=50)	36.0%	50.0%	12.0%	2.0%
71+ Years (n=64)	31.3%	46.9%	20.3%	1.6%
Party Identification				
Republican (n=132)	27.3%	46.2%	18.9%	7.6%
Democrat (n=171)	42.7%	43.3%	9.9%	4.1%
Independent / Other (n=19)	42.1%	47.4%	10.5%	0.0%

Q14h. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The laminated one pagers allowed workers to quickly and efficiently follow procedures.

Laminated One-Pagers Were Useful to Follow Procedures				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=403)	33.7%	51.4%	11.2%	3.7%
Election Worker Type				
Poll Judge (n=388)	33.5%	52.1%	11.3%	3.1%
Poll Worker (n=15)	40.0%	33.3%	6.7%	20.0%
Experience				
First Election (n=22)	9.1%	59.1%	22.7%	9.1%
1-5 Years (n=169)	30.8%	53.8%	13.6%	1.8%
6-10 Years (n=71)	39.4%	50.7%	7.0%	2.8%
More than 10 Years (n=140)	37.9%	47.9%	8.6%	5.7%
Election Period Worked				
Early Voting Only (n=12)	41.7%	41.7%	8.3%	8.3%
Election Day Only (n=217)	25.8%	57.1%	13.8%	3.2%
Early Voting and Election Day (n=174)	43.1%	44.8%	8.0%	4.0%
Election Worker's Age				
16-35 Years (n=13)	61.5%	23.1%	15.4%	0.0%
36-45 Years (n=20)	35.0%	50.0%	15.0%	0.0%
46-55 Years (n=61)	34.4%	49.2%	14.8%	1.6%
56-65 Years (n=120)	40.8%	48.3%	8.3%	2.5%
66-70 Years (n=63)	34.9%	54.0%	4.8%	6.3%
71+ Years (n=81)	23.5%	61.7%	12.3%	2.5%
Party Identification				
Republican (n=173)	24.3%	54.9%	15.0%	5.8%
Democrat (n=194)	43.3%	47.9%	8.2%	0.5%
Independent / Other (n=23)	34.8%	52.2%	8.7%	4.3%

Q14i. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: I was able to quickly locate items in my supply box/cabinet

Easy to Locate Items in Supply Cabinet				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=423)	26.5%	53.2%	14.7%	5.7%
Election Worker Type				
Poll Judge (n=409)	26.2%	53.8%	14.4%	5.6%
Poll Worker (n=14)	35.7%	35.7%	21.4%	7.1%
Experience				
First Election (n=25)	4.0%	52.0%	28.0%	16.0%
1-5 Years (n=173)	26.6%	55.5%	12.7%	5.2%
6-10 Years (n=76)	32.9%	48.7%	10.5%	7.9%
More than 10 Years (n=147)	26.5%	53.1%	17.0%	3.4%
Election Period Worked				
Early Voting Only (n=13)	15.4%	61.5%	15.4%	7.7%
Election Day Only (n=231)	21.2%	51.9%	18.6%	8.2%
Early Voting and Election Day (n=179)	34.1%	54.2%	9.5%	2.2%
Election Worker's Age				
16-35 Years (n=13)	61.5%	23.1%	7.7%	7.7%
36-45 Years (n=19)	26.3%	42.1%	31.6%	0.0%
46-55 Years (n=65)	24.6%	58.5%	13.8%	3.1%
56-65 Years (n=127)	33.1%	50.4%	9.4%	7.1%
66-70 Years (n=67)	23.9%	52.2%	17.9%	6.0%
71+ Years (n=85)	16.5%	62.4%	16.5%	4.7%
Party Identification				
Republican (n=178)	19.7%	55.1%	18.0%	7.3%
Democrat (n=208)	32.2%	52.9%	11.1%	3.8%
Independent / Other (n=24)	33.3%	41.7%	20.8%	4.2%

Q14j. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The Harris County Judge's line was helpful

The Judge's Line was Helpful				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=383)	26.1%	48.6%	14.9%	10.4%
Election Worker Type				
Poll Judge (n=370)	26.5%	48.6%	14.9%	10.0%
Poll Worker (n=13)	15.4%	46.2%	15.4%	23.1%
Experience				
First Election (n=23)	4.3%	56.5%	17.4%	21.7%
1-5 Years (n=153)	28.1%	46.4%	17.6%	7.8%
6-10 Years (n=71)	23.9%	50.7%	11.3%	14.1%
More than 10 Years (n=134)	28.4%	48.5%	13.4%	9.7%
Election Period Worked				
Early Voting Only (n=14)	35.7%	50.0%	0.0%	14.3%
Election Day Only (n=206)	19.9%	49.0%	17.5%	13.6%
Early Voting and Election Day (n=163)	33.1%	47.9%	12.9%	6.1%
Election Worker's Age				
16-35 Years (n=11)	63.6%	9.1%	9.1%	18.2%
36-45 Years (n=17)	23.5%	52.9%	5.9%	17.6%
46-55 Years (n=59)	25.4%	45.8%	23.7%	5.1%
56-65 Years (n=118)	30.5%	42.4%	15.3%	11.9%
66-70 Years (n=59)	25.4%	55.9%	10.2%	8.5%
71+ Years (n=74)	18.9%	56.8%	16.2%	8.1%
Party Identification				
Republican (n=151)	16.6%	48.3%	17.2%	17.9%
Democrat (n=196)	34.2%	48.0%	13.3%	4.6%
Independent / Other (n=22)	27.3%	59.1%	9.1%	4.5%

Q14k. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The training instructors were courteous and professional

Training Instructors were Professional				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=424)	42.7%	51.2%	4.2%	1.9%
Election Worker Type				
Poll Judge (n=409)	42.8%	51.3%	3.9%	2.0%
Poll Worker (n=15)	40.0%	46.7%	13.3%	0.0%
Experience				
First Election (n=26)	30.8%	65.4%	0.0%	3.8%
1-5 Years (n=174)	42.5%	50.6%	5.2%	1.7%
6-10 Years (n=76)	43.4%	50.0%	3.9%	2.6%
More than 10 Years (n=147)	44.2%	50.3%	4.1%	1.4%
Election Period Worked				
Early Voting Only (n=13)	46.2%	53.8%	0.0%	0.0%
Election Day Only (n=234)	40.2%	52.1%	4.3%	3.4%
Early Voting and Election Day (n=177)	45.8%	49.7%	4.5%	0.0%
Election Worker's Age				
16-35 Years (n=12)	66.7%	25.0%	8.3%	0.0%
36-45 Years (n=19)	52.6%	36.8%	5.3%	5.3%
46-55 Years (n=65)	49.2%	47.7%	1.5%	1.5%
56-65 Years (n=127)	40.9%	53.5%	4.7%	0.8%
66-70 Years (n=66)	43.9%	51.5%	3.0%	1.5%
71+ Years (n=88)	35.2%	58.0%	4.5%	2.3%
Party Identification				
Republican (n=180)	36.1%	54.4%	6.1%	3.3%
Democrat (n=207)	49.8%	46.9%	2.9%	0.5%
Independent / Other (n=24)	45.8%	50.0%	4.2%	0.0%

Q14I. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: Harris County Judge line technicians were courteous and professional on the phone.

Judge Line Technicians were Professional on the Phone				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=390)	37.4%	51.8%	6.9%	3.8%
Election Worker Type				
Poll Judge (n=376)	38.0%	51.6%	6.6%	3.7%
Poll Worker (n=14)	21.4%	57.1%	14.3%	7.1%
Experience				
First Election (n=23)	30.4%	60.9%	4.3%	4.3%
1-5 Years (n=153)	36.6%	54.9%	5.9%	2.6%
6-10 Years (n=71)	36.6%	52.1%	5.6%	5.6%
More than 10 Years (n=141)	39.0%	47.5%	9.2%	4.3%
Election Period Worked				
Early Voting Only (n=14)	42.9%	50.0%	0.0%	7.1%
Election Day Only (n=209)	33.0%	54.1%	7.7%	5.3%
Early Voting and Election Day (n=167)	42.5%	49.1%	6.6%	1.8%
Election Worker's Age				
16-35 Years (n=10)	80.0%	10.0%	10.0%	0.0%
36-45 Years (n=17)	41.2%	47.1%	5.9%	5.9%
46-55 Years (n=61)	37.7%	50.8%	8.2%	3.3%
56-65 Years (n=118)	38.1%	54.2%	3.4%	4.2%
66-70 Years (n=60)	31.7%	56.7%	8.3%	3.3%
71+ Years (n=76)	31.6%	59.2%	7.9%	1.3%
Party Identification				
Republican (n=158)	26.6%	57.6%	10.1%	5.7%
Democrat (n=196)	47.4%	46.9%	4.1%	1.5%
Independent / Other (n=22)	40.9%	45.5%	9.1%	4.5%

Q14m. The following questions ask you about the election worker training you received. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The Harris County Judge Line technicians were courteous and professional in person.

Judge Line Technicians were Professional in Person				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=384)	41.1%	49.7%	6.5%	2.6%
Election Worker Type				
Poll Judge (n=371)	41.5%	49.9%	5.9%	2.7%
Poll Worker (n=13)	30.8%	46.2%	23.1%	0.0%
Experience				
First Election (n=23)	26.1%	69.6%	0.0%	4.3%
1-5 Years (n=154)	37.7%	53.9%	6.5%	1.9%
6-10 Years (n=70)	40.0%	47.1%	8.6%	4.3%
More than 10 Years (n=135)	47.4%	43.7%	6.7%	2.2%
Election Period Worked				
Early Voting Only (n=14)	50.0%	42.9%	7.1%	0.0%
Election Day Only (n=207)	35.7%	53.6%	7.2%	3.4%
Early Voting and Election Day (n=163)	47.2%	45.4%	5.5%	1.8%
Election Worker's Age				
16-35 Years (n=12)	58.3%	25.0%	16.7%	0.0%
36-45 Years (n=19)	36.8%	52.6%	5.3%	5.3%
46-55 Years (n=58)	41.4%	51.7%	6.9%	0.0%
56-65 Years (n=119)	42.9%	52.9%	1.7%	2.5%
66-70 Years (n=57)	43.9%	43.9%	7.0%	5.3%
71+ Years (n=73)	38.4%	52.1%	8.2%	1.4%
Party Identification				
Republican (n=159)	30.2%	56.6%	9.4%	3.8%
Democrat (n=191)	50.8%	45.0%	3.1%	1.0%
Independent / Other (n=21)	52.4%	38.1%	4.8%	4.8%

Q15a. The following questions ask you about other persons working with you at the polls this past March. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The people working at the location (non-election workers) were friendly and helpful.

Non-Election Workers Working at the Location were Helpful				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,010)	53.3%	43.9%	2.1%	0.8%
Election Worker Type				
Poll Judge (n=432)	53.2%	42.4%	3.0%	1.4%
Poll Worker (n=573)	53.4%	44.9%	1.4%	0.3%
Experience				
First Election (n=69)	58.0%	39.1%	0.0%	2.9%
1-5 Years (n=519)	56.5%	40.5%	2.1%	1.0%
6-10 Years (n=178)	47.2%	50.0%	2.2%	0.6%
More than 10 Years (n=237)	49.4%	48.1%	2.5%	0.0%
Election Period Worked				
Early Voting Only (n=129)	49.6%	49.6%	0.0%	0.8%
Election Day Only (n=392)	54.3%	41.8%	2.8%	1.0%
Early Voting and Election Day (n=489)	53.4%	44.0%	2.0%	0.6%
Election Worker's Age				
16-35 Years (n=63)	73.0%	23.8%	1.6%	1.6%
36-45 Years (n=42)	54.8%	42.9%	2.4%	0.0%
46-55 Years (n=98)	61.2%	36.7%	1.0%	1.0%
56-65 Years (n=278)	52.9%	42.1%	4.0%	1.1%
66-70 Years (n=170)	50.6%	48.8%	0.6%	0.0%
71+ Years (n=238)	46.6%	51.7%	1.3%	0.4%
Party Identification				
Republican (n=373)	48.0%	47.7%	2.9%	1.3%
Democrat (n=507)	58.4%	40.2%	1.2%	0.2%
Independent / Other (n=86)	48.8%	47.7%	2.3%	1.2%

Q15b. The following questions ask you about other persons working with you at the polls this past March. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: Election workers at my location were punctual.

Election Workers at my Location were Punctual				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,048)	49.9%	44.8%	4.9%	0.4%
Election Worker Type				
Poll Judge (n=455)	52.1%	43.3%	4.0%	0.7%
Poll Worker (n=588)	48.3%	45.9%	5.6%	0.2%
Experience				
First Election (n=71)	56.3%	38.0%	2.8%	2.8%
1-5 Years (n=533)	52.0%	42.2%	5.6%	0.2%
6-10 Years (n=188)	44.1%	52.1%	3.2%	0.5%
More than 10 Years (n=249)	47.4%	47.4%	5.2%	0.0%
Election Period Worked				
Early Voting Only (n=130)	44.6%	52.3%	2.3%	0.8%
Election Day Only (n=424)	55.2%	41.0%	3.1%	0.7%
Early Voting and Election Day (n=494)	46.8%	46.2%	7.1%	0.0%
Election Worker's Age				
16-35 Years (n=62)	66.1%	29.0%	3.2%	1.6%
36-45 Years (n=42)	50.0%	40.5%	9.5%	0.0%
46-55 Years (n=100)	58.0%	38.0%	4.0%	0.0%
56-65 Years (n=286)	51.7%	40.2%	7.7%	0.3%
66-70 Years (n=179)	45.3%	50.3%	4.5%	0.0%
71+ Years (n=252)	44.0%	54.0%	2.0%	0.0%
Party Identification				
Republican (n=392)	45.7%	47.2%	7.1%	0.0%
Democrat (n=522)	53.1%	43.3%	3.4%	0.2%
Independent / Other (n=88)	47.7%	45.5%	4.5%	2.3%

Q15c. The following questions ask you about other persons working with you at the polls this past March. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: Election workers at my location were knowledgeable.

Election Workers at My Location Were Knowledgeable				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,040)	45.0%	48.8%	5.3%	1.0%
Election Worker Type				
Poll Judge (n=449)	41.9%	51.2%	5.6%	1.3%
Poll Worker (n=586)	47.4%	46.8%	5.1%	0.7%
Experience				
First Election (n=71)	50.7%	32.4%	11.3%	5.6%
1-5 Years (n=528)	47.0%	48.1%	4.5%	0.4%
6-10 Years (n=189)	40.2%	55.0%	3.7%	1.1%
More than 10 Years (n=246)	43.1%	50.0%	6.1%	0.8%
Election Period Worked				
Early Voting Only (n=128)	39.8%	54.7%	4.7%	0.8%
Election Day Only (n=423)	48.5%	44.0%	5.9%	1.7%
Early Voting and Election Day (n=489)	43.4%	51.3%	4.9%	0.4%
Election Worker's Age				
16-35 Years (n=60)	63.3%	30.0%	3.3%	3.3%
36-45 Years (n=42)	40.5%	50.0%	9.5%	0.0%
46-55 Years (n=99)	47.5%	47.5%	4.0%	1.0%
56-65 Years (n=286)	47.2%	46.5%	5.9%	0.3%
66-70 Years (n=178)	43.3%	51.1%	4.5%	1.1%
71+ Years (n=249)	40.2%	54.2%	5.2%	0.4%
Party Identification				
Republican (n=392)	41.3%	49.7%	7.7%	1.3%
Democrat (n=515)	48.3%	48.5%	2.7%	0.4%
Independent / Other (n=87)	46.0%	46.0%	5.7%	2.3%

Q15d. The following questions ask you about other persons working with you at the polls this past March. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The Electronic Support Specialist (high school tech) was knowledgeable about technical aspects of voting equipment.

Electronic Support Specialist was Knowledgeable About Voting Equipment				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=841)	39.4%	48.0%	8.1%	4.5%
Election Worker Type				
Poll Judge (n=350)	33.4%	46.9%	12.3%	7.4%
Poll Worker (n=487)	43.5%	48.9%	5.1%	2.5%
Experience				
First Election (n=55)	40.0%	43.6%	9.1%	7.3%
1-5 Years (n=433)	42.3%	45.5%	7.4%	4.8%
6-10 Years (n=155)	38.1%	53.5%	5.8%	2.6%
More than 10 Years (n=192)	33.9%	51.0%	10.9%	4.2%
Election Period Worked				
Early Voting Only (n=109)	36.7%	55.0%	6.4%	1.8%
Election Day Only (n=327)	41.0%	45.6%	8.3%	5.2%
Early Voting and Election Day (n=405)	38.8%	48.1%	8.4%	4.7%
Election Worker's Age				
16-35 Years (n=53)	64.2%	26.4%	3.8%	5.7%
36-45 Years (n=36)	50.0%	33.3%	5.6%	11.1%
46-55 Years (n=81)	37.0%	45.7%	13.6%	3.7%
56-65 Years (n=222)	38.7%	46.4%	9.5%	5.4%
66-70 Years (n=146)	38.4%	50.7%	9.6%	1.4%
71+ Years (n=202)	32.7%	55.9%	8.4%	3.0%
Party Identification				
Republican (n=265)	29.4%	49.8%	14.3%	6.4%
Democrat (n=474)	43.9%	47.7%	5.5%	3.0%
Independent / Other (n=69)	50.7%	42.0%	4.3%	2.9%

Q15e. The following questions ask you about other persons working with you at the polls this past March. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: The Electronic Support Specialist proactively updated wait times in the ePollBook/phone app.

Electronic Support Specialist Proactively Updated Wait Times				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=787)	40.7%	50.2%	4.6%	4.6%
Election Worker Type				
Poll Judge (n=336)	37.2%	49.7%	7.1%	6.0%
Poll Worker (n=447)	43.2%	50.6%	2.7%	3.6%
Experience				
First Election (n=45)	44.4%	46.7%	4.4%	4.4%
1-5 Years (n=411)	44.8%	45.0%	5.1%	5.1%
6-10 Years (n=146)	35.6%	58.2%	3.4%	2.7%
More than 10 Years (n=180)	33.9%	57.8%	3.9%	4.4%
Election Period Worked				
Early Voting Only (n=107)	36.4%	56.1%	3.7%	3.7%
Election Day Only (n=296)	41.9%	47.0%	6.1%	5.1%
Early Voting and Election Day (n=384)	40.9%	51.0%	3.6%	4.4%
Election Worker's Age				
16-35 Years (n=55)	63.6%	27.3%	3.6%	5.5%
36-45 Years (n=35)	54.3%	31.4%	8.6%	5.7%
46-55 Years (n=79)	44.3%	46.8%	2.5%	6.3%
56-65 Years (n=203)	38.9%	48.3%	7.4%	5.4%
66-70 Years (n=134)	36.6%	56.7%	3.0%	3.7%
71+ Years (n=187)	32.6%	62.0%	3.7%	1.6%
Party Identification				
Republican (n=244)	29.5%	54.9%	10.2%	5.3%
Democrat (n=446)	45.1%	50.0%	1.8%	3.1%
Independent / Other (n=66)	54.5%	37.9%	1.5%	6.1%

Q15f. The following questions ask you about other persons working with you at the polls this past March. Please indicate whether you Strongly Agree, Agree, Disagree or Strongly Disagree with this statement: Interactions between election workers at my location were professional, courteous, and respectful.

Interactions Between Election Workers were Professional				
	Strongly Agree	Agree	Disagree	Strongly Disagree
Respondents (n=1,053)	53.7%	39.9%	4.2%	2.3%
Election Worker Type				
Poll Judge (n=456)	57.5%	36.0%	3.3%	3.3%
Poll Worker (n=593)	50.8%	42.8%	4.9%	1.5%
Experience				
First Election (n=72)	56.9%	34.7%	2.8%	5.6%
1-5 Years (n=538)	55.8%	38.3%	4.5%	1.5%
6-10 Years (n=187)	48.7%	47.6%	1.1%	2.7%
More than 10 Years (n=250)	52.4%	39.2%	6.0%	2.4%
Election Period Worked				
Early Voting Only (n=130)	40.0%	50.8%	6.9%	2.3%
Election Day Only (n=428)	60.3%	35.0%	2.3%	2.3%
Early Voting and Election Day (n=495)	51.5%	41.2%	5.1%	2.2%
Election Worker's Age				
16-35 Years (n=62)	66.1%	27.4%	4.8%	1.6%
36-45 Years (n=43)	55.8%	37.2%	7.0%	0.0%
46-55 Years (n=102)	52.9%	35.3%	5.9%	5.9%
56-65 Years (n=289)	57.1%	37.7%	3.8%	1.4%
66-70 Years (n=179)	53.6%	41.3%	3.4%	1.7%
71+ Years (n=253)	48.6%	47.4%	2.8%	1.2%
Party Identification				
Republican (n=396)	49.0%	43.2%	5.6%	2.3%
Democrat (n=525)	57.7%	37.1%	3.2%	1.9%
Independent / Other (n=86)	55.8%	39.5%	3.5%	1.2%

Q17. Did you have any difficulty with the setup and operation of the voting equipment at your polling location?

Difficulties with Voting Equipment Setup and Operation		
	Yes	No
Respondents (n=1,058)	36.5%	63.5%
Election Worker Type		
Poll Judge (n=461)	47.3%	52.7%
Poll Worker (n=593)	28.3%	71.7%
Experience		
First Election (n=79)	41.8%	58.2%
1–5 Years (n=537)	30.9%	69.1%
6–10 Years (n=186)	36.6%	63.4%
More than 10 Years (n=250)	46.8%	53.2%
Election Period Worked		
Early Voting Only (n=132)	24.2%	75.8%
Election Day Only (n=430)	46.3%	53.7%
Early Voting and Election Day (n=496)	31.3%	68.8%
Election Worker's Age		
16–35 Years (n=63)	31.7%	68.3%
36–45 Years (n=44)	40.9%	59.1%
46–55 Years (n=104)	42.3%	57.7%
56–65 Years (n=289)	38.1%	61.9%
66–70 Years (n=184)	37.5%	62.5%
71+ Years (n=248)	32.7%	67.3%
Party Identification		
Republican (n=395)	45.8%	54.2%
Democrat (n=528)	29.0%	71.0%
Independent / Other (n=88)	38.6%	61.4%

Q18. Which of the following did you have difficulty with? Choose all that apply.

Experienced Difficulty with Equipment				
	Audio equipment for hearing impaired	ePollBook	Scan	Duo voting tablet
Respondents (n=1,103)	7.2%	9.8%	19.3%	31.4%
Election Worker Type				
Poll Judge (n=470)	6.8%	12.6%	26.0%	40.9%
Poll Worker (n=626)	7.5%	7.8%	14.5%	24.6%
Experience				
First Election (n=86)	8.1%	12.8%	18.6%	40.7%
1-5 Years (n=554)	6.0%	9.4%	18.1%	26.2%
6-10 Years (n=196)	10.7%	11.7%	16.3%	31.1%
More than 10 Years (n=257)	6.6%	8.6%	24.5%	40.1%
Election Period Worked				
Early Voting Only (n=135)	9.6%	6.7%	13.3%	25.2%
Election Day Only (n=451)	5.8%	12.9%	25.7%	35.5%
Early Voting and Election Day (n=514)	7.8%	8.0%	15.4%	29.6%
Election Worker's Age				
16-35 Years (n=64)	10.9%	10.9%	25.0%	29.7%
36-45 Years (n=44)	6.8%	9.1%	18.2%	36.4%
46-55 Years (n=106)	3.8%	7.5%	19.8%	40.6%
56-65 Years (n=298)	7.0%	11.4%	21.5%	29.2%
66-70 Years (n=191)	6.3%	9.4%	19.4%	33.5%
71+ Years (n=262)	7.3%	9.2%	14.1%	28.6%
Party Identification				
Republican (n=415)	7.2%	12.0%	20.7%	37.1%
Democrat (n=542)	7.2%	8.3%	17.3%	27.5%
Independent / Other (n=95)	9.5%	9.5%	21.1%	28.4%

Q19. How likely are you to work at the polls next year?

Likelihood to Work at the Polls in the Future					
	Very Likely	Somewhat Likely	Somewhat Unlikely	Very Unlikely	Don't Know
Respondents (n=1,103)	85.4%	9.9%	1.3%	2.0%	1.5%
Election Worker Type					
Poll Judge (n=470)	82.1%	11.5%	2.1%	3.0%	1.3%
Poll Worker (n=626)	87.7%	8.8%	0.6%	1.3%	1.6%
Experience					
First Election (n=86)	72.1%	22.1%	1.2%	3.5%	1.2%
1-5 Years (n=554)	87.0%	8.8%	1.6%	1.3%	1.3%
6-10 Years (n=196)	86.2%	8.7%	1.0%	2.6%	1.5%
More than 10 Years (n=257)	85.6%	9.3%	0.8%	2.7%	1.6%
Election Period Worked					
Early Voting Only (n=135)	88.9%	7.4%	0.0%	2.2%	1.5%
Election Day Only (n=451)	77.4%	14.6%	2.4%	4.0%	1.6%
Early Voting and Election Day (n=514)	91.4%	6.4%	0.6%	0.2%	1.4%
Election Worker's Age					
16-35 Years (n=64)	84.4%	7.8%	3.1%	3.1%	1.6%
36-45 Years (n=44)	79.5%	13.6%	2.3%	4.5%	0.0%
46-55 Years (n=106)	81.1%	13.2%	0.9%	2.8%	1.9%
56-65 Years (n=298)	87.6%	9.1%	1.0%	1.3%	1.0%
66-70 Years (n=191)	85.3%	7.9%	1.6%	2.1%	3.1%
71+ Years (n=262)	86.3%	10.7%	0.8%	1.1%	1.1%
Party Identification					
Republican (n=415)	83.9%	9.6%	1.4%	3.1%	1.9%
Democrat (n=542)	88.4%	9.2%	0.9%	0.4%	1.1%
Independent / Other (n=95)	75.8%	15.8%	1.1%	5.3%	2.1%

Q21. Age.

Age						
	16 – 35 Years Old	36 – 45 Years Old	46 – 55 Years Old	56 – 65 Years Old	66 – 70 Years Old	71+ Years Old
Respondents (n=965)	6.6%	4.6%	11.0%	30.9%	19.8%	27.2%
Election Worker Type						
Poll Judge (n=417)	3.8%	5.5%	16.1%	33.6%	17.7%	23.3%
Poll Worker (n=543)	8.8%	3.9%	7.2%	28.7%	21.2%	30.2%
Experience						
First Election (n=78)	12.8%	6.4%	15.4%	24.4%	20.5%	20.5%
1-5 Years (n=482)	9.3%	5.6%	13.9%	33.8%	18.7%	18.7%
6-10 Years (n=167)	4.2%	3.0%	6.0%	25.7%	21.0%	40.1%
More than 10 Years (n=232)	0.9%	3.0%	6.5%	31.0%	21.1%	37.5%
Election Period Worked						
Early Voting Only (n=113)	8.8%	4.4%	8.0%	23.0%	20.4%	35.4%
Election Day Only (n=395)	7.6%	5.1%	12.4%	30.6%	21.3%	23.0%
Early Voting and Election Day (n=457)	5.3%	4.2%	10.5%	33.0%	18.4%	28.7%
Party Identification						
Republican (n=372)	4.8%	3.5%	8.6%	32.5%	17.7%	32.8%
Democrat (n=492)	6.1%	4.3%	12.6%	29.3%	22.8%	25.0%
Independent / Other (n=75)	20.0%	9.3%	13.3%	29.3%	12.0%	16.0%

Q22. Gender.

Gender				
	Female	Male	Prefer not to say	Transgender or Non-Binary
Respondents (n=1,090)	69.8%	28.1%	1.9%	0.2%
Election Worker Type				
Poll Judge (n=465)	61.3%	35.7%	2.8%	0.2%
Poll Worker (n=619)	76.3%	22.5%	1.1%	0.2%
Experience				
First Election (n=86)	70.9%	26.7%	2.3%	0.0%
1-5 Years (n=548)	70.6%	27.4%	1.6%	0.4%
6-10 Years (n=193)	72.5%	25.4%	2.1%	0.0%
More than 10 Years (n=255)	65.5%	32.5%	2.0%	0.0%
Election Period Worked				
Early Voting Only (n=134)	65.7%	31.3%	3.0%	0.0%
Election Day Only (n=444)	67.6%	29.3%	2.9%	0.2%
Early Voting and Election Day (n=511)	73.0%	26.0%	0.8%	0.2%
Election Worker's Age				
16-35 Years (n=64)	60.9%	37.5%	1.6%	0.0%
36-45 Years (n=44)	65.9%	31.8%	2.3%	0.0%
46-55 Years (n=106)	69.8%	26.4%	2.8%	0.9%
56-65 Years (n=297)	70.4%	28.3%	1.0%	0.3%
66-70 Years (n=189)	69.3%	29.1%	1.6%	0.0%
71+ Years (n=261)	72.0%	27.2%	0.8%	0.0%
Party Identification				
Republican (n=411)	62.0%	35.5%	2.4%	0.0%
Democrat (n=542)	76.9%	22.7%	0.0%	0.4%
Independent / Other (n=95)	62.1%	31.6%	6.3%	0.0%

Q23. Are you...?

Race / Ethnicity						
	African-American	American Indian or Native American	Asian-Pacific Islander	Hispanic	Other	White
Respondents (n=1,103)	32.8%	0.5%	6.2%	13.5%	9.9%	37.2%
Election Worker Type						
Poll Judge (n=470)	31.5%	0.2%	3.8%	10.6%	10.2%	43.6%
Poll Worker (n=626)	34.0%	0.6%	7.8%	15.5%	9.4%	32.6%
Experience						
First Election (n=86)	32.6%	0.0%	9.3%	10.5%	10.5%	37.2%
1-5 Years (n=554)	31.9%	0.9%	7.9%	14.1%	8.8%	36.3%
6-10 Years (n=196)	37.2%	0.0%	4.6%	14.8%	8.2%	35.2%
More than 10 Years (n=257)	31.5%	0.0%	2.3%	12.8%	11.7%	41.6%
Election Period Worked						
Early Voting Only (n=135)	32.6%	0.0%	9.6%	16.3%	8.1%	33.3%
Election Day Only (n=451)	23.9%	0.2%	5.5%	13.3%	10.4%	46.6%
Early Voting and Election Day (n=514)	40.9%	0.8%	5.6%	13.0%	9.5%	30.2%
Election Worker's Age						
16-35 Years (n=64)	28.1%	0.0%	12.5%	31.3%	9.4%	18.8%
36-45 Years (n=44)	25.0%	0.0%	4.5%	27.3%	15.9%	27.3%
46-55 Years (n=106)	34.0%	0.9%	7.5%	19.8%	9.4%	28.3%
56-65 Years (n=298)	33.9%	0.3%	5.0%	11.4%	7.7%	41.6%
66-70 Years (n=191)	40.3%	0.0%	2.1%	9.9%	7.9%	39.8%
71+ Years (n=262)	28.6%	0.8%	5.7%	11.5%	7.3%	46.2%
Party Identification						
Republican (n=415)	2.2%	0.5%	10.1%	11.8%	9.4%	66.0%
Democrat (n=542)	60.3%	0.0%	2.4%	14.4%	5.4%	17.5%
Independent / Other (n=95)	17.9%	2.1%	13.7%	13.7%	17.9%	34.7%

Q24. With which political party do you identify?

Political Party Identification			
	Republican	Democratic	Independent
Respondents (n=1,052)	39.4%	51.5%	9.0%
Election Worker Type			
Poll Judge (n=455)	42.4%	50.8%	6.8%
Poll Worker (n=593)	37.3%	52.1%	10.6%
Experience			
First Election (n=81)	40.7%	44.4%	14.8%
1-5 Years (n=524)	39.9%	48.3%	11.8%
6-10 Years (n=191)	35.1%	59.7%	5.2%
More than 10 Years (n=249)	42.2%	53.8%	4.0%
Election Period Worked			
Early Voting Only (n=124)	35.5%	54.0%	10.5%
Election Day Only (n=429)	42.9%	47.3%	9.8%
Early Voting and Election Day (n=498)	37.6%	54.6%	7.8%
Election Worker's Age			
16-35 Years (n=63)	28.6%	47.6%	23.8%
36-45 Years (n=41)	31.7%	51.2%	17.1%
46-55 Years (n=104)	30.8%	59.6%	9.6%
56-65 Years (n=287)	42.2%	50.2%	7.7%
66-70 Years (n=187)	35.3%	59.9%	4.8%
71+ Years (n=257)	47.5%	47.9%	4.7%

Harris County Elections Performance Measures

Evaluation Findings

Fors Marsh conducted an evaluation of the 2022 March Primary election in Harris County, TX. Among the key issues identified as part of this evaluation were challenges within the newly created Elections Administrator's Office (EAO) in:

- establishing clear objectives;
- defining performance measures and benchmarks;
- planning and prioritizing processes; and
- allocating resources to align with objectives.

Discussions with EAO staff, the Office of Management and Budget (OMB), party representatives, and other stakeholders revealed a disconnect between perceptions of those outside of the EAO, who perceive a substantial increase in the funding for elections, and those within the EAO who cite a lack of resources as key barrier to success. Despite generally collecting large volumes of data, at the time of the evaluation, the EAO had not been able to successfully utilize that information to set performance benchmarks, communicate resource needs, or demonstrate progress toward objectives.

Logic Model and Performance Measures Development

At the request of the County Administrator's office, Fors Marsh extended its original engagement to work with the EAO to assist in the development of a strategic plan that would establish elections performance measures for Harris County. As part of this effort, Fors Marsh planned to conduct three (3) facilitated sessions with key personnel from the Elections Administrator's Office to create a logic model for the EAO and its sub-departments.

After establishing a logic model that depicts a theory of change and identified performance measures for tracking outputs of EAO activities, Fors Marsh then intended to conduct a data asset inventory to determine the availability and sufficiency of data necessary to construct performance measures. However, due to time constraints at EAO, which was focused on preparing for and administering the November General Election as well as December runoff elections, the overall scope of the strategic election performance measures planning project was revised.

Ultimately, Fors Marsh utilized source material collected as part of the prior evaluation to construct a draft logic model, then hosted one review session with staff from Harris County OMB and one session with Harris County Elections Administrator Cliff Tatum. Information collected during these sessions was incorporated into a revised logic model (attached). This logic model is comprised of four key components:

- **Inputs** that represent the financial, human organizational, and community resources needed for the program to operate as designed.
- **Activities** are operational components of the program that capture how the program is implemented day-to-day.
- **Outputs** are the products of the activities that a program engages in.
- **Outcomes** are the ultimate end products of what a program seeks to achieve.

Additionally, Fors Marsh developed a performance measures template for EAO which includes proposed outcomes, potential performance measures associated with these outcomes, and potential data sources. While, due to the aforementioned time constraints, Fors Marsh was unable to workshop the logic model with other EAO staff members or complete a comprehensive data asset inventory, it is our hope that the revised model and performance measures template will support EAO efforts to initiate discussion about and further develop a

performance measurement framework, as well as enable EAO to effectively and efficiently identify and allocate the resources needed to successfully administer elections in Harris County.

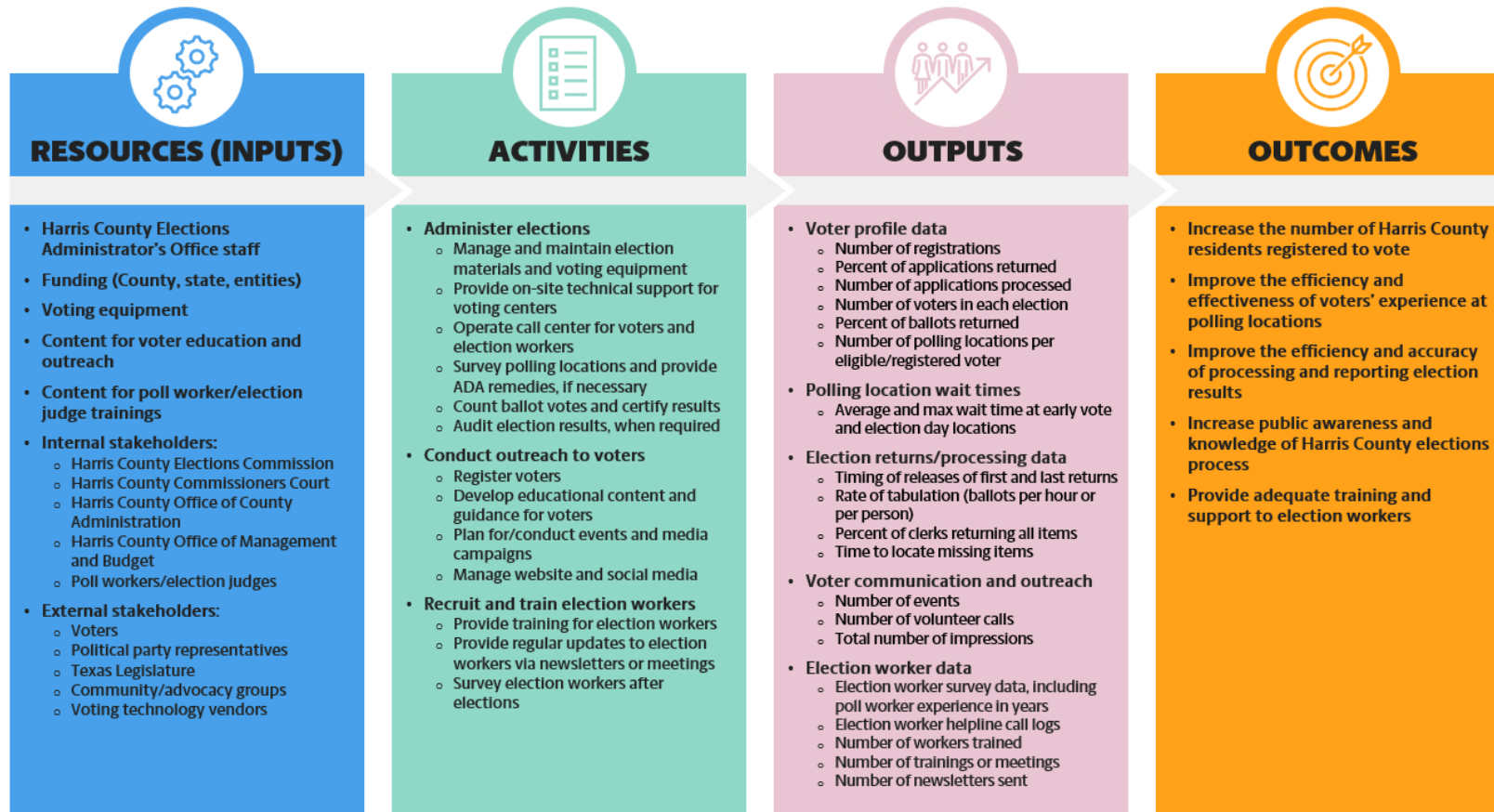
It should be noted that the EAO has made substantial progress toward establishing clearer performance measures and utilizing those measures to assess performance. For example, the Office released a comprehensive Post Election Report following the November 8, 2022 General Election that detailed activities and assessed performance in key areas such as pre-election planning and outreach, Early Voting and Election Day operations, election night tabulation and post-election procedures.

Next Steps

The logic model created by Fors Marsh can support continued efforts for performance management by providing a graphic representation of the theory of change driving EAO operations and generate discussions about the Office's objectives and desired outcomes. The Office can continue to refine both the logic model, itself, as well as the performance measurement framework by conducting a series of strategy meetings or workshops designed to]

- Refine and prioritize desired objectives and outcomes;
- Identify performance measures to meet outcomes;
- Inventory the data assets available to measure outcomes;
- Identify gaps in available data assets;
- Establish clear lines of responsibility among EAO staff for each outcome or category of outcomes; and
- Design processes to monitor the progress toward meeting outcomes.

These strategy meetings or workshops may be conducted internally and/or in collaboration with subject matter experts (such as Fors Marsh) or OMB. In the interview with Fors Marsh, OMB identified performance measure development as a county priority, given the varying levels of development across county agencies. OMB indicated that their office is exploring an approach to providing support to county offices working through this process, which could serve a vital resource for EAO as the Office continues to refine its logic model and performance measure framework.



	Outcome	Potential Performance Measures	Potential Data Sources	Data Source Detail (e.g., methodology)	Measure Level (E.g., service, program, or department)
1	Increase the number of Harris County residents registered to vote	1a Increase the number of applications processed 1b Increase the number of registrations 1c	Voter profile data		
2	Improve the efficiency and effectiveness of voters' experience at polling locations	2a Decrease voter wait times at polling locations 2b Meet adequate voter-to-polling location ratio 2c Operate all polling locations during expected hours 2d	Polling location wait times Voter profile data Election worker data		
3	Improve the efficiency of processing and reporting election results	3a Release first returns within [X] hours of polls closing 3b Release last returns with [X] hours of polls closing 3c Receive voting equipment/items from all clerks within [X] hours of polls closing 3d	Election returns/processing data		
4	Increase public awareness and knowledge of Harris County elections process	4a Increase the number of voter outreach events OR conduct [X] number of events for elections (could vary by type of election) 4b Develop and distribute educational content on [TOPICS] 4c Increase the number of paid and organic impressions [overall OR by type] 4d	Voter communication and outreach data		
5	Provide adequate training and support to election workers	5a Meet adequate voter-to-election worker ratio 5b Increase [or maintain] the number of election workers trained OR increase [or maintain] the number of election worker trainings 5c Decrease [or maintain] the amount of time (in minutes/hours) it takes to resolve issues on helpline 5d	Election worker data Polling location wait times		

Harris County Elections Administrator's Office

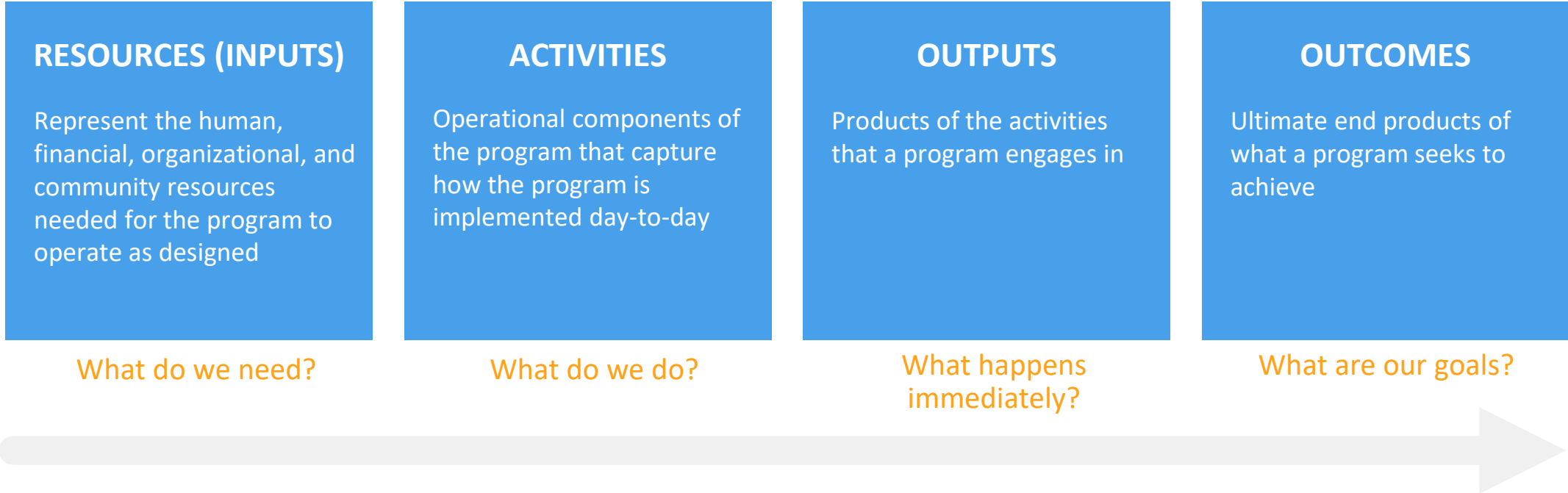
Updated Logic Model

January 2023

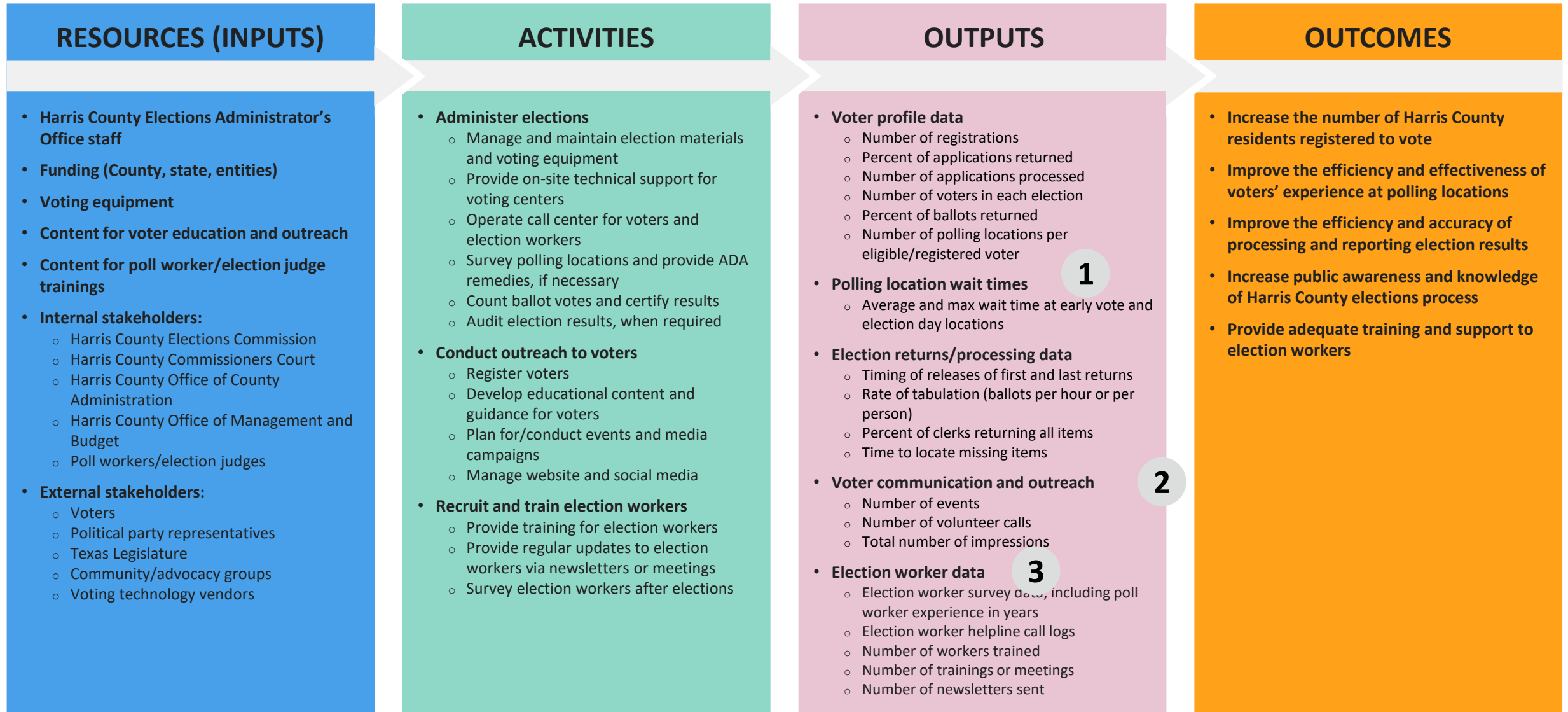
ForsMarsh

Overview of Logic Model Components

A logic model **visually** demonstrates how a program is designed to work. Why, logically, you would expect to get the result(s) you are aiming for. It identifies the intended **relationships** between the program's **resources, activities, outputs,** and desired **outcomes.**







1

Interview Insight: How can this information be collected reliably and accurately?

2

Interview Insight: Is there information collected about outreach efforts that would help accurately capture all the activities conducted by EAO and their impacts?

3

Interview Insight: Are there other election worker/training data that are collected and could be included here (e.g., number of election worker vacancies at polls)?