

Analysis and Report of Overvotes and Undervotes for the 2016 General Election

Pursuant to Section 101.595, Florida Statutes

January 31, 2017



Florida Department of State
Ken Detzner
Secretary of State

Florida Department of State
Division of Elections
Room 316, R.A. Gray Building
500 South Bronough Street
Tallahassee, Florida 32399-0250

Introduction

Section 101.595, Florida Statutes (F. S.), directs the Department of State (the Department) to analyze and report on the performance of each type of voting system after every general election and determine whether ballot design or instructions contributed to voter confusion. The law requires the report to be based on overvote and undervote data that is provided by each Florida County for either the “President and Vice President” contest or “Governor and Lieutenant Governor” contest or, if neither is present, the first contest on the ballot. The Department of State analyzes this information and reports its findings to the Legislature and the Governor by January 31 of the year following the general election.

This report focuses on factors relating to the “non-valid votes” being cast for the contest of the President and Vice President in the 2016 General Election. The “non-valid votes” consist of three categories:

- *Overvote.* An overvote occurs when a voter casts more votes than allowed in a contest. An overvote is typically attributed to voter error and is the primary reason why ballots, other than vote-by-mail (formerly “absentee”) and provisional ballots, are not tabulated at the polling location. For ballots cast at the precinct or early voting location, the voter is immediately alerted to the overvote when the tabulator rejects the ballot.¹ The voter is then given the choice to change the overvote before casting the ballot or cast the overvoted ballot as is.² In the case of a vote-by-mail or provisional ballot voter, no procedure exists to let the voter know that he or she has overvoted one or more contests and there is no way to provide them an opportunity to change it.
- *Undervote.* An undervote means that the voter did not designate a choice for a contest and the tabulator records no vote for the contest.³ Although an undervote may be due to a voting machine issue⁴, most often it reflects a voter’s intent not to vote in a particular contest. Voters may choose to undervote for any number of reasons. Current voting systems only alert the voter as to a blank ballot (not whether there is one or more undervoted contests).⁵ As in the case of overvoting, no mechanism exists to let a vote-by-mail or provisional ballot voter know that he or she has undervoted one or more contests or to provide an opportunity to correct it.
- *Invalid write-in vote.* An invalid write-in vote may be due to voter error, such as unintentionally writing in a valid candidate’s name from another contest. Often, a voter intentionally writes in a non-qualified candidate’s name.

The certified voting systems in Florida’s 67 counties fall into four vendor-labeled categories: Elections Systems and Software, Inc. (ES&S), Premier Election Solutions (GEMS), Sequoia Voting Systems, Inc. (Sequoia), and Dominion Voting Systems, Inc. (Dominion). At this time, only two active voting system vendors provide and service certified voting systems in Florida:

¹ Section 101.5606(3), F. S.

² Ibid.

³ It could also mean that the voter designated fewer than the allowable number of choices, e.g., selecting only two choices in a “Vote for 3” contest.

⁴ Typically, this issue arises more as a function of the machine’s design limitation. For example, a tabulator may drop out the color yellow so that the machine will not be able to read any marks a voter makes in yellow ink. Therefore, a ballot marked with a yellow highlighter would be read as a blank ballot. Tabulators also have settings that help them distinguish between a definite “vote” mark vs. an accidental hesitation mark.

⁵ As the law is silent in regards to whether tabulators should alert voters of undervotes (other than blank ballot alerts), how the county codes their tabulators for undervotes is at the county’s discretion. No Florida county, to the Department’s knowledge, codes their tabulators to alert voters of undervotes other than blank ballots.

ES&S and Dominion.⁶ Sequoia and Premier are Dominion product lines. Currently, 26 Florida counties use Dominion voting systems, and 41 counties use ES&S voting systems.⁷

All voting in Florida must be by paper/marksense ballot method in connection with a paper tabulator scanner with the exception of persons with disabilities, who still have the option of voting on Direct Recording Electronic (DRE) touchscreen machines.⁸ For disability accessibility compliance⁹, 25 counties currently use the AutoMark ballot marking device as their compliant device; ten counties use the Dominion ICE; and nine counties use the ES&S ExpressVote, all of which satisfy the paper ballot requirement.¹⁰ By 2020, the remaining counties which currently use DRE touchscreen machines (such as ES&S's iVotronic, the Premier TSX and the Sequoia AVC Edge) will need to provide disability accessibility machines that meet the requirements of the Help America Vote Act (HAVA)¹¹ and permit the voter to cast a paper/marksense ballot.¹²

Methodology

Since 2010, the Department has been analyzing the data at the tabulator level instead of the voting system level.¹³ This analytical approach offers more flexibility, provides greater details and can be applied even in the event of future changes in voting system configuration. For purposes of this report, the 2016 General Election data was analyzed on the basis of the eleven types of voting systems' tabulation devices (tabulators) that have been used by Florida counties in the last four years. The eleven types of tabulators were further segregated in **Figure 1**, below, according to their use for early voting, Election Day, and vote-by-mail voting for the 2016 general election. This figure shows how many counties used each tabulator type and for which voting method (early voting, Election Day, and vote-by-mail). Depending on the voting system and tabulator, a county may use a tabulator type for tabulating ballots of one voting method, or they may use the tabulator for tabulating ballots of several voting methods. Counties using either the Premier GEMS AVOSX or the ES&S M100 switched to other voting systems and/or machinery prior to the 2016 general election, so those two tabulator types do not show any current usage data in this report.

⁶ In 2009, ES&S acquired Premier Election Solutions from Diebold Election Systems, Inc. In 2010, the U.S. Department of Justice mandated ES&S to divest elements of the Premier line of voting systems due to monopoly concerns. As part of the agreement, Dominion Voting Systems, Inc. (Dominion) then acquired Premier's voting systems. In 2010, Dominion also acquired Sequoia Voting Systems, Inc.

⁷ Seminole county is alone in being supported by ES&S for its Premier GEMS 1.20.2 voting system with Accuvote OS machines. All other counties using Premier voting systems are supported by Dominion. Seminole county is included in the Premier counties' AVOS machine count, although they are supported by ES&S.

⁸ Section 101.56075(1), F. S.

⁹ A voting device with equipment compliant with the Americans with Disabilities Act is known as an ADA device.

¹⁰ As reported by the counties to the Florida Division of Elections as of October 3, 2016.

¹¹ HAVA (Title III, Section 15481, Public Law 107-252).

¹² Section 101.56075(3), F. S.

¹³ Prior to 2010, the data was analyzed according to voting system.

Figure 1. Voting Systems Tabulators by Voting Method Usage in Florida

Voting System - Tabulator	Number of Counties using Tabulator, by Voting Method		
	Early Voting	Election Day	Vote-by-mail
Sequoia - Insight+	2	2	0
Sequoia - 400-C	0	0	2
Democracy Suite - ICE	10	10	4
Democracy Suite - ICC	0	0	6
GEMS - AVOS	15	15	13
GEMS - AVOSX	0	0	0
GEMS - PCS	0	0	2
ES&S - M100	0	0	0
ES&S - DS200	40	40	12
ES&S - M650	0	0	9
ES&S - DS850	0	0	19
Total	67	67	67

Pursuant to Section 101.595(1), F. S., the 67 county supervisors of elections must report their raw overvote and undervote data to the Department. Counties submitted their data using the form implemented in 2010 (Form DS-DE 40). During the data verification, reconciliation and compilation process, counties were contacted for explanations of any discrepancies or unusual entries. The aggregate data was then categorized and analyzed according to voting equipment (tabulation device).

Figures presented in this report show not only statewide results, but results aggregated by tabulator. Data was not compared between the optical scanner tabulator device and DRE touchscreen tabulator device. No meaningful analysis can be done on the DRE touchscreen ballots cast because ballots cast via DRE were such a small portion of all ballots cast. For the 2016 general election, only 572 (0.006%) of the state’s total ballots cast were cast via DRE touchscreen. Since 2010, the touchscreen votes have been combined with the counties’ optical scan tabulator group data. Because the DRE touchscreen votes were so few, aggregating them with the marksense totals does not bias the results.

Data in this report are presented as rates, or percentages, of an event, rather than as raw data. The reason for this is that numbers of ballots cast vary greatly across Florida counties, ranging from a few thousand to millions of ballots cast in a county. By converting the event raw values to percentage of ballots cast, it becomes possible to compare events across Florida counties.¹⁴

Results for years other than 2016 can be found in earlier reports.

Findings

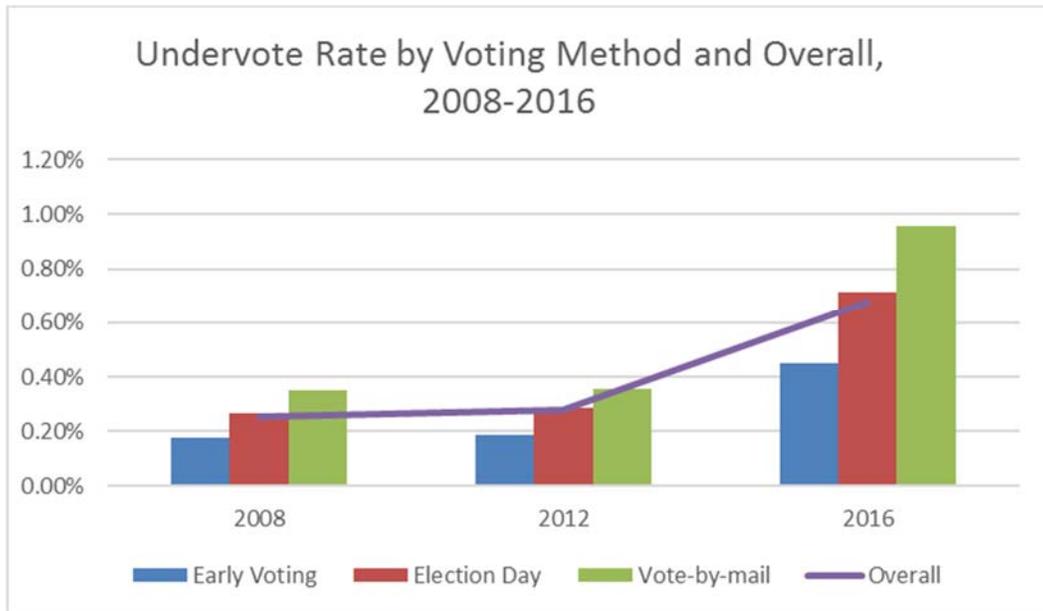
Undervotes

The 2016 general election saw an increase in the undervote rate. Neither voting method nor tabulator type appeared to be factors in the increase.

¹⁴ The raw data reported by the counties is available from the Department.

Figure 2 shows that the overall undervote rate remained fairly static from 2008 to 2012 presidential races, but then more than doubled in 2016. Even so, the rate remained below 1% of all ballots cast statewide.

Figure 2. Undervote Rate by Voting Method and Overall, 2008-2016 Presidential Contests



The overall undervote rate increased from 0.28% in 2012 to 0.68%. The overall undervote rate, or statewide average¹⁵, is defined as the total number of optical scan ballots statewide which were undervoted on the presidential race, divided by the total number of optical scan ballots statewide.

Broken down by voting method (**Figure 3**), from 2012 to 2016, the statewide average of undervotes increased for each method of casting a ballot. The statewide average for early voting increased from 0.19% to 0.45%. For Election Day voting only, the statewide average of undervotes increased from 0.28% to 0.71%. And for vote-by-mail voting only, the statewide average of undervotes increased from 0.35% to 0.96%. Not only did the rate of undervotes increase in 2016 overall, but it increased for *every* voting method by which voters may cast a ballot.

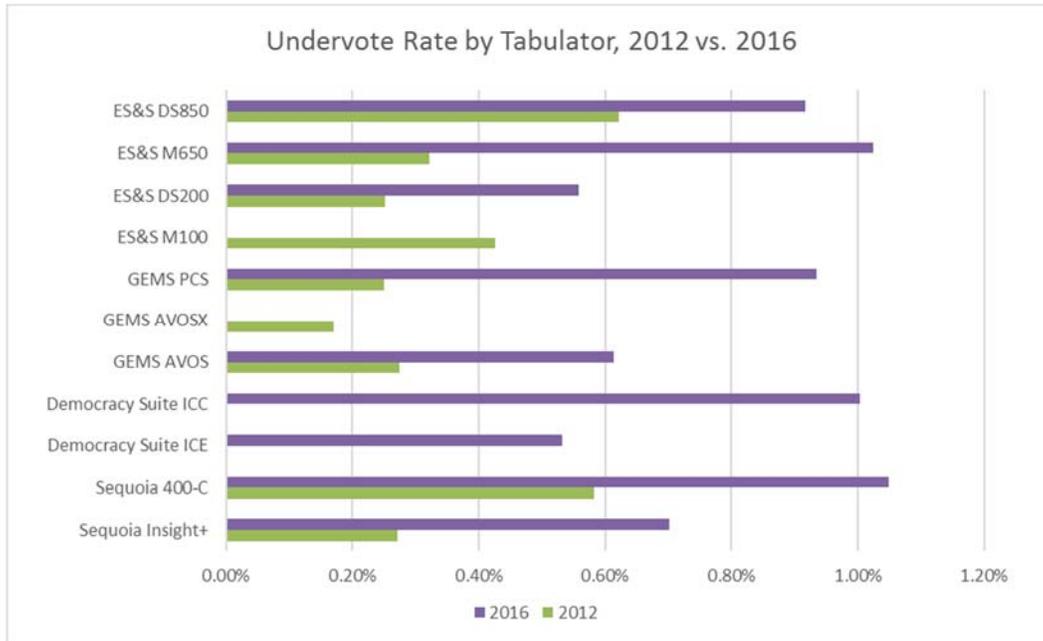
Figure 3. Undervote Rate by Voting Method for 2008-2016 Presidential Contests

Average Undervote Rate			
Presidential Contest			
Voting Method	2008	2012	2016
Early Voting	0.17%	0.19%	0.45%
Election Day	0.26%	0.28%	0.71%
Vote-by-mail	0.35%	0.35%	0.96%
Overall	0.26%	0.28%	0.68%

¹⁵ “Average” as used in this document is the statistical mean, unless otherwise specified. The term “average” is used as it is more commonly understood.

The overall undervote rate per tabulator type also increased, regardless of machine type. **Figure 4**, below, shows that, from 2012 to 2016, undervote rates increased for every machine type for which there was data for both election years.¹⁶ Undervotes increased not only on those high-speed machines used specifically for vote-by-mail processing, such as the DS850, M650, PCS, and 400-C, but also for machines used for precinct tabulation as well, such as the DS200, AVOS, and Insight+. Since all machine types experienced an increase in undervotes, the increase does not appear to be attributed to any particular type of machine.

Figure 4. Undervote Rate by Tabulator, 2012 vs. 2016



As **Figure 5**, below, shows, the undervote rate increased across all voting machine types. As stated before, the statewide average¹⁷ increased from 0.28% to 0.68%. The county average, calculated as the average of all 67 counties' rates of overvoted optical scan ballots, also increased in a similar vein, from 0.35% to 0.64%. Furthermore, the standard deviation stayed nearly the same (0.20% to 0.18%), meaning that the range between the lowest and highest counties' percentages remained the same. In other words, the 67 counties' data clustered around the average in much the same way they did four years ago, with similar variability.

¹⁶ Four machine types, the M100, the AVOSX, the ICC, and ICE, have data for either 2012 or 2016, but not both. The ICC and ICE machines were not yet certified in 2012, and the counties who used M100s or AVOSXs switched to other machines prior to the 2016 general election.

¹⁷ Defined as the total number of overvoted optical scan ballots divided by total number optical scan ballots.

Figure 5. Undervote Rate by Tabulator, 2012 vs. 2016

Undervote Rate by Tabulator, 2012 vs. 2016		
Voting System - Tabulator	2012	2016
Sequoia Insight+	0.27%	0.70%
Sequoia 400-C	0.58%	1.05%
Democracy Suite ICE	N/A	0.53%
Democracy Suite ICC	N/A	1.00%
GEMS AVOS	0.27%	0.61%
GEMS AVOSX	0.17%	N/A
GEMS PCS	0.25%	0.94%
ES&S M100	0.43%	N/A
ES&S DS200	0.25%	0.56%
ES&S M650	0.32%	1.03%
ES&S DS850	0.62%	0.92%
Statewide Average:	0.28%	0.68%
County Average:	0.35%	0.64%
Standard Deviation:	0.20%	0.18%

Overvotes

The 2016 general election saw a decrease in the overvote rate. Neither the voting method nor the tabulator type appeared to be factors in the decrease.

Figure 6, below, demonstrates the decline of overvotes since 2008, with the latest presidential election showing a sharper decline than the almost imperceptible decline in the previous presidential election. Even though the decline was more marked in 2016, it is still only about one-tenth of a percent difference in the last two presidential election cycles.

Figure 6. Overvote Rate by Voting Method and Overall, 2008-2016

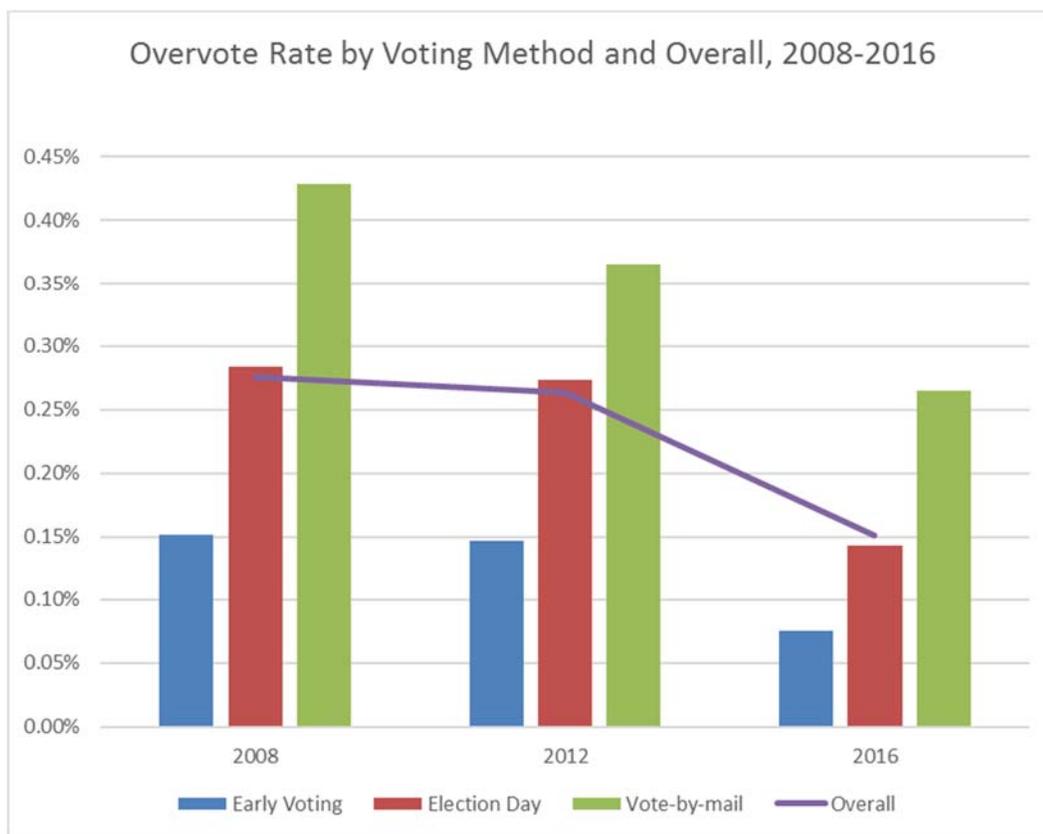


Figure 7 shows the data behind the chart above.

Figure 7. Overvote Rate Data by Voting Method, 2008-2016 Presidential Contests

Average Overvote Rate			
Presidential Contest			
Voting Method	2008	2012	2016
Early Voting	0.15%	0.15%	0.08%
Election Day	0.28%	0.27%	0.14%
Vote-by-mail	0.43%	0.36%	0.26%
Overall	0.28%	0.26%	0.15%

The overvote rate as a function of tabulator type shows a decrease, as well. The overvote rate decreased for every tabulator type from 2012 to 2016, as illustrated in **Figure 8**, below.¹⁸ For this reason, the decrease in overvotes cannot be attributed to a specific tabulator type.

¹⁸ As with the undervote figures in the previous section, four machine types do not have overvote data for both election years, due to not being in use during both years. Furthermore, in 2012, the only county using the DS850 machine reported 0 overvotes.

Figure 8. Overvote Rate by Voting Machine Type, 2012 vs. 2016

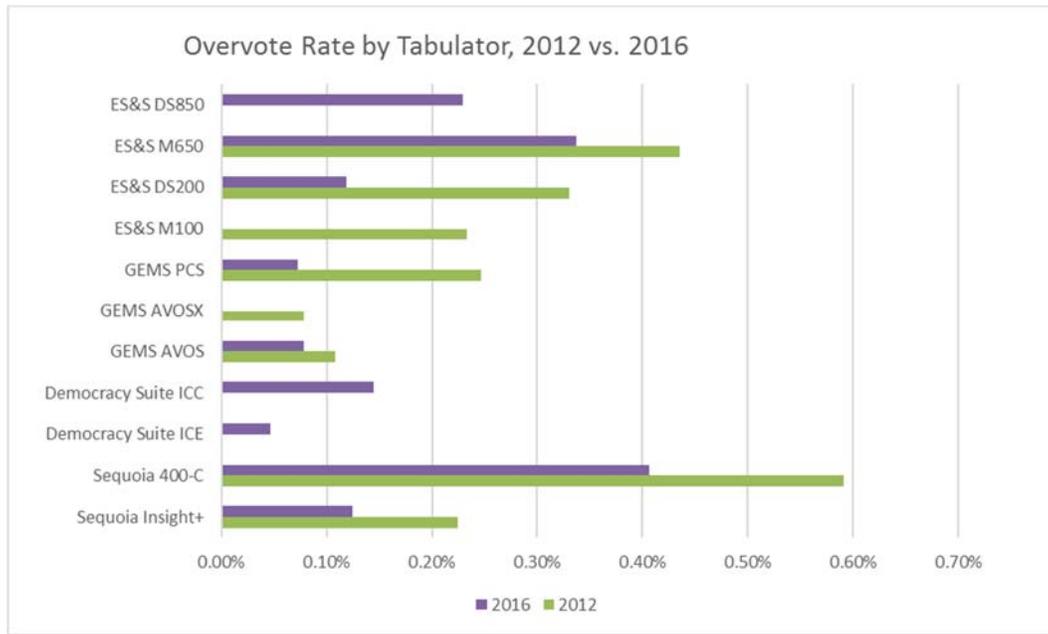


Figure 9, below, shows the percentages for each tabulator type. The change in standard deviation on this table shows that the cluster of counties' overvote rates around the average (an indicator of variability) tightened somewhat from 2012 to 2016. In 2016, there was less variability among all 67 counties' overvote rates, even though the statewide average dropped overall.

Figure 9. Overvote Rate by Tabulator, 2012 vs. 2016

Overvote Rate by Tabulator, 2012 vs. 2016

Voting System - Tabulator	2012	2016
Sequoia Insight+	0.22%	0.12%
Sequoia 400-C	0.59%	0.41%
Democracy Suite ICE	N/A	0.05%
Democracy Suite ICC	N/A	0.14%
GEMS AVOS	0.11%	0.08%
GEMS AVOSX	0.08%	N/A
GEMS PCS	0.25%	0.07%
ES&S M100	0.23%	N/A
ES&S DS200	0.33%	0.12%
ES&S M650	0.44%	0.34%
ES&S DS850	0.00%	0.23%
Statewide Average:	0.26%	0.15%
County Average:	0.18%	0.11%
Standard Deviation:	0.13%	0.08%

As the Department has reported in the past, the vote-by-mail (formerly “absentee”) voting method continues to generate a disproportionate number of the overvotes and undervotes in the election. To illustrate, **Figure 10** shows the percentage of total ballots that were cast by each voting method. Early voting was the most used method for casting a ballot in 2016, followed by Election Day and, finally, vote-by-mail.

Figure 10. Distribution of Total Ballots Cast by Voting Method, 2016

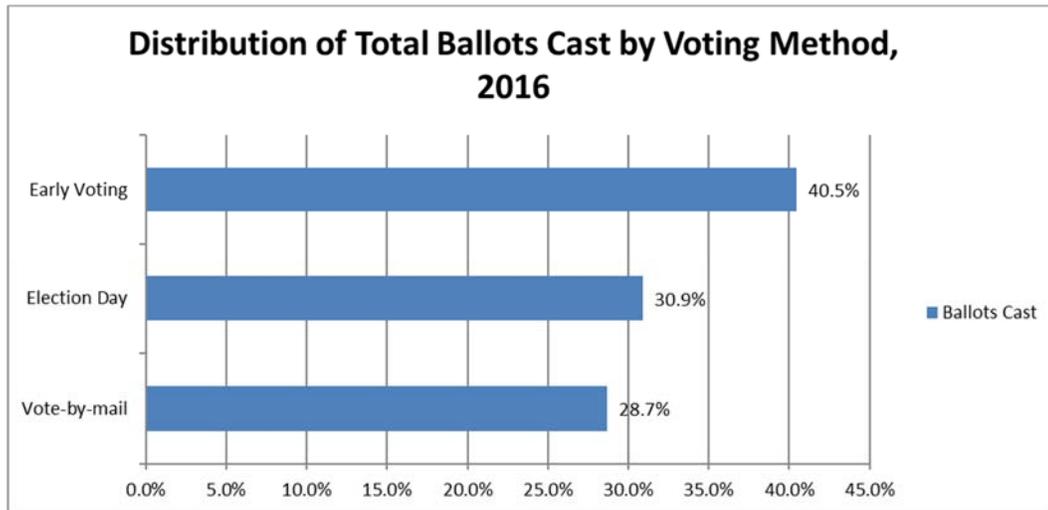
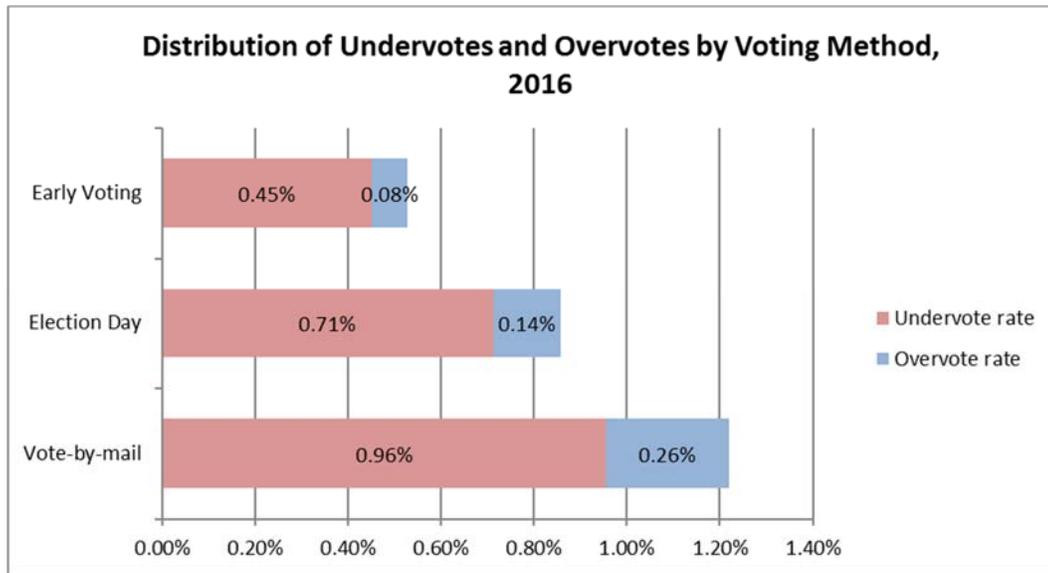


Figure 11, however, shows that the voting-by-mail method generated the most overvotes as well as the most undervotes. Early voting, the most used method of casting a ballot, produced the fewest overvotes and undervotes. Furthermore, 2016 is the first general election year in which early voting, since its codification in law in 2004¹⁹, surpassed Election Day in usage²⁰; yet early voting continued to follow the pattern of producing the fewest overvotes and undervotes.

¹⁹ Section 13, ch. 2004-252, Laws of Florida.

²⁰ Ballots Cast Reports, 2004-2014. (<http://dos.myflorida.com/elections/data-statistics/elections-data/general-election-summaries/>)

Figure 11. Distribution of Undervotes and Overvotes by Voting Method, 2016



As mentioned in previous reports and illustrated above, the method of casting a vote is a factor in the overvote and undervote rates. When compared with early voting and Election Day, the vote-by-mail method clearly produces a disproportionate share of overvotes and undervotes. Currently, there is no mechanism (statutory or procedural) to alert vote-by-mail voters that they have marked an overvote or undervote before their ballot is finally cast in the supervisor of elections' office. The Department theorized in previous reports that overvotes and undervotes are lower during early voting and Election Day because voters there are alerted by the tabulators that they have marked an overvote or are about to cast a blank ballot.²¹ However, that same voter in the polling location is *not* alerted to an undervote; still, the voters are less likely to undervote in-person than when voting by mail. Therefore, although the method of casting a vote is a factor in the overvote and undervote rates, the presence of a mechanism to alert the voter is not a factor, at least in regard to undervotes.

The year 2016 is the first general election year since early voting was codified in law in 2004²² that early voting surpassed Election Day voting in the number of ballots cast²³. The rates of undervotes and overvotes, however, still held the same pattern as in previous elections. Vote-by-mail balloting produces the most undervotes and overvotes, followed by Election Day, and then early voting, which produces the fewest undervotes and overvotes.

Nonetheless, an inherent bias continues to exist resulting in the underrepresentation of actual *overvote* rates (or conversely higher than actual *undervote* rates). The bias is attributable to the current requirement in section 101.5614(5), F. S., for duplicating a ballot that is not otherwise tabulated at the precinct. County canvassing boards are required to duplicate a vote-by-mail ballot with an overvoted contest as a ballot that includes only valid votes. This process has the unintended effect of changing an overvoted contest into an undervoted contest. Since it is

²¹ In compliance with 101.5606(3), F. S., counties code their tabulators to alert voters of a blank ballot or an overvoted contest. However, the law is silent in regards to alerting voters of undervotes, and counties do not, in practice, code their tabulators to alert voters of undervotes. Indeed, setting an alert for undervotes would severely impact the voting process and create long lines at the polls.

²² Section 13, ch. 2004-252, Laws of Florida.

²³ Ballots Cast Reports, 2004-2014. (<http://dos.myflorida.com/elections/data-statistics/elections-data/general-election-summaries/>)

unknown how significant the bias is in the data set, evaluations of the data set can only be approximate.

In addition, current polling place practices in some counties may also contribute to this bias. In counties that use the ES&S DS200 or the Dominion ICE, the voter can override the tabulator to cast his or her overvoted ballot without assistance from the poll worker. However, in counties that use precinct tabulators such as the Sequoia Insight+ or GEMS AVOS, the poll worker must conduct the “override.” Some counties do not permit their poll workers to override the tabulator, and instead, the poll worker places the overvoted ballot in the emergency bin. Consequently, those ballots are duplicated later without the overvoted contest in the same manner as the vote-by-mail ballots in compliance with section 101.5614(5), F. S. This process results in overvotes being converted to undervotes and thus not accurately represented.

Invalid Write-In Votes

Invalid write-in votes (those votes for which the voter wrote in a candidate’s name who had not qualified for the ballot) increased from 2012 to 2016.

Figure 12, below, shows the statewide average increased from 0.21% to 0.86%, a four-fold increase. Of all the non-valid vote types—overvote, undervote, and invalid write-in— the invalid write-in shows a significant rate change since the previous presidential election (a change of 0.65%). Furthermore, the standard deviation increased from 0.08% to 0.25%, which means that the 67 counties’ invalid write-in rates were clustered very close to the average in 2012 (a small range between the lowest and highest rates), and then spread out more in 2016 (indicating greater variability).

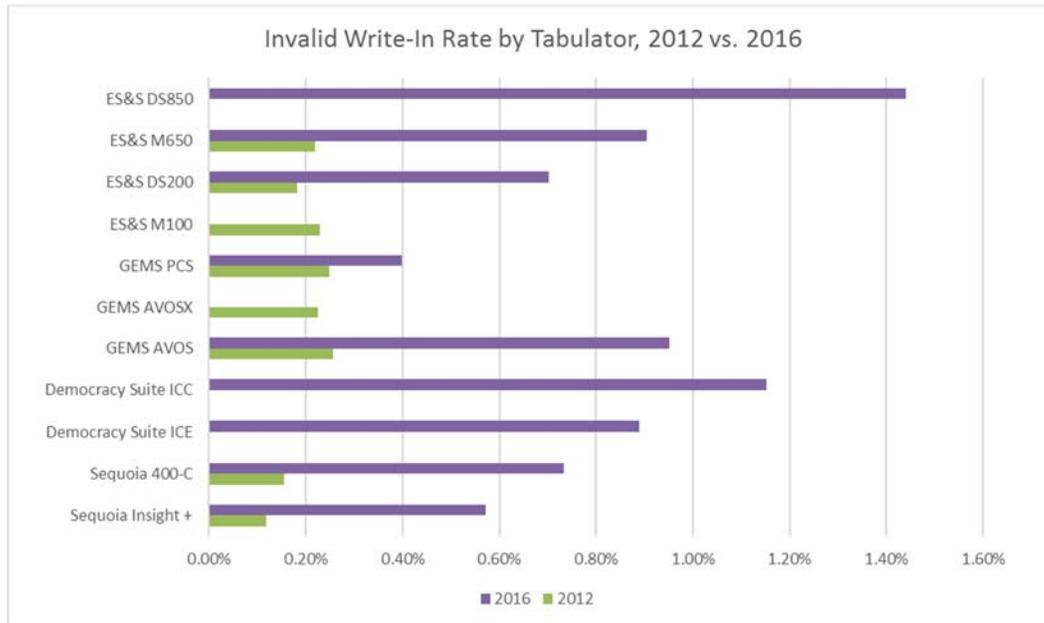
Figure 12. Invalid Write-In Rate by Tabulator, 2012 vs. 2016

Invalid Write-In Rate by Tabulator, 2012 vs. 2016

Tabulator	2012	2016
Sequoia Insight +	0.12%	0.57%
Sequoia 400-C	0.16%	0.73%
Democracy Suite ICE	N/A	0.89%
Democracy Suite ICC	N/A	1.15%
GEMS AVOS	0.26%	0.95%
GEMS AVOSX	0.23%	N/A
GEMS PCS	0.25%	0.40%
ES&S M100	0.23%	N/A
ES&S DS200	0.18%	0.70%
ES&S M650	0.22%	0.90%
ES&S DS850	0.00%	1.44%
Statewide Average:	0.21%	0.86%
County Average:	0.24%	0.74%
Standard Deviation:	0.08%	0.25%

Figure 13, below, illustrates that the invalid write-in votes rates increased considerably across all tabulator types, including not only those high-speed machines used only for vote-by-mail processing, such as the DS850, M650, PCS, and 400-C, but also for machines used for precinct tabulation as well, such as the DS200, AVOS, and Insight+.²⁴

Figure 13. Invalid Write-In Rate by Tabulator, 2012 vs. 2016



In 2012, the only county using the DS850 reported no invalid write-ins.²⁵ However, by 2016, eighteen more counties had adopted the DS850 as their vote-by-mail tabulator, which could explain why the rate of invalid write-ins jumped to 1.44% in 2016, the highest invalid write-in rate (and largest increase, as well) for any tabulator. (All nineteen counties reported invalid write-ins greater than 0 in 2016.) The DS850 is currently the most popular tabulator in Florida for tabulating vote-by-mail ballots (see Figure 1). The Conduct of Elections reports and other information submitted by Florida counties indicates the DS850 is performing as expected, and no anomalies are reported.

All Non-Valid Votes

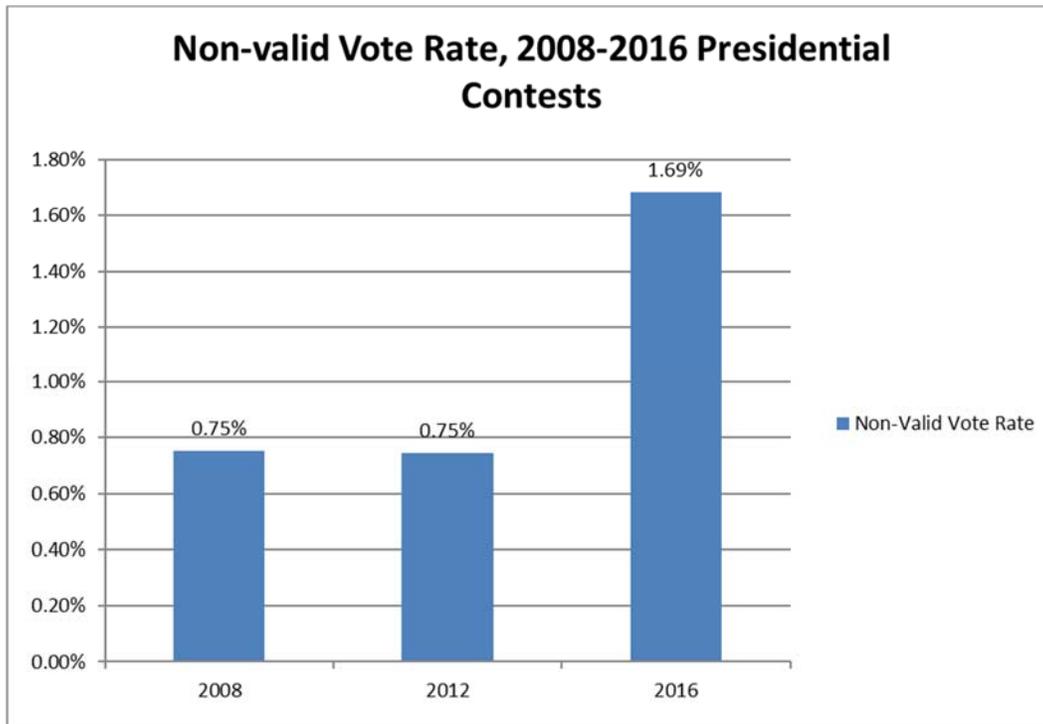
The 2016 general election saw an increase in the non-valid vote rate from 2012. Neither voting method nor tabulator type appeared to be factors in the increase.

Non-valid votes include all types of votes that do not count, such as overvotes, undervotes, and invalid write-ins. **Figure 14**, below, shows that non-valid votes stayed the same between the 2008 and 2012 presidential elections, and jumped significantly in 2016 (an increase of 0.94%).

²⁴ In addition to the four machines mentioned earlier which do not have data for both years (M100, AVOSX, ICC, ICE), the data for the DS850 was 0.00%.

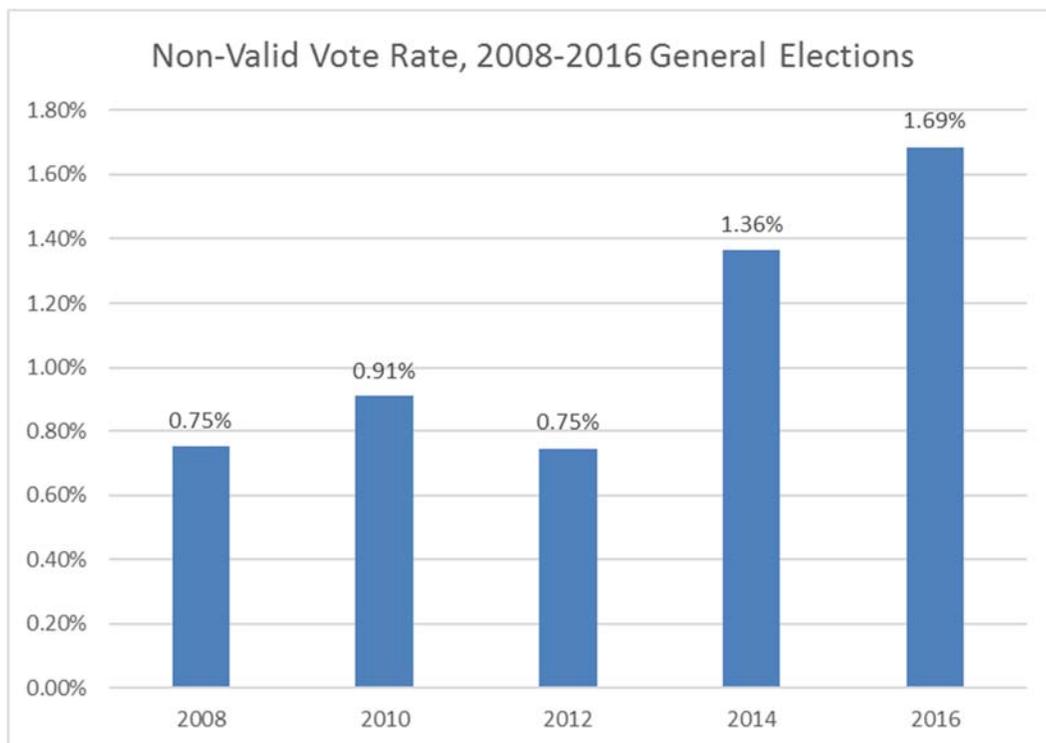
²⁵ Cross-reference, page 9.

Figure 14. Non-Valid Vote Rate, 2008-2016 Presidential Contests



In the non-presidential general election years of 2010 and 2014, the non-valid vote rate also increased from 0.91% in 2010 to 1.36% in 2014. **Figure 15**, below, shows the non-valid vote rate for all general elections since 2008. The non-valid vote rate has been trending upward since 2012.

Figure 15. Non-Valid Vote Rate, 2008-2016 General Elections



The increase in non-valid votes in the presidential contest in Florida is part of a nationwide trend.

Ballot Design and Instructions

An historical overview of the overvote and undervote data consistently shows no demonstrable correlation as to whether ballot design and/or instructions confused voters, and whether the voting system manifested any anomalies.

Conclusion

The results of analysis of the overvotes and undervotes in the 2016 General Election compared to the 2012 General Election show that the rate of undervotes increased, along with invalid write-ins and all non-valid votes; and the rate of overvotes decreased. The overall rates changed as follows:

- The undervote rate increased from 0.28% to 0.68%.
- The invalid write-in rate increased from 0.21% to 0.86%.
- The non-valid vote rate increased from 0.65% to 1.69%.
- The overvote rate decreased from 0.26% to 0.15%.

The increases in undervotes, invalid write-ins, and all non-valid votes appear to be part of a national trend.

The method of casting a vote has been found to be a factor affecting the number of overvotes and undervotes. This analysis again demonstrates that the vote-by-mail method clearly generates a disproportionate share of overvotes and undervotes. This year, however, as the number of ballots cast during early voting surpassed that of Election Day, yet the number of overvotes and undervotes remained the fewest of all voting methods, the data suggests that early voting is the voting method still least likely to produce overvotes and undervotes, regardless of its increasing level of usage as a method of casting ballots.

The Department again recognizes that an inherent reporting bias exists attributable to the requirement in section 101.5614(5), F. S., for duplicating a vote-by-mail ballot. County canvassing boards are required to duplicate a vote-by-mail ballot with overvotes as a ballot with valid votes, which requires the overvotes to be converted to undervotes. Thus, overvotes may be under-represented, and undervotes may be over-represented. Such bias could hinder identification and reporting of an issue with a voting system, since actual vote data cannot be reliably verified.

Further bias exists because some counties do not allow their poll workers to perform the “override” function of the tabulator to override the “overvote” alert and accept a voter’s overvoted ballot. Instead, the poll worker places the overvoted ballot in the emergency bin, to be duplicated later in the same manner as vote-by-mail ballots are duplicated, in accordance with the requirements of section 101.5614(5), F. S. This results in under-representation of the actual overvotes, and over-representation of the actual undervotes, of precinct results.

Nothing in the compiled presidential contest data from the counties indicates that there was voter confusion during the election as a result of ballot design and/or ballot instructions issues. Likewise, neither did the data suggest any anomalies with the voting equipment. Furthermore, a historical overview of the overvote and undervote data and reports consistently shows no demonstrable correlation as to whether ballot design and/or instructions confused voters, and whether the voting system manifested any anomalies.

Recommendations

Based on the findings and conclusion, the Department makes the following recommendations:

1. To more accurately reflect actual overvote and undervote data, supervisors of elections who have not otherwise established such procedures must train pollworkers to allow a voter who chooses to vote an overvoted ballot to immediately cast the ballot in a precinct tabulator, rather than segregating the ballot in the emergency bin for later duplication. This may help to minimize under-represented overvote data.
2. To better identify any potential issues and correlate a cause and effect on how voting systems performed and how the voting process including ballot design and instructions might have affected voters, the overvote and undervote report and the conduct of elections report should comprise one report due at the same time. The combined report would provide a more comprehensive contextual analysis including but not limited to election day, post-election and post-election certification activities and other useful data elements.