INVESTIGATION OF THE VOTE MISCOUNT IN THE MONMOUTH COUNTY NOVEMBER 2022 ELECTION

INVESTIGATIVE FINDINGS

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I. INTRODUCTION

In January 2023, the Division on Civil Rights (“DCR”) in the Office of the Attorney General, New Jersey Department of Law and Public Safety, retained Peter Harvey, Esq., former New Jersey Attorney General, and his colleagues at Patterson Belknap Webb & Tyler LLP\(^1\) for two purposes. First, DCR requested that Mr. Harvey and his colleagues conduct an investigation on behalf of DCR into the recording, tabulation, reporting, and certification of votes cast in the November 2022 General Election in Monmouth County, New Jersey. One objective of the investigation was to assist DCR in ascertaining whether any person or entity engaged in any practice declared to be unlawful under the New Jersey Civil Rights Act, *N.J.S.A.* § 10:6-1 *et seq.* Second, DCR requested that Mr. Harvey propose recommendations for potential election reforms in New Jersey based upon the findings and conclusions of the investigation.

This report addresses the first request by summarizing the events that resulted in the vote miscount in the November 2022 General Election, and by offering considerations to DCR regarding the New Jersey Civil Rights Act. In a separate report, we have addressed the second request by making recommendations for potential election reforms.

All relevant parties—specifically, Election Systems & Software, LLC (“ES&S”), the Monmouth County election offices, and other witnesses—cooperated with our investigation. We interviewed twenty-three (23) witnesses who were located in Trenton, Freehold, Camden, Nashville, and Omaha, among other locations.

II. EXECUTIVE SUMMARY

As technology has become an integral part of our elections, New Jersey’s counties and their respective voting equipment vendors have implemented several safeguards to ensure the accuracy of election results. In the November 2022 General Election in Monmouth County, however, certain safeguards designed to prevent double counting of votes cast were not in place. Hence, in four municipalities, some votes were counted twice. In one local race, the wrong candidate was declared the winner. That error was later corrected.

Several factors contributed to the vote miscount. *First*, Monmouth County’s voting equipment vendor, ES&S, failed to implement a software patch designed to prevent the tabulation of ballots more than once. In July 2022,\(^1\) Mr. Harvey was assisted by Emma Ellman-Golan, Esq., and Basil Williams, Esq.
Monmouth County sought assistance from ES&S to resolve what were later determined to be network-connectivity issues. ES&S dispatched a Customer Relations Manager to “uninstall” and “reinstall” election software on Monmouth County’s election server. The Customer Relations Manager had no software or hardware technical expertise; that is, he had not “uninstalled” or “reinstalled” software in several years of working at ES&S. Also, ES&S designated a Principal Technical and Account Support Engineer, who did not work in the company’s Technical Services Department, to provide instructions to the Customer Relations Manager over a mobile phone when the Customer Relations Manager was on-site in Monmouth County. After the Customer Relations Manager uninstalled the election software, the Principal Technical and Account Support Engineer did not instruct the Customer Relations Manager to reinstall an “Engineering Change Order” or “ECO”—a software patch—designed to prevent duplication of ballot data. Thus, the Customer Relations Manager did not install the ECO, leaving open the possibility that the software could read the same ballots twice if flash drives containing ballot results were loaded into the election software twice.

Second, when county personnel loaded flash drives with ballot images into election workstations on Election Night and the day after the election—a process designed to facilitate the manual tabulation of write-in votes—they loaded some flash drives twice. If the ECO had been installed, the ballots on those flash drives would not have been counted more than once. Only the ballot images with write-in vote information would have been loaded. Because the ECO had not been installed, however, the ballot results on six flash drives were loaded into the election software and tabulated (counted) twice.

Third, although reports produced by ES&S’s election software showed that the flash drives had been loaded twice, and although someone using Monmouth County’s election software account ran one of those reports on the day after the election, no one identified the double insertions in any reports before the county certified the election. The county was not aware that ES&S had not installed the ECO.

As we noted in our policy recommendations report, counties that use ES&S’s election software can and should generate and review reports to detect any tabulation errors in the days following every election. Voting equipment vendors should ensure that these reports are easy to read and that counties know how to generate and review them.

The consequence of the miscount in Monmouth County was that the wrong candidate was temporarily declared the winner in a local race for a seat on
the Ocean Township Board of Education. In February 2023, the Monmouth County Board of Elections conducted a recount and the election result was corrected. Hence, the true winner of the election is now in office. In no other race was the wrong candidate declared the winner.

We discovered no evidence suggesting that the miscount was the result of any fraudulent or willfully wrongful conduct by any Monmouth County election official or personnel, ES&S employee, or any other person. Nor did we discover evidence of double counting of ballots on ES&S’s elections system before or after the November 2022 Election in Monmouth County, or elsewhere.

III. METHODOLOGY

To determine how the vote miscount occurred, we reviewed documents relevant to the miscount and the voting systems and processes in Monmouth County. Of the twenty-three (23) persons whom we interviewed, seventeen (17) persons had direct relevant knowledge related to those topics. Those persons included ES&S employees, election officials in the New Jersey Secretary of State’s Office and the New Jersey Division of Elections, election officials in Monmouth County, and other Monmouth County personnel. We also interviewed other persons for purposes of presenting policy recommendations to DCR.

IV. FACTUAL FINDINGS

A. Election Administration and Technology in Monmouth County

Counties in New Jersey have significant responsibilities in administering elections. In Monmouth County, those responsibilities are divided between three election offices: the Monmouth County Superintendent of Elections (the “Superintendent”), the Monmouth County Board of Elections (the “Board of Elections” or the “Board”), and the Monmouth County Clerk (the “County Clerk” or the “Clerk”). The Superintendent is appointed by the Governor to a five-year term, and is responsible for, among other things, selecting and maintaining the county’s voting equipment, processing voter registrations, and maintaining voter records. See N.J.S.A. §§ 19:31-2, 19:32-1, 19:32-26, 19:48-4. The Board of Elections is comprised of six commissioners—three Democrats and three Republicans—nominated by Monmouth County party leaders to the Governor for appointment to two-year terms. See id. §§ 19:6-17, 19:6-18. The Board is responsible for, among other things, selecting and maintaining polling locations, training pollworkers, counting vote-by-mail and provisional ballots, serving as the county Board of Canvassers alongside the County Clerk, and conducting recounts.

The issues described in this report relate to an older version of the election software that is no longer in use in Monmouth County. Monmouth County has upgraded to a new version of the software.

In 2021, Monmouth County reevaluated its election technology needs in response to State laws requiring the use of electronic pollbooks for Early Voting. The then-Superintendent of Elections organized an election technology “showcase,” inviting voting equipment vendors to display their election equipment and software. The Superintendent sought comments from local election officials concerning the ease of use and quality of the available, approved voting technology. After the showcase, the county chose ES&S as its vendor and executed contracts with ES&S to deliver, install, and maintain hardware (voting machines and tabulators) and software for elections in the county. A different outside vendor conducted “acceptance testing” of the equipment around that time to ensure that it worked properly.

_Electionware_, an election management software used for tabulation and reporting, is part of ES&S’s voting system. Ballots are loaded into _Electionware_ in different ways, depending on the process in which a voter casts the ballot. For example, paper-ballot tabulators process mail-in and provisional ballots, which are then transmitted into _Electionware_, where candidate names and ballot questions already have been loaded. In contrast, on Election Day, voters cast ballots on electronic voting machines, called “ExpressVote XLs,” that collect the ballots both in paper form and on secured flash drives. Then, through a process called “Regional Results,” ballot results are transmitted from regional sites into _Electionware_ on Election Day. Images of each ballot cast also are stored on the flash drives, but those images are not transmitted into _Electionware_ through the Regional Results process, apparently because doing so would take a substantial amount of time. Only ballot results are transmitted at that point.

Starting on Election Night and continuing the day after the election, Monmouth County personnel insert each of the flash drives into an election workstation—a computer that is _not_ connected to the Internet—to load the ballot images into _Electionware_. Ballot images are loaded, in part, so the county can manually tabulate votes for write-in candidates. Write-in votes are typed on the
electronic voting machines, but they are not automatically tabulated in *Electionware* in the Regional Results phase.

The “Ballot Image” phase supplements the “Regional Results” phase. In the “Ballot Image” phase, *Electionware* matches ballot images to ballot results. But the process of loading ballot images is not designed to and cannot alter the tabulation of votes, with one exception: it enables election officials to tabulate votes cast for write-in candidates only. Accordingly, when a flash drive is loaded during the “Ballot Image” phase, *Electionware* (i) recognizes that the ballot results on that particular flash drive have already been loaded, (ii) sends a message to the user that ballot images are loading, and (iii) does not count the votes on those ballots again.

Monmouth County has a physical primary and backup file server dedicated solely to elections. ES&S installs *Electionware* and *PostgreSQL* on both servers. *PostgreSQL* is a database that, in Monmouth County’s voting system, stores election data.

*Electionware* is programmed *not* to count ballots on the same flash drive twice. When a flash drive is loaded, *Electionware* checks the database to determine if the flash drive has been loaded previously. If it has, an error message appears, stating: “*These Results were previously loaded. No files have changed.*” The software does not count the ballots on the flash drive a second time.

According to ES&S’s Senior Vice President of Product Development, it was theoretically *possible* to double count votes with the *prior* software version that Monmouth County used in the November 2022 Election *if* a specific software patch was not installed and flash drives were loaded twice.\(^2\) That software version is no longer in use in Monmouth County, as the county has upgraded to a version with additional built-in protections that prevent the double counting of votes.

In response to the possibility of double counting, in mid-2020, ES&S developed an “Engineering Change Order” or “ECO”—a software patch—that “optimizes” the *PostgreSQL* database and prevents ballots from being counted multiple times. The ECO detects and removes duplicate data in the database. Each

\(^2\) ES&S’s Senior Vice President of Product Development suggested that the possibility of double counting could arise under certain very rare network conditions. We have not been presented with evidence or a report demonstrating that any network conditions were the cause of the double counting of ballots in the November 2022 Election in Monmouth County. Nor have we been presented with evidence or a report of double counting of ballots on ES&S’s elections system before or after the November 2022 Election in Monmouth County, or elsewhere.
time the ECO performs this function, an error message appears in Electionware, indicating that a “unique constraint” has been “violated.”

B. Monmouth County’s October 2021 Installation of a New Voting System

In October 2021, ES&S technicians visited Monmouth County from the company’s headquarters in Omaha, Nebraska to install a voting system comprising election hardware and software. The hardware and software had been certified by the United States Election Assistance Commission and the New Jersey Secretary of State. The hardware included, among other things, the primary and backup file servers, “ExpressVote XL” voting machines, paper-ballot tabulators used to count vote-by-mail and provisional ballots received by the Board of Elections, and election workstations. The software included Electionware and PostgreSQL.

The ES&S technicians who visited Monmouth County in October 2021 completed a checklist, signed by a programmer in the Monmouth County Clerk’s Office, stating that they had installed the ECO on Monmouth County’s election servers. An ES&S technician explained that during an initial installation, the ECO is installed as part of an “image file” containing several software components. Technicians then confirm that they have installed the ECO.

C. Technological Issues in the Summer 2022

In late June and early July 2022, Monmouth County personnel encountered slowness issues and error messages on their election workstations when performing certain functions within Electionware in advance of a July 26, 2022 Special Election. Monmouth County personnel contacted ES&S for support. In early July, ES&S sent several employees—including an employee in ES&S’s Technical Services department—to troubleshoot the problem. They were unable to identify or resolve the issue.

Eventually, ES&S sent a company representative to “uninstall” and “reinstall” PostgreSQL on the county’s file server to try to resolve the delay issues. The New Jersey-based technician that ES&S ordinarily would have sent, however, was out of the office that week. ES&S’s Vice President of Account Management asked a New Jersey-based Customer Relations Manager responsible for ES&S’s New Jersey accounts to perform the uninstallation and reinstallation instead. The Customer Relations Manager had decades of experience in account management for election technology companies. Years earlier, he had installed software as an employee of a different election technology company. But the Customer Relations
Manager was not a technician. He had never uninstalled or reinstalled software at ES&S, nor even heard of the ECO that prevents double counting of ballots. The Vice President of Account Management also asked a Principal Technical and Account Support Engineer at ES&S to provide instructions over the phone to the Customer Relations Manager. The Principal Technical and Account Support Engineer had uninstalled and reinstalled software before, and the Vice President of Account Management trusted his capabilities. But, he was not a “technician” either—or at least did not work in ES&S’s Technical Services Department. He was part of ES&S’s sales group.

The day before the Customer Relations Manager visited the county, he asked the Principal Technical and Account Support Engineer if the county would have a copy of the software that he would need to reinstall. The Principal Technical and Account Support Engineer responded that the county should have a copy, but that he would share a copy with the Customer Relations Manager if the county did not provide one.

On July 14, 2022, the Customer Relations Manager met with a programmer from the County Clerk’s Office. Monmouth County controls access to the election servers, and the county’s election equipment is protected from outside intrusions. The Customer Relations Manager recalled receiving a CD from a programmer in the Clerk’s Office, but the programmer asserted that he did not provide a CD to the Customer Relations Manager.

Over a mobile phone, the Principal Technical and Account Support Engineer provided instructions throughout the uninstallation and reinstallation process. The Customer Relations Manager was not given and did not follow any written instructions. The programmer from the County Clerk’s Office was in the same room as the Customer Relations Manager, but he did not hear the other end of the call because the Customer Relations Manager was using earbuds.

The Customer Relations Manager uninstalled Electionware and PostgreSQL on the county’s primary file server. The ECO that prevents double counting of ballots is automatically uninstalled when Electionware and PostgreSQL are uninstalled. Here is where the problem occurred: The Customer Relations Manager reinstalled Electionware and PostgreSQL on the primary server. But the Principal Technical and Account Support Engineer did not instruct the Customer Relations Manager to reinstall the ECO separately from the other software, which was required in the software version that Monmouth County had at that time. Thus, the Customer Relations Manager did not install the ECO.
It is important to note that Monmouth County no longer has the version of ES&S’s election software that it used in November 2022. The county has upgraded to a new version of the software.

Because uninstalling and reinstalling the software did not solve Monmouth County’s slowness issues, Monmouth County ran its July Special Election from a standalone laptop, rather than from the county’s election server.

Around that time, the county considered upgrading to a newer version of the election software, but decided to wait to upgrade its system until after the November 2022 General Election. The newer version of ES&S’s election software, unlike the version that Monmouth County used in the November 2022 Election, would not have required the ECO to be installed separately from the other election software. Put another way, the newer version of ES&S’s election software would have automatically installed the ECO component. We did not find evidence demonstrating that, before the November 2022 Election, Monmouth County personnel were aware that the newer version of the election software automatically installed the ECO.

ES&S’s technicians did not verify that the company’s Customer Relations Manager had properly installed the ECO in July 2022.

ES&S technicians from Omaha continued to troubleshoot the latency issues in late July and August 2022. One technician isolated the cause of the slowness and error messages to network-connectivity issues. Another technician determined that an IP address conflict in the network caused the issues. ES&S resolved the IP address conflict in mid-August 2022.

In late August 2022, county elections personnel experienced additional connectivity issues, which an ES&S technician resolved in late September 2022.

D. Pre-Election Logic and Accuracy Testing

Before each election, counties in New Jersey conduct “logic and accuracy” (“L&A”) testing. New Jersey law requires that “each county board of elections shall have the automatic tabulating equipment tested to ascertain that it will accurately count the votes cast for all offices and on all measures.” N.J.S.A. § 19:53A-8(a). Monmouth County uses a separate third-party vendor to conduct L&A testing. Monmouth County personnel attend the testing but do not play a substantial role in it.
Testing includes both a manual test and an automatic test. In the manual test, the vendor separately casts a ballot for every candidate and ballot question to ensure that the machine processes the votes correctly. In the automatic test, the machine automatically casts votes for every candidate and ballot question. County personnel tabulate votes in *Electionware* to ensure that the ballots are counted correctly. ES&S conducts testing on its electronic pollbooks.

Before the November 2022 Election, ES&S provided counties with guidance regarding L&A testing for voting machines and paper-ballot tabulators, including user guides and “best practices” documents. Since then, ES&S has created additional documentation with guidance for counties describing how to conduct L&A testing.

L&A testing in Monmouth County does not include testing to ensure that the software is unable to count ballots multiple times when flash drives are loaded multiple times.

**E. The November 2022 General Election**

On November 8, 2022, Monmouth County administered its General Election. On Election Day, several counties, including Monmouth County, experienced connectivity issues between their electronic pollbooks and the corresponding host server. The host server is separate from the counties’ election servers. These issues prevented check-in data on the physical pollbooks from syncing in real time with the pollbook application that collects the data. These issues, however, did not affect the performance of the other voting equipment or of *Electionware*.

Over 900 flash drives were used in the November 2022 Election in Monmouth County. On Election Day, county personnel loaded flash drives containing ballots from Early Voting into election workstations. Additionally, election officials at regional sites loaded each of the flash drives from the voting machines used on Election Day into *Electionware* through the Regional Results process. Subsequently, those flash drives were delivered to the County Clerk’s Office.

On Election Night and the day after the election, county personnel inserted flash drives into USB ports on election workstations to load ballot images into *Electionware*. A programmer with the County Clerk’s Office inserted flash drives into one election workstation, and two other county technicians inserted flash drives into another workstation. The programmer logged into his *Electionware*
account on one workstation, and the other workstation was logged into an account with the username “admin.” We have not definitively determined who was using which account to load flash drives.

Although the programmer explained that he followed a process of inserting flash drives one at a time to avoid inserting the same flash drive multiple times, the county personnel inadvertently loaded some flash drives into the workstations more than once. The first time each flash drive containing Election Day ballots was inserted, Electionware stored the ballot images and indicated that it had done so. When nineteen of those flash drives were inserted more than once—some flash drives on the programmer’s account and others on the “admin” account—an error message appeared, stating: “These Results were previously loaded. No files have changed.” The same error message appeared when three additional flash drives containing Early Voting ballots were loaded twice on Election Day. This error message is the one that is supposed to appear when flash drives are inserted multiple times and Electionware recognizes duplicate data in the database.

However, when six other flash drives were inserted a second time on the programmer’s account, the error message did not appear, and ballot results—which already had been loaded into Electionware in the Regional Results process—were loaded into Electionware a second time. The flash drives were from districts in the following municipalities: (1) Belmar, (2) Tinton Falls, (3) Fair Haven (two flash drives), and (4) Ocean Township (two flash drives). The programmer and technicians did not notice that the ballot results data on the six flash drives had been duplicated.

At the end of the day on November 9, 2022, the user or users of the programmer’s account ran a Media Status Report, a report that indicated the load status of all flash drives, including whether, when, and how many times a flash drive previously had been inserted. Electionware records do not indicate that the report was run again before the county certified the November 2022 Election results.

No one we interviewed noticed the double insertions in the Media Status Report before the election was certified.

County personnel stated that they were never instructed by ES&S to run after elections either a Media Status Report or an Election Audit Events Report that tracks all activity in Electionware. In fact, the County Clerk stated that she did not even know that those reports existed in November 2022.
Although vendors should ensure that counties are aware of these reports and know how to run them, we note that the *Electionware User Guide* does provide instructions about how to run a *Media Status Report* and how to run a report indicating the total number of ballots cast. Moreover, the user of the county programmer’s *Electionware* account ran a *Media Status Report* at the end of the day on November 9, 2022.

On the morning of November 21, 2022, the Monmouth County Board of Elections and the County Clerk met to certify the November 2022 General Election in their capacity as the Monmouth County Board of Canvassers.

In the Ocean Township Board of Education race, Steven Clayton was declared the winner of the third available seat on the nine-seat school board, defeating another candidate, Jeffrey Weinstein.

**F. Identification of Vote Discrepancies**

That same afternoon (November 21), a former city councilmember in Belmar, New Jersey, sent a request to the Secretary of the Monmouth County Superintendent of Elections’ Office pursuant to the New Jersey Open Public Records Act (“OPRA”). The OPRA request sought “[a]ny document or report that shows the Nov 2022 municipal election results for Belmar with the number of votes cast per district and whether they were machine vote, early voting, vote by mail, or absentee ballot.” The Secretary was on vacation on November 21, and received the OPRA request when she returned on November 28. On the morning of November 29, the Secretary sent an e-mail message to the former councilmember, stating that she had forwarded the OPRA request to the County Clerk’s Office.

On December 8, 2022, the State Board of Canvassers, which comprises the Governor (or his/her representative), four members of the New Jersey Legislature, and the Secretary of State, certified the results of the federal and state elections held on November 8, 2022. The State Board of Canvassers does not certify county and municipal elections.

The following day, the former councilmember sent a follow-up e-mail communication to the Secretary of the Superintendent’s Office regarding his OPRA request. On December 12, 2022, the Secretary sent an e-mail message to the former councilmember that provided several files, including the total number of persons who voted in the November 2022 Election in Belmar. The former councilmember noted that the county’s data showed that the total number of votes cast in the Belmar mayoral election exceeded the total number of voters in the election by over 300
votes. A few days later, the former councilmember notified the County Clerk of this discrepancy, and the County Clerk responded that she was working on the issue with the Superintendent of Elections.

G. Monmouth County’s and ES&S’s Investigation into the Vote Miscount

Personnel in the County Clerk’s Office contacted ES&S for assistance. A programmer in the County Clerk’s Office and a Software Support Analyst at ES&S were able to resolve some discrepancies between the pollbook application and New Jersey’s Statewide Voter Registration System (“SVRS”). Some voter data in the pollbook application had not been uploaded to the SVRS. But as of early January 2023, the programmer and Software Support Analyst had been unable to completely reconcile the vote discrepancy raised by the former Belmar councilmember.

On January 11, 2023, the County Clerk contacted ES&S’s Vice President of Account Management and requested that the company escalate its investigation of the discrepancy. While at a company meeting in Omaha, the Software Support Analyst who had identified discrepancies between the pollbook application and the SVRS ran an Election Audit Events Report, the report that tracks all activity in Electionware. That report revealed that ballot results on six (6) flash drives had been loaded twice into Electionware. The Software Support Analyst also ran a Media Status Report, which confirmed that the six (6) flash drives were loaded twice. In each of the instances in which ballot results on flash drives were counted twice, the second flash drive was loaded less than one minute after the first flash drive had been loaded.

ES&S’s Vice President of Account Management contacted the County Clerk to report that flash drives had been inserted twice, and that ES&S was planning to remove the duplicate ballots to determine the impact, if any, of double insertions on the election results. ES&S then determined that the double insertions affected the outcome of the election for the Ocean Township Board of Education. Either ES&S or Monmouth County personnel ran a Results Report without the double insertions, which indicated that the wrong candidate had been declared the winner of that race. The Vice President of Account Management reported that information to the County Clerk, who reviewed reports for the affected districts. The County Clerk called the Chairperson of the Board of Elections to inform him of what had been discovered.

Later that week, ES&S learned that the ECO that prevents the double counting of votes had not been installed on Monmouth County’s election server.
ES&S also determined that the issue was limited to Monmouth County by reviewing help desk logs in every jurisdiction with election software that required installation of the ECO. From those logs, ES&S determined that its personnel had not uninstalled and reinstalled the election software in any other jurisdictions.

ES&S’s Software Support Analyst and Principal Technical and Account Support Engineer attempted to duplicate the double insertions on standalone computers that were not connected to Monmouth County’s server. They removed data associated with the six double-inserted flash drives from the software, and then loaded the flash drives twice. They did not load the flash drives through Regional Results. The Principal Technical and Account Support Engineer explained that he attempted to duplicate the double-insertion issue both with the ECO installed and without the ECO installed. Neither the Software Support Analyst nor the Principal Technical and Account Support Engineer was able to duplicate the same double-count result that occurred in Monmouth County.

Around that time, ES&S’s Vice President of Account Management placed a telephone call to the Chairperson of the Board of Elections to explain what had happened. ES&S’s Vice President of Account Management reported that ES&S’s Customer Relations Manager who had uninstalled and reinstalled the election software in July 2022 had failed to reinstall the ECO designed to prevent double counting of votes.

The Acting Director of the New Jersey Division of Elections received a prepared statement from ES&S via e-mail on January 17, 2023. The prepared statement acknowledged ES&S’s error:

**Issue**

In Monmouth County, the outcome of one race in the 2022 November General Election—a local, nonpartisan race—was affected due to USB flash media being loaded twice into the results reporting module. This isolated incident occurred due to a human procedural error. An audit of the system yielded this information.

**Cause**

In July of 2022, upon request, ES&S technicians were sent to Monmouth County to investigate reports of slow performance on the county’s internal network. During troubleshooting, technicians uninstalled and reinstalled the county’s election management software. A human procedural error during reinstallation excluded a step, which
optimizes the system database and ensures USB flash media cannot be read twice during the results loading process. Because the database was not optimized, the user was not notified when the USB flash media were loaded twice into the results reporting module.

**Discovery**

A review of the election database provided detailed information, noting that USB flash media were loaded twice during post-election results compilation. There are reports in the system which document these types of actions, and duplication of results can be detected during reporting and canvas procedures. The USB Status Load Report identifies any USB flash media that have been loaded more than once. Additionally, pollbook data cross-referenced with the ballots cast also shows issues with the number of ballots cast.

**Mitigating Action**

ES&S will reinstall the election management system which will ensure the system is optimized to detect and block duplication of USB flash media results.

ES&S pledges to work with Monmouth County to ensure all necessary steps are taken to ensure election accuracy.\(^3\)

Two days later, the Acting Director of the Division of Elections communicated with the Monmouth County Clerk and the Superintendent of Elections and, later, separately with ES&S personnel, regarding the miscount issue.

**H. Reinstallation of ECO Software in January 2023**

On January 18, 2023, ES&S’s Vice President of Account Management and a Technical Services employee reinstalled the ECO on Monmouth County’s server. A programmer from the Clerk’s Office met them at the location of the

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\(^3\) Subsequently, ES&S wrote an Op-Ed that appeared in a local news outlet on March 15, 2023. In the Op-Ed, the company sought to explain to the public the reason for the double counting of votes. A copy of that Op-Ed is attached to this report as **Exhibit A**. Thereafter, in a letter dated March 27, 2023, the Monmouth County Board of County Commissioners, Clerk, Superintendent of Elections, and Board of Elections, through counsel, responded to ES&S’s Op-Ed, taking issue with certain characterizations made by ES&S in the Op-Ed, and particularly with any implication that Monmouth County election officials had some responsibility for the miscount. That letter is attached to this report as **Exhibit B**.
servers. This time, the technician used written instructions regarding how to apply the ECO.

The programmer from the Clerk’s Office asked the ES&S employees to check whether the ECO was installed on the backup server, as well. Although the Customer Relations Manager apparently only uninstalled and reinstalled the software on the primary server, ES&S’s technician determined that the ECO also had not been installed on the backup server as of January 18, 2023. Despite investigating the October 2021 installation and the July 2022 uninstallation and reinstallation, we have not definitively determined why the ECO was not installed on the backup server as of January 18, 2023, and we will not speculate as to why that installation was not performed. In any event, when the Customer Relations Manager uninstalled and reinstalled software on the primary server—the server used on Election Day—he did not install the ECO. The backup server was not used in any manner during the November 2022 Election in Monmouth County.

I. Recount


On February 2, 2023, the Honorable David Bauman, Judge of the Superior Court, Law Division, Monmouth County, entered an Order directing the recount and recheck to begin on February 8. See Order ¶ 2, In re Application for a Recount & Recheck of the Results of the Nov. 8, 2022 Gen. Election in the Muns. of Tinton Falls, Fair Haven, Belmar, & Ocean Twp., No. MON-L-000197-23 (N.J. Super. Ct. Law Div. Feb. 2, 2023). To conduct the recount, the Board of Elections obtained: (1) “tapes” from Monmouth County’s voting machines that record votes cast; (2) ballot cards from Early Voting; and (3) vote-by-mail, overseas, emergency, and provisional ballots. The Board hand-tallied the votes cast for each candidate and ballot question.

On February 21, 2023, the Board and Superintendent informed the court that the recount resulted in a change in the outcome of only one race in
Monmouth County: the election for the Ocean Township Board of Education. See Letter at 1, In re Application for a Recount & Recheck of the Results of the Nov. 8, 2022 Gen. Election in the Muns. of Tinton Falls, Fair Haven, Belmar, & Ocean Twp., No. MON-L-000197-23 (N.J. Super. Ct. Law Div. Feb. 21, 2023). The Board and Superintendent provided a certified statement of recount results showing that Steven Clayton, the initially certified winner of the third available seat on the school board had, in fact, lost that race by four votes to Jeffrey Weinstein. Id.


Minutes of school board meetings in Ocean Township indicate that Steven Clayton cast votes in meetings on five (5) dates: January 3, 2023; January 10, 2023; January 24, 2023; February 7, 2023; and February 21, 2023. See Annual Reorganization Meeting January 3, 2023, Twp. of Ocean Bd. of Educ., https://go.boarddocs.com/nj/tosd/Board.nsf/Public (follow “Meetings” hyperlink; then scroll through “Featured” sidebar and click “Jan 3, 2023 (Tue)”; then click “View Minutes”) (last visited Aug. 30, 2023); Work Meeting Minutes January 10, 2023, Twp. of Ocean Bd. of Educ., https://go.boarddocs.com/nj/tosd/Board.nsf/Public (follow “Meetings” hyperlink; then scroll through “Featured” sidebar and click “Jan 10, 2023 (Tue)”; then click “View Minutes”) (last visited Aug. 30, 2023); Regular Meeting Minutes January 24, 2023, Twp. of Ocean Bd. of Educ., https://go.boarddocs.com/nj/tosd/Board.nsf/Public (follow “Meetings” hyperlink; then scroll through “Featured” sidebar and click “Jan 24, 2023 (Tue) Regular Meeting”; then click “View Minutes”) (last visited Aug. 30, 2023); Work Meeting Minutes January 24, 2023, Twp. of Ocean Bd. of Educ., https://go.boarddocs.com/nj/tosd/Board.nsf/Public (follow “Meetings” hyperlink; then scroll through “Featured” sidebar and click “Jan 24, 2023 (Tue) Work Meeting”; then click “View Minutes”) (last visited Aug. 30, 2023); Work Meeting Minutes February 7, 2023, Twp. of Ocean Bd. of Educ., https://go.boarddocs.com/nj/tosd/Board.nsf/Public (follow “Meetings” hyperlink; then scroll through “Featured” sidebar and click “Feb 7, 2023 (Tue)”; then click “View Minutes”) (last visited Aug. 30, 2023) [hereinafter Feb. 7, 2023 Minutes]; Work Meeting Minutes February 21, 2023, Twp. of Ocean Bd. of Educ.,
Mr. Weinstein was sworn in at the school board’s March 7, 2023 meeting. See Work Meeting Minutes March 7, 2023, Twp. of Ocean Bd. of Educ., https://go.boarddocs.com/nj/tosd/Board.nsf/Public (follow “Meetings” hyperlink; then scroll through “Featured” sidebar and click “Mar 7, 2023 (Tue) Work Meeting”; then click “View Minutes”) (last visited Aug. 30, 2023).

We found at least one instance where a change in Mr. Clayton’s vote would have affected the outcome of a decision of the Ocean Township Board of Education. In the school board’s February 7, 2023 meeting, a Board member provided an update from a Wellness Committee meeting, and the Board voted 5–4 to obtain minutes from the Wellness Committee’s meeting. Mr. Clayton voted in the five-person majority. In the same meeting, Mr. Clayton voted for an unspecified “Option 1” on “the course of action for the 163 Monmouth Road property.” Two other Board members, in addition to Mr. Clayton, voted for Option 1. Four Board members voted for “Option 0” and two Board members voted for “Option 2.” The motion did not carry. See Feb. 7, 2023 Minutes. It is unknown—and unknowable—how Mr. Weinstein would have voted had he been seated on the Board at the time these votes were cast.

J. Analysis of Recount Results

The double loads of the six flash drives account for nearly the entire discrepancy between the initial results and the recount results. For example, in the initial results, there were 20,721 total votes in the Ocean Township school board race. After the initial certification, but before the recount, ES&S or Monmouth County personnel ran a Results Report without double loads of flash drives to determine the impact of the double loads on the election results. In that report, the total number of votes in the Ocean Township school board race is 20,109—612 fewer votes than the initial results. In the recount results, the total number of votes in the Ocean Township school board race is 20,104—five fewer votes than the number of votes reflected in the Results Report.
The Chairperson of the Board of Elections, who leads the recount process, provided context for the minor discrepancies between the Results Report and the recount results. He explained that some ballots that are adjudicated in the hand-to-eye recount have not yet been seen by the Board, and some ballots may be “adjudicated” differently than they were adjudicated in the General Election.

For example, in a General Election, a tabulator scans vote-by-mail ballots. Ballots with “undervotes,” “overvotes,” or stray marks are separated from the other ballots. An “undervote” occurs when a voter casts votes for fewer candidates than he or she is allowed. An “overvote” occurs when a voter casts votes for more candidates than he or she is allowed. A “stray” mark is a marking on a ballot other than to cast a vote; for example, a note in the margin of a ballot. The Chairperson of the Board of Elections explained that the Commissioners of the Board “adjudicate” the undervoted, overvoted, and marked ballots to resolve any issues, but that some ballots not initially reviewed by the Board may have marks or other issues that the tabulator does not recognize. When the Commissioners review those ballots in a recount, they may determine that a voter intended a different result than what the tabulator read. The Commissioners also may determine that a ballot cannot be counted; for example, if it has identifying information like a signature. The Chairperson noted that the vote-by-mail tabulation in a recount is always different than the vote-by-mail tabulation in the corresponding General Election.

K. Upgrade of Monmouth County’s Election Software

Monmouth County upgraded its election software in March 2023. ES&S’s Customer Relations Manager explained that, because ES&S owed Monmouth County what it calls a “preventive maintenance,” Monmouth County did not need to pay for this upgrade. In the new election software, the database is automatically optimized to recognize and remove duplicate flash drives. Separate installation of the ECO is not required in Monmouth County’s new software. Stated differently, in the new software version, the ECO is built in and is not a separate component or patch.

L. Observations

We offer a few concluding observations with respect to how the miscount in Monmouth County’s November 2022 Election occurred.

ES&S personnel failed to install the ECO, which prevents double counting of ballots on flash drives. In July 2022, when Monmouth County sought assistance from ES&S to resolve what were determined to be network-connectivity
issues, ES&S sent a Customer Relations Manager to uninstall and reinstall the software on Monmouth County’s election server. He was not a technician and had no software or hardware technical expertise. Although the Customer Relations Manager had decades of account management experience, he had not uninstalled or reinstalled software in several years of working at ES&S. A company representative decided to send the Customer Relations Manager to Monmouth County, and the Customer Relations Manager did the best that he could given his limited technical knowledge and the inadequate instruction given to him by another ES&S employee.

ES&S’s Vice President of Account Management requested that a Principal Technical and Account Support Engineer provide instructions to the Customer Relations Manager over the phone. Although the Principal Technical and Account Support Engineer had experience uninstalling and reinstalling software, he did not work in ES&S’s Technical Services Department either.

Although ES&S sent Technical Services employees to Monmouth County after the Customer Relations Manager performed the uninstallation and reinstallation, the company did not instruct those employees to confirm that the reinstallation had been done properly.

While loading ballot images on Election Night and the next day, county personnel inadvertently loaded some flash drives twice. These double insertions should not have had any effect on the county’s election results. The “Ballot Image” phase is designed to load ballot images and match them to ballot results. It is not designed to load ballot results again. Had ES&S installed the ECO properly, the double insertions of six flash drives would have had no effect on election results. No miscount would have occurred.

Although someone using a county Electionware account ran a Media Status Report at the end of the day on November 9, 2022, no one discovered the double insertions in any Electionware reports before the election was certified. Counties that use ES&S’s election software can generate and review certain reports to detect tabulation errors. Among these reports are an Election Audit Events Report, which tracks all activity in the software; a Media Status Report, which tracks the load status of all flash drives inserted during the election; and a report of the total number of ballots cast, which counties can compare to the total number of voter check-ins in pollbooks. Some of these reports are quite lengthy and difficult to read and understand. For example, the portion of the Election Audit Events Report from Election Day and the day after the election is nearly 1,000 pages, and the Media Status Report is nearly 300 pages. Voting equipment vendors should ensure that these reports are easily reviewable.
Finally, we did not discover any evidence suggesting that the miscount was the result of any fraudulent or willfully wrongful conduct by any Monmouth County election official or personnel, ES&S employee, or any other person. We also did not discover evidence of double counting of ballots on ES&S’s elections system before or after the November 2022 Election in Monmouth County, or elsewhere.

V. THE NEW JERSEY CIVIL RIGHTS ACT

Voting is critical to representative government, and every person’s vote must count equally. Obviously, no person’s vote should be counted twice in any election. As noted above, one purpose of our investigation was to assist DCR in ascertaining whether any person or entity engaged in any practice declared to be unlawful under the New Jersey Civil Rights Act, N.J.S.A. § 10:6-1 et seq. (the “Act”).

Enacted in 2004, the Act authorizes the New Jersey Attorney General to sue a person who, “whether or not acting under color of law,” (1) “subjects or causes to be subjected any other person to the deprivation of any substantive due process or equal protection rights, privileges or immunities secured by the Constitution or laws of the United States, or any substantive rights, privileges or immunities secured by the Constitution or laws of [New Jersey],” or (2) “interferes or attempts to interfere by threats, intimidation or coercion with the exercise or enjoyment” of those rights, privileges, or immunities. Id. §§ 10:6-2(a)–(b). The Act is the “state law analogue” of Title 42, United States Code, Section 1983, which provides a cause of action against persons acting under color of state law for violations of rights, privileges, or immunities secured under the U.S. Constitution or federal law. Perez v. Zagami, LLC, 94 A.3d 869, 875 (N.J. 2014); see also Tumpson v. Farina, 95 A.3d 210, 223 (N.J. 2014) (explaining that the legislative history of the Act indicates that it “is modeled off of” Section 1983 “and is intended to provide what Section 1983 does not: a remedy for the violation of substantive rights found in our State Constitution and laws”).

Under the New Jersey Civil Rights Act, a private party can bring a suit only against a defendant who was “acting under color of law.” Perez, 94 A.3d at 870. In contrast, the Attorney General can bring suit under the Act even against a person who was not “acting under color of law.” Id.

In most cases brought under the Act, the defendants are state actors. There is a dearth of case law in which the Attorney General has brought suits against private persons or entities under the Act. Under what circumstances the Attorney
General will commence suit under the Act in the voting-rights context depends on institutional considerations that we reserve to the Attorney General and DCR.

VI. CONCLUSION

This report summarizes our investigative findings regarding the recording, tabulation, reporting, and certification of votes in the November 2022 General Election in Monmouth County, New Jersey.

This report necessarily looked backward in time. In our investigation, however, we also addressed DCR’s second request to Mr. Harvey: to propose recommendations for potential election reforms in New Jersey based upon the findings and conclusions of the investigation. In a separate document, we have proposed policy recommendations and considerations to help prevent vote miscount issues from happening again, and to address vote miscount issues if they arise in the future.

DATED: August 31, 2023

Respectfully submitted,

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These are facts behind a Monmouth County election error | Opinion

Many readers know by now that Monmouth County determined in January 2023 that some votes from the November 2022 election were double counted. What readers may not know are the facts regarding how this unfortunate mistake came about.

With my team and with the county, we closely examined the data to determine what occurred. The data yielded the facts: This was a case of human error in multiple places.

I realize, based on what has been said in some news outlets, readers may assume the voting equipment was the cause of the incorrect reporting. Yet the evidence clearly shows that the equipment and software worked just as humans told it to. The technology was sound.

The truth is that an election official inadvertently loaded vote totals twice, not once, into a software reporting module. And the double loading of votes was not flagged. Simple enough, but how can it happen?

After voting is complete at the polls, election officials tally the vote totals. They record votes from all the polling places on secure USB flash media — also called thumb drives or sticks. Then, they gather those secure USBs and securely transport them to a county office or regional results reporting site where they insert the USBs into the county election office secure computer system, called an election management system.

This election management system is not a voting machine where you mark a ballot or anything that a voter would ever interact with. Think of it like the computer your accountant uses to do your taxes. Your accountant takes the information you provide and tallies it up on their system so you know your tax bill to Uncle Sam. But even if you gave your accountant the right information, they could enter your information incorrectly in their system. For example, say you told your accountant you had $2,000 in charitable contributions to be deducted, and your accountant entered $4,000 of deductions. Your accountant’s mistake has now caused you to under report your tax bill, and you’re now in trouble with Uncle Sam. In the same way as the accountant doubled up your information, an election official inadvertently doubled up the vote totals by inserting individual USB thumb drives twice into the election management system.

Here’s what happened next: The software on the election management system is designed to notify and block double loading of votes. But that didn’t work right, either. ES&S created this software, and it works flawlessly across the country. However, when we put this software in place for Monmouth County last July, our technician missed an installation step that makes the software flag double loading.
To top off those two mistakes, each by a different living, breathing human being, we know there are county election reports that showed this error. But those reports were missed by humans as well. The post-election canvassing checks and balances failed.

So, what now? Thanks to the paper ballots used in Monmouth County, officials were able to recount the races. Paper ballot systems provide auditable ballots that can be reviewed by both the human eye and machine. The votes are always secure and can be accurately reported.

Even with that ability, we must prevent this kind of mishap from ever happening again. Here’s what we have done: a) We reloaded the election management software for Monmouth County to make sure it works correctly. So now, if someone loads votes twice, that person will see an error message, and b) we have updated documentation and training materials to emphasize the importance of post-election auditing to ensure the integrity of vote counting.

There are multiple ways to check vote count accuracy. A canvass of election results, when performed properly, would always clearly show that the vote totals were loaded twice.

Humans are fallible, and human errors in elections do happen no matter what system is used. That’s no excuse. Just reality. That’s why we need to check, double check and triple check election results, through a combination of ways. Our company has a duty in that, and even though this instance was isolated to Monmouth County, we fully own our part of the process.

Voter confidence is the lifeblood of our democracy, and something we are always striving to bolster. Our hope is that the reiteration of the facts creates a more transparent and accurate understanding of the situation. Voters have our pledge that ES&S will do everything in its power to prevent such an error in the future.

Chris Wlaschin is senior vice president of security and CISO at Election Systems and Software.
March 27, 2023

Katie D. Figgins, Esq.
Associate General Counsel
Election Systems and Software
11208 John Galt Boulevard
Omaha, NE 68137

RE: CEASE AND DESIST
MONMOUTH COUNTY 2022 GENERAL ELECTION

Dear Ms. Figgins:

As Monmouth County Counsel, our office is the legal representative of the Monmouth County Board of County Commissioners, Monmouth County Clerk, Monmouth County Superintendent of Elections and Monmouth County Board of Elections. We write to command that Election Systems and Software ("ES&S") cease and desist its false and misleading statements relating to the double counting of a limited number of votes during the 2022 General Election in Monmouth County. Specifically, we direct your attention to Chris Wlaschin’s “Op Ed” published in the Asbury Park Press on March 15, 2023.

ES&S has in the past, and continues, to represent that their election system is “secure and accurate.” Monmouth County’s decision to utilize the ES&S product relied on these representations to ensure the integrity of the election process.

As ES&S is aware, it was discovered after much effort by Monmouth County’s Election Offices, that during the 2022 General Election, votes were double counted in six election districts in four towns -- Belmar, Fair Haven, Ocean Township and Tinton Falls. After a thorough evaluation to determine what caused this issue, it was established that this “double count” was due solely to the failure of ES&S’s election software. Specifically, ES&S’s election software did not contain the required “optimization file” which would prevent votes from being improperly uploaded to the server and counted twice. As ES&S’s software is proprietary, Monmouth officials did not have access to this optimization file and had no way of knowing that the optimization file was missing.

Leading into the 2022 General Election, Monmouth County’s IT personnel brought to the attention of ES&S functionality issues with ES&S’s operating system. After allegedly fixing the issues, ES&S
assured the County that its system was ready for the election. This claim was wrong. Through the County’s review of this matter, it was determined (and confirmed by ES&S) that ES&S staff, when allegedly fixing the issues, uninstalled and improperly reinstalled its proprietary election software. Inexplicably, ES&S did not send a software specialist to perform the reinstallation work. Instead, ES&S sent a customer relations manager to perform the reinstallation of its software, rather than an IT specialist, who received “guidance” and instruction on how to perform the reinstallation from ES&S’s office in Omaha over the phone. Even with the guidance over the phone, ES&S’s employee failed to properly reinstall the software.

It is outrageous that Mr. Wlaschin ignored these facts in his public statement to the Asbury Park Press.

Equally important is that Mr. Wlaschin fails to mention that Monmouth County followed the specific procedures established by ES&S for the County to conduct its elections, which required that the ES&S flash drives be inserted more than one time in order to ensure that all of the data is captured into ES&S’s software system. Additionally, Mr. Wlaschin fails to acknowledge that nowhere in any ES&S’s manuals, or any other publication issued to the County, does it warn or advise that inserting a flash drive more than once could ever result in votes being counted twice. Furthermore, no representative from ES&S ever instructed any Monmouth election worker or official that the system, as designed by ES&S for Monmouth County, could result in a double counting of votes, nor did any representative from ES&S advise Monmouth election staff that there were software reports that should be run to confirm that the ES&S system was counting properly.

The claim that an “election official inadvertently loaded vote totals twice, not once, into a software module” as the cause of the double count issue is disingenuous at best and intentionally misleading at worst. In fact, ES&S Vice-President Adam Carbullido acknowledged to Monmouth County that there was no error by Monmouth County.

It is also important to note that on election day there were communication issues between ES&S’s poll books and its servers in Omaha. This in turn resulted in real time information from the poll books not being available. The information from the poll books would provide an accurate snapshot of the number of voters who cast machine ballots on election day. This information, however, was not available from ES&S.

ES&S was paid considerably to have its employees on site during and following the 2022 General Election to support the County in conducting the election.

At the end of the day, Monmouth County has had to expend considerable resources, both through staffing and financially, to make sure ES&S’ system works and, most recently, to determine where ES&S failed during the General Election and then rectify that failure to ensure that an accurate vote count was finally provided to the public. ES&S’ attempt to deflect its technological and staffing deficiencies ignores the facts and will not be permitted to continue.

Again, ES&S is instructed to cease and desist its false and misleading statements regarding this matter. Monmouth County is currently quantifying the loss caused by ES&S’s malfeasance.

Be advised that Monmouth County reserves all rights available under law.
Kindly be guided accordingly.

Very truly yours,

MICHAEL D. FITZGERALD
Monmouth County Counsel

MDF: gsg