

Report of the Coordinator of Elections Regarding Misassigned Voters in Davidson County, Tennessee

Authority for Report

Pursuant to an agreed court order, the Coordinator of Elections initiated a review of the 2022 redistricting assignment of voters. The report seeks to determine the root cause of the issues in Davidson County in 2022 and to make recommendations to minimize the risk of a similar occurrence in the future.

Introduction

The Davidson County Election Commission (DCEC) reported 489,944 registered voters as of Election Day for the November 8, 2022 election. During the early voting period for the state and federal general election, some Davidson County voters were identified as having been assigned to incorrect districts. As a result of these misassignments, DCEC staff reported 437 voters received incorrect ballots during the early voting period.

Changes made by DCEC staff to the street file used to assign districts were the primary cause of the errors. Because these changes were not verified through geocoding with Metro IT Services GIS, the errors were not caught prior to the election. GIS refers to geographic information systems and is the primary tool used to perform redistricting. It should be noted the majority of DCEC staff were not involved in assigning voters during the redistricting process. Based on interviews with DCEC officials, four employees of the DCEC primarily worked on the redistricting process.

Redistricting Overview

State and federal law require redistricting after each decennial census. State and federal redistricting, including federal congressional and Tennessee state senatorial and house districts, is conducted by the Tennessee General Assembly. County redistricting is delegated to each county legislative body by T.C.A. § 5-1-111. Understandably, placing 489,944 voters in the correct congressional, legislative, and metro council district is a complex process.

The Metro Council gave final approval to local council and school board maps in January. The General Assembly completed redistricting in late January, and the enacting legislation was signed into law on February 6, 2022.

Assistance is available to counties from both the Office of the Tennessee Comptroller of the Treasury and the County Technical Assistance Service (CTAS). In particular, the Comptroller's office offers a verification service through a process called geocoding. Some larger counties use their own local GIS departments if they have the resources. Metro IT Services GIS has the ability to geocode.

The Comptroller's office publishes *A Guide to Local Government Redistricting in Tennessee* explaining the process in greater detail and the resources available. As noted in the guide, however, "While GIS is a powerful mapping tool, it does not do all the work."

For purposes of redistricting, geocoding is a computerized process that compares voter address information to approved district boundaries and flags voter addresses for further investigation. A county receiving geocoded results must carefully review the data and make any necessary changes.

Geocoding can be done multiple times in the process. The most important verification is done after the redistricting assignment of voters is complete to ensure voters have been placed in the correct districts.

Davidson County primarily relied on its own staff during this redistricting cycle. Metro IT Services GIS implemented the same Esri GIS software and census data offered by the Comptroller's office on its own hardware. DCEC officials stated because of the resources available through Metro IT Services, DCEC did not seek the assistance of the Comptroller's office.

Redistricting in Davidson County

The DCEC engaged with the GIS staff of Metro Nashville's Information Technology Services to begin the voter reassignment process once all district lines were available.

DCEC is a bipartisan board responsible for appointing the administrator of elections. By statute, the administrator of elections predominantly hires the staff members of the county election commission office. The exceptions to the hiring authority of the administrator of elections consist of the voting machine technicians, the early voting officials, nursing home deputies, and Election Day officials. The voting machine technicians, the early voting officials, nursing home deputies, and Election Day officials are appointed in a bipartisan manner by the Republican County election commissioners and the Democratic County election commissioners. Regarding the voting machine technicians, T.C.A. § 2-12-116(5) states that the voting machine technicians work under the direction of the administrator.

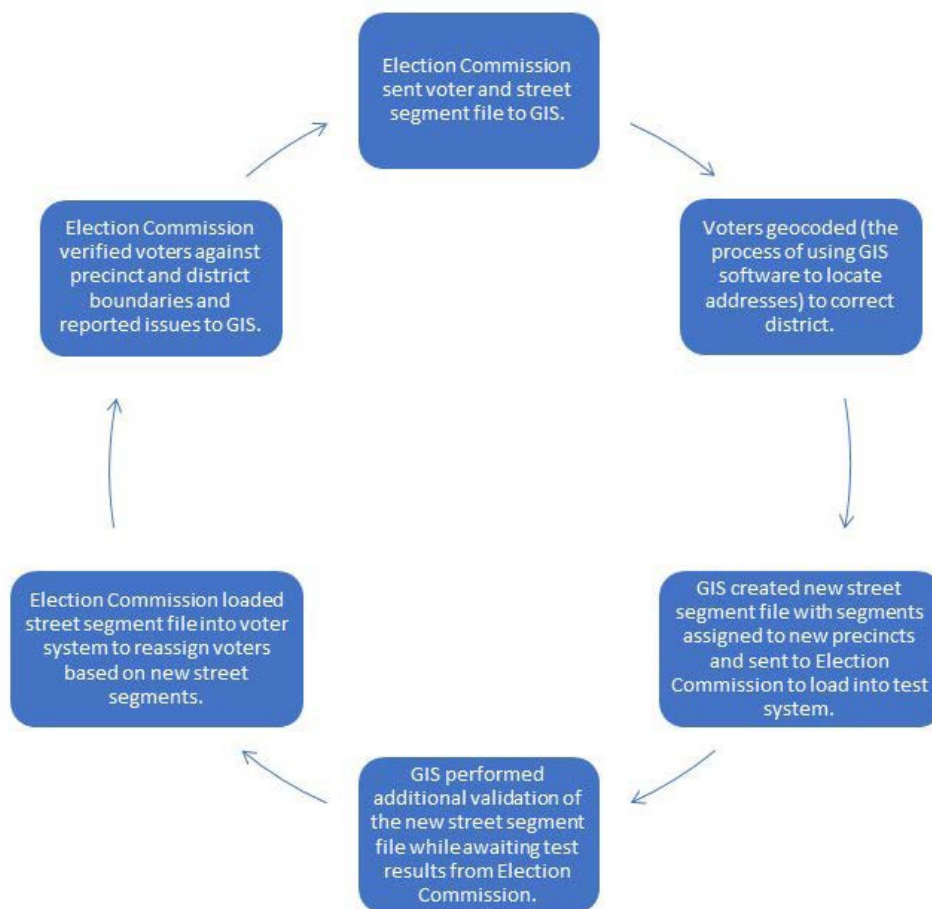
Metro IT Services described the steps of assigning voters as an "iterative process" in a December 1 memo reviewing the issues that arose during the November election:

- "The Planning Department worked with the Davidson County Election Commission to establish new voting precinct boundaries within each Council district.
- These boundaries were then sent to ITS GIS staff, who completed a review to verify that the boundaries were in accordance with state law regarding precinct boundaries for council and senate districts.
- The GIS staff then worked with the Election Commission to make modifications as needed.
- Once the precinct boundaries review was completed, the ITS GIS staff began the process of assisting the Election Commission with voter reassignment."

As part of the voter reassignment process, DCEC staff provided a voter file with all addresses on file to the GIS office to be geocoded by Metro IT Services, that is, plotted on the map to determine which precinct and districts applied to each address.

GIS then generated a street file with street ranges and districts for import into the voter registration system called PowerProfile. In the configuration used in Davidson County, PowerProfile has no GIS capabilities of its own. All district assignments are generated by comparing an address to the street segment file. DCEC staff oversees the street segment file in PowerProfile used to assign districts to voters.

Metro IT Services provided the following graphical representation of the process:



This process was nearing completion in mid-March. On March 17, DCEC staff assigned to redistricting communicated with Metro IT Service GIS staff. GIS staff wanted confirmation that they had the latest voter data prior to generating the street file. Upon confirmation from DCEC staff and proofing by the GIS office, an initial file was provided on March 17 at 4:03 p.m. Later that afternoon, GIS provided a spreadsheet showing how many voters they anticipated would be in each precinct split and then a corrected version after further manual review.

DCEC staff imported the street file into PowerProfile that afternoon and shared two reports, an exception report showing street segments on six streets that overlapped, and an audit report showing voters who could not be assigned based on the street index. DCEC staff provided new files to GIS staff, who then provided an updated street file incorporating the changes identified.

DCEC staff once again imported the file and provided updated reports and voter files. Based on these reports, GIS staff acknowledged that the election commission would have to assign the voters listed on Old Trinity Lane, S 20th Ave, and Elliott because of split precincts.

Metro IT GIS staff continued their review on March 18 and provided four additional segments, two each on Charlotte Pike and Otter Creek Road, that needed to be added by the election commission, as well as a list of segments in precinct 18-3 whose congressional district needed to be updated. As they continued to identify potential areas to review, DCEC staff once again requested a full street file to avoid having to make the changes manually. GIS staff provided a third countywide street file at 12:07 p.m. on March 18. This file contained 17,389 street segments.

DCEC staff imported the new file and provided the same reports as before and a new voter file. GIS staff reviewed the overlapping segments from the exception report and sent back recommendations on what to update and delete.

In reviewing the data provided by DCEC staff, GIS staff again flagged several addresses that they believed still needed attention on Elliot, Abbott Martin, 20th Ave S, Old Trinity Lane, Otter Creek, and Anderson Road. DCEC staff stated that they reviewed and made some changes, sent a new file, and indicated that some addresses may need to physically be visited by election commission staff to make determinations. As GIS staff reviewed the new voter file and asked for the source of changes made, a DCEC staff member replied “Research.”

In assigning precincts to the addresses flagged for manual review, DCEC made errors that caused voters to be misassigned. The voters on Abbott Martin were assigned to the wrong precinct split, which assigned 74 voters to the incorrect Tennessee House district. On Old Trinity Lane, DCEC skipped a step in their process to review the exception report that led to 36 voters being misassigned. On 20th Ave S, boundaries split an apartment complex. Some of the voters were assigned correctly, but 41 were misassigned.

According to the December 1 memo from Metro IT Services, Metro IT Services considered the process complete as of March 21.

DCEC staff, however, continued to make manual updates to the street file after the final countywide import. Between March 21 and March 30, 3,341 edits were made to 3,086 individual street segments. Based on the number of segments in the final street file from March 18, this represents changes to nearly 18% of the street segments in the county. The changes primarily consisted of updates to precinct splits. For example, on March 23, DCEC changed 50 street segments that had been listed in 0203.0 to 0203.1.

By March 25, GIS staff were preparing a precinct and polling place locator for use by voters and asked for the most current precincts. DCEC staff indicated there were some precinct changes still

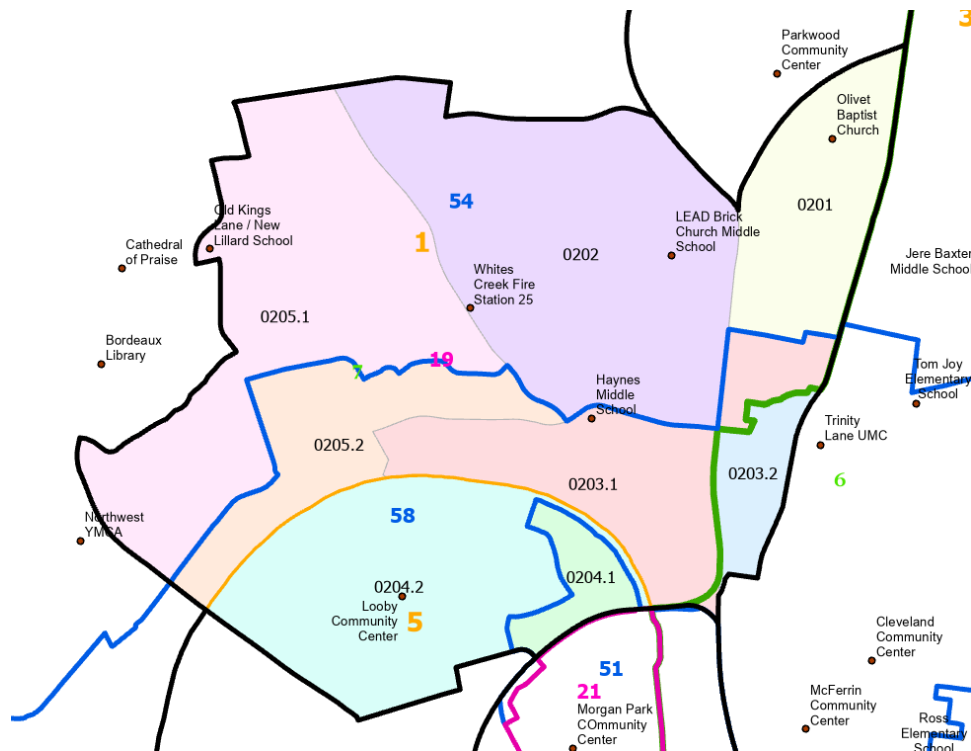
being made and provided new files on March 30. GIS staff asked whether DCEC staff wanted GIS to check the voters assuming changes had been made. Unfortunately, a DCEC staff member declined the offer.

GIS staff then asked for more information regarding the changes made. DCEC staff provided a series of emails listing updates.

Upon reviewing the suggested changes in precinct 2-3, GIS staff had questions regarding the changes. According to the GIS records, 2-3 was split between congressional districts 6 and 7, and 2-5-1 was in congressional district 7. GIS staff also noted that there were more changes than expected. DCEC staff indicated that this was a result of the challenge in finding locations to host polling places.

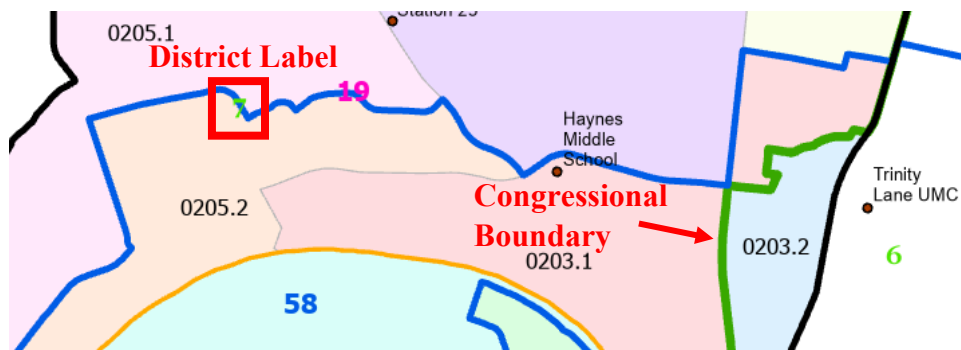
Correspondence between DCEC staff on March 23 indicated that 2-5-1 needed to be merged with 2-3-1. DCEC staff attempted to explain the sequence of changes, including merging and renaming of splits. GIS staff expressed confusion, but DCEC staff indicated that they had been working from the maps GIS provided and then had two people checking to verify precinct information after changes had been made.

GIS staff sent a map showing the splits in the 2nd council district.



According to election commission, because the green “7” label noting the congressional district appeared on the boundary line between House districts 54 and 58 (highlighted in the red box in

the excerpt below), they overlooked the label and believed the map confirmed their changes that placed all of precinct 2-3 in congressional district 6. Changes made by election commission staff misassigned voters in precinct 2-3 who should have been in congressional district 7 to instead be assigned to congressional district 6. Looking at the unhighlighted map above, the Congressional District 7 label is difficult to locate on the map.



Another source of the confusion may be differing naming conventions used by the election commission and Metro GIS. On the map above from Metro GIS, 0203.1 is in congressional district 7, and 0203.2 is in congressional district 6. In the March 23 email, DCEC staff listed 2-3.1 in congressional district 6 and 2-3.2 in congressional district 7. Ultimately, these changes and subsequent confusion left precinct 2-3 with 1,029 misassigned voters.

Additional manual edits to the street file were made in June by DCEC staff. In particular, on June 15, precinct splits were updated for street segments in precinct 20-5 in attempt by DCEC staff to clean up splits with small populations. During an interview with state election officials, a DCEC staff member admitted this change was his human error. This error led to 1,544 voters being misassigned.

Identification of Issue and Remediation

Early voting for the November election began Wednesday, October 26, 2022. On Tuesday, November 1, 2022, an individual contacted the Director of Communications for the Office of the Secretary of State with questions regarding district assignments in Davidson County. The Division of Elections immediately started researching the issue, determined that there was an issue in Davidson County and contacted Administrator Roberts. Administrator Roberts had also been contacted that day by someone inquiring about district assignments.

The Department of State and Coordinator of Elections do not maintain GIS software. In order to determine the number of misassignments, the Division of Elections requested that the Comptroller's Geographic Services geocode Davidson County's voter roll.

The Comptroller's Office supplied the Division of Elections with geocoded results, which were then shared with the DCEC Tuesday evening. The initial geocoding results identified 3,637 voters who were potentially assigned to one or more incorrect districts. With this information, election commission staff would need to review the data and make final determination of the

correct district assignments. Reviewing the geocoded data is similar to the iterative process with Metro IT Services, however, the timeframe available was compressed into one night and early morning instead of over the course of several weeks.

Administrator Roberts stated because early voting requires the use of the voter registration database to provide ballot applications and voter history to voters, no systematic changes can be made while the polls are open. Early voting ended at 7:00 p.m. on November 1. The DCEC worked diligently into the early hours of Wednesday morning to review potential errors before early voting started and believed a solution was in place when the polls opened for the day.

Early Wednesday morning, using the voter registration records transferred to the Division of Elections, staff compared the updated voter files to the geocoded results provided to the Division of Elections by the Comptroller's office and found that 285 voters' district assignments had not been updated. DCEC staff told the Division of Elections that upon review, no changes were needed for voters at those addresses to receive the proper ballot for this election.

Additionally, upon further analysis after the polls opened Wednesday, November 2, the Comptroller's Office determined 295 voters should not have been included on the original list because they had addresses that didn't match with the master address file or were located where the district boundary ran through the middle of a voter's property. In subsequent documentation from the DCEC, 41 of these voters were confirmed to have been misassigned in March because a boundary split an apartment complex. Many of these addresses also had extra characters in the street address (e.g., 123A Main Street), which impacted how they were geocoded. This analysis was sent to the Division of Elections, which believed the analysis contained duplicate information that had already been sent and discussed with the DCEC earlier that day. As a result, that list was not sent to Davidson County. Later review by the Division of Elections determined 128 of the 295 voters were possibly misassigned into the wrong district as DCEC made corrections based on the initial file prior to the opening of the polls on Wednesday.

For verification purposes, at the request of the Division of Elections, the Comptroller's Office geocoded Davidson County's updated voter roll on Thursday, November 3. A new list was provided to the DCEC identifying a total of 1,537 voters who were still potentially assigned to the wrong districts requiring further review by Davidson County. These were the result of inadequate time to fully confirm the geocoding results and to complete the changes identified November 1, as well as overcorrections to street segments.

Pursuant to an agreed order on November 4, the DCEC took additional steps to ensure all voters had the opportunity to receive the correct ballot. For misassigned voters who had already voted, the order allowed them to cast a provisional ballot at the DCEC office on Election Day. These ballots were to be counted only in the event that an election contest was filed in the affected state or federal legislative district. The election commission identified 437 potentially affected voters and posted a list on their website. Fortunately, based on margin of victory, no election was decided because of the misassignment of voters. On Election Day, 117 voters from the list appeared at the election commission office to vote a provisional ballot.

Davidson County Analysis of Misassigned Voters

DCEC staff, with the assistance of Metro IT Services, analyzed the initial list of 3,637 voters identified as potentially misassigned on November 1. They confirmed 3,060 misassignments on the list were the result of changes made to the street file and a small number of data entry errors when registering voters. They attribute 2 misassignments to voter error in providing their addresses and 7 to incorrect data from GIS. They also assert that addresses for 10 voters are invalid, and 552 voters should not have been included on the November 1 list. 6 voters were not included in their analysis.

Summary of Errors

Metro IT Services geocoded Davidson County voter rolls in March. Changes were made to the street file after the geocoding took place. Additional geocoding was not done after those changes were made. In addition to incorrectly making some of the initial changes, additional changes were made to the street file by DCEC staff in June when consolidating precincts. Finally, trying to correct the issue during early voting under a condensed schedule led to some overcorrections.

Recommendations

The root cause of the errors in Davidson County was updates by DCEC staff after Metro IT Services GIS had geocoded the voter rolls. When a county election commission makes substantial changes to their precincts or districts in their street file, there should be independent validation that the changes are correct. In counties using their own GIS resources, local GIS staff could provide initial validation of the data.

In order to have uniformity, validation should also be done by the Comptroller's office through their geocoding process. The Comptroller's office will provide the county election commission with a list of potential errors. The county election commission would be responsible for reviewing the data and determining what changes need to be made.

In some instances, better communication would have prevented some of the issues. The standard throughout the process should be that if you are in doubt, seek more guidance. For example, the confusion over the different ways of describing the splits on the map presumably would have been avoided with more communication.

Conclusion

The issues in Davidson County were the unfortunate combination of human error and failure to follow all steps to ensure changes were made accurately. I am confident that through the election commission's continued work with Metro IT Services, as well as assistance from the Comptroller's office, they can prevent similar issues in future elections.