

Analysis and Report of Overvotes and Undervotes for the 2012 General Election

Pursuant to Section 101.595, Florida Statutes

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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

Executive Summary

Introduction

Section 101.595, Florida Statutes, delegates to the Department of State the responsibility to analyze and report on the performance of each type of voting system after every general election. The basis for this analysis is the overvote and undervote report 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 “*no valid votes*” being cast for the contest of interest in the 2012 General Election. The *no valid votes* consist of three categories:

- *Overvote*: when a voter casts more votes than allowed in a contest.
- *Undervote*: when the voter did not properly designate a choice for a contest and/or the tabulator records no vote for the contest.
- *Invalid write-in vote*: which may be intentional or unintentional by the voter.

The certified voting systems in Florida’s 67 counties fall into three vendor-labeled categories: Elections Systems and Software, Inc. (ES&S), Premier Election Solutions (Premier), and Sequoia Voting Systems, Inc. (Sequoia). In actuality, there are only two active voting system vendors providing and servicing certified voting systems in Florida: ES&S and Dominion Voting Systems, Inc. (Dominion).¹ Sequoia and Premier are Dominion product lines. Currently, 33 Florida counties use Dominion voting systems, and 34 counties use ES&S voting systems.

Methodology

After the counties submitted their data for this report, the data set underwent a verification and reconciliation process in order to arrive at a uniform and consistent set of data. The collected data was segregated by voting equipment (tabulation device) and voting method (early voting, Election Day, absentee). This level of data segregation is an improvement over the analysis methodology used prior to 2010, in which data was analyzed not by tabulator, but by the voting system used. The increased detail of analysis allows a more enhanced look at the voting systems at the tabulator level and at the voting method level. For this reason, the only pre-2010 data presented in this report is the 2008 data, and then only the statewide results are compared; 2008 data by voting system is presented but not used for comparison.

Conclusion

The results of analysis of the overvotes and undervotes in the 2012 General Election are consistent with previous elections. Overvote and undervote rates are comparable to the rates found in the previous presidential election—the overall undervote rate increased by 0.02% to 0.28%, and the overvote rate decreased by the same amount to 0.26%. The invalid write-in rate remained almost unchanged, increasing only 0.01% to 0.21%. When compared to the first contest on the ballot in 2010 (senatorial contest), results further support previous reports’

¹ In 2009, ES&S acquired Premier Election Solutions from Diebold Elections Systems, Inc. In 2010, the U.S. Department of Justice forced 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.

findings that overvote and undervote rates are contest-dependent. The statewide “no valid vote” rate is unchanged from the previous presidential election, remaining at 0.75%.

The method of casting a vote has been found to be a factor affecting the number of overvotes and undervotes. When compared with early voting and Election Day, the absentee voting method consistently produces a higher number of overvotes and undervotes.

There is nothing in the compiled presidential contest data to indicate that there was voter confusion during the election as a result of ballot design and/or ballot instructions issues. Because overvote and undervote rates appear to be consistent with the results of the 2008 presidential election results, and that the only ballot design differences between the two elections were the removal of the headers requirement, the conclusion is that the ballot design and/or instructions were not at issue in the 2012 presidential election results.

Analysis of the detailed information submitted by Florida counties did not reveal any anomalies with the voting equipment.

Recommendations

The Department again conveys that an inherent bias exists for reporting lower than actual *overvote* rates (or conversely higher than actual *undervote* rates) due to the current requirement in section 101.5614(5), Florida Statutes, for duplicating a ballot. Counties are required to duplicate an absentee ballot with an overvoted contest as a ballot with all valid votes. This process has the unintended effect of changing an overvoted contest into an undervoted contest.

In addition, polling place procedures in some counties may also enhance this bias. In counties that use ES&S DS200, the voter can override the tabulator to cast such a ballot without interaction or assistance from the poll worker. However, in counties that use precinct tabulators such as the Sequoia Insight Plus, Premier AVOS, Premier AVOSX, and ES&S M100, the poll worker has to override the tabulator when a voter chooses to cast a blank ballot or a ballot with an overvoted contest. For some counties that do not allow the poll worker to override the tabulation device, the poll worker places the blank ballot or overvoted ballot in an emergency bin. Consequently, those ballots are later duplicated without the overvoted contest in the same manner as stated above for absentee ballots.

In summary, there are times that these processes, in essence, incorrectly express an overvoted contest as an undervoted contest, which could hinder identification and reporting of an issue with a voting system and/or underrepresent an *overvote* error rate. It is recommended, at a minimum, that the poll worker permit a voter who chooses to vote a rejected (overvoted) ballot to immediately cast the ballot in all precinct tabulators (not just the ES&S DS200), in lieu of placing the overvoted ballot in the emergency bin.

Introduction

Section 101.595, Florida Statutes, delegates to the Department of State the responsibility to analyze and report on the performance of each type of voting system after every general election. The basis for this analysis is the overvote and undervote report 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 “*no valid votes*” being cast for the contest of interest in the 2012 General Election. The *no 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 absentee and provisional ballots, are tabulated at the polling location. By tabulating the ballots at the polls, the voter is immediately alerted to the error when the tabulator rejects the ballot. The voter is then given the choice to correct the ballot or to cast the rejected ballot. In the case of an absentee or provisional ballot voter, no mechanism exists to let the voter know that he or she has overvoted one or more contests or provide an opportunity to correct it.
- *Undervote*. An undervote means that the voter did not properly designate a choice for a contest and/or the tabulator records no vote for the contest. Although an undervote may be due to a voting machine error, most often it reflects a voter’s intent not to vote in a particular contest. It may be for any number of reasons including a lengthy ballot, an express wish not to vote in a particular contest due to disinterest or as a protest, or a desire to maintain active voter history status without an interest in the ballot. Current voting systems, as counties currently code them, only alert the voter as to a blank ballot (not whether there is one or more undervoted contests). As in the case of overvoting, no mechanism exists to let an absentee 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, or intentionally writing in (as protest) “Mickey Mouse,” “None of the above,” “Anybody but [candidate],” or a fictitious name.

With the exception of persons with disabilities who still have the option of voting on Direct Recording Electronic (DRE) touchscreen machines, all voting in Florida must be by paper/marksense ballot method in connection with a paper tabulator scanner.² Fifteen counties³ use the AutoMark ballot marking device for disability compliance that also satisfies the paper ballot requirement. By 2016, the remaining 52 counties which currently use touchscreen machines will need to provide disability accessibility machines that meet the requirements⁴ of the Help America Vote Act (HAVA)⁵ and permit the voter to cast a paper/marksense ballot.⁶

The certified voting systems in Florida’s 67 counties fall into three vendor-labeled categories: Elections Systems and Software, Inc. (ES&S), Premier Election Solutions (Premier), and

² Section 101.56075, Florida Statutes.

³ As reported by the counties to the Florida Division of Elections.

⁴ A voting device with equipment compliant with the Americans with Disabilities Act is known as an ADA device

⁵ HAVA (Title III, Section 301, Public Law 107-252)

⁶ Section 101.56075(3), Florida Statutes.

Sequoia Voting Systems, Inc. (Sequoia).⁷ In actuality, there are only two active voting system vendors providing and servicing certified voting systems in Florida: ES&S and Dominion Voting Systems, Inc. (Dominion).⁸ Sequoia and Premier are Dominion product lines. Currently, 33 Florida counties use Dominion voting systems, and 34 counties use ES&S voting systems.⁹

For purposes of this report, the 2012 General Election data was analyzed on the basis of the nine types of voting systems' tabulation devices. The nine types of tabulators were further segregated in the table below according to their use in early voting (EV), Election Day (ED), and absentee voting (AB). By analyzing the data at the tabulator level, this analytical approach offers more flexibility than in years prior to 2010 by being more detailed, as well as independent of future changes in voting system configuration.

Tabulators	Number of Counties		
	EV	ED	AB
Sequoia Counties - Insight +	2	2	0
Sequoia Counties - 400-C	0	0	2
Premier Counties - AVOS	27	30	26
Premier Counties - AVOSX	5	2	2
Premier Counties - PCS	0	0	4
ES&S Counties - M100	15	15	13
ES&S Counties - DS200	18	18	0
ES&S Counties - M650	0	0	19
ES&S Counties - DS850	0	0	1
Total =	67	67	67

Nomenclature	
AB	Absentee Ballots
ED	Election Day
EV	Early Voting
PA	Provisional Accepted
OS	Optical Scan
TS	Touchscreen

In this report, “voting method” refers to the different ways Florida voters may cast ballots: via early voting, on Election Day, or via absentee voting.

Methodology

The data for this report was compiled from raw data submitted by Florida's 67 counties. Pursuant to Section 101.595(1), F.S., counties reported their data to the Florida Division of Elections. During the data verification and reconciliation process, counties were contacted for explanations of any discrepancies or unusual entries. The Division of Elections made minor adjustments in this data in order to arrive at a uniform and consistent set of data. The form used

⁷ With the exception of Sequoia counties who use ballots with the “arrow” target selection, all counties use “oval” target selection on the ballots.

⁸ In 2009, ES&S acquired Premier Election Solutions from Diebold Elections Systems, Inc. In 2010, the U.S. Department of Justice forced 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.

⁹ 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.

to submit the 2012 data was the same form used for submission of the 2010 data, containing the same data elements. In both 2010 and 2012, the aggregate data was analyzed according to voting equipment (tabulation device).

The same data elements were submitted by the counties in 2008, and the data set also underwent data verification and reconciliation. Prior to 2010, however, the data was not analyzed by tabulator, as were the 2010 and 2012 data, but by the voting system used. Prior to 2008, when data was aggregated by voting system, many counties were using a single tabulation device (such as 100% touchscreens). By 2008, counties had made considerable changes in tabulation devices, incorporating multiple devices into their systems. The 2008 Overvotes and Undervotes Report,¹⁰ however, continued that analysis methodology in order to make valid comparisons to previous years' data. The analysis methodology was improved in 2010 to incorporate voting device level data by voting method in order to further examine the multiple tabulation devices that were used within each voting system. The change in methodology in 2010 allowed a more enhanced look at the voting systems at the tabulator level and at the voting method level.

Tables presented in this report show not only statewide results, but results aggregated by voting system or by tabulator, depending on the year/contest. Because there is a difference in methodology between 2008 and subsequent years, comparisons are done between these data sets' aggregate statewide results only. The results by voting system for 2008 are included for information only and are not compared to the results by tabulator for subsequent years. (However, since the methodology remained the same since 2010, comparisons by tabulator are possible between 2010 and 2012 data sets.)

Counties commonly upgrade their voting systems as election management system (EMS) versions and software and firmware upgrades become available (and become certified by FDOS); it is far less common for counties to upgrade or change their tabulation devices¹¹. In order to make comparisons among data sets from multiple election years, the data are analyzed at the tabulation device level and not the voting system version, software version, or firmware version levels.

Since 2010, the touchscreen votes were combined with the counties' optical scan tabulator group data. The aggregated touchscreen votes in the marksense totals were few and did not produce a bias to the results. No meaningful analysis could be done on the DRE touchscreen ballots cast, since only 0.03% (2,571 electronic ballots) of the state's total ballots cast was cast via DRE touchscreen. Therefore, data is not compared between the optical scanner tabulator device and DRE touchscreen tabulator device.

Results

The undervote and overvote rates in **Table 1** demonstrate that, for the presidential contests only, results remained very similar. Except for the overvote rate for absentees, which decreased by 0.07%, the deltas between 2008 and 2012 by voting method either remained unchanged or varied by 0.02% or less. The overall undervote rate increased by 0.02%, whereas the overall overvote rate decreased by 0.02%.

The 2010 senatorial contest, in contrast, is significantly different from the two presidential results sets. The overall undervote rate decreased by 0.44% from 2010 to 2012; the overvote rate

¹⁰ [Analysis and Report of Overvotes and Undervotes for the 2008 General Election](http://election.dos.state.fl.us/reports/pdf/Over_Under_Report_08.pdf), Division of Elections, report available at http://election.dos.state.fl.us/reports/pdf/Over_Under_Report_08.pdf

¹¹ For example, of the 53 counties that made some change to their voting system between 2008 and 2012 (as reported to the FDOS), 49 counties changed the EMS software; only three changed their precinct scanner devices, 10 changed ADA devices, and 10 changed central count scanners.

increased by 0.17% for the same period. The fact that in 2012 the overvote and undervote rates return to almost their 2008 levels supports the conclusions of earlier reports that the overvotes and undervotes are influenced by contest.

Table 1

	Undervote Rate			Overvote Rate			
	2008	2010	2012	2008	2010	2012	
	President	Senator	President	President	Senator	President	
Early Voting	0.17%	0.57%	0.18%	Early Voting	0.15%	0.07%	0.15%
Election Day	0.26%	0.76%	0.28%	Election Day	0.28%	0.10%	0.27%
Absentee	0.35%	0.77%	0.35%	Absentee	0.43%	0.18%	0.36%
Overall	0.26%	0.72%	0.28%	Overall	0.28%	0.11%	0.26%

Table 2 compares the "no valid vote" rate from 2008 to 2012 presidential contests. The percent of "not valid" votes in the presidential contest remain unchanged, at 0.75%, from 2008 to 2012. Although aggregated statewide totals can be compared between the two years, it must be noted that the 2008 data was analyzed by voting system, whereas the 2012 data was analyzed by tabulation device and voting method.

Table 2

**Presidential Contest, 2008 vs. 2012
"No Valid Vote" by Voting System**

2008 President			2012 President					
Voting System (Type)	No. of Counties	No Valid Vote	Voting System	Type	No. of Counties			No Valid Vote
					EV	ED	AB	
Sequoia Counties (w/ Insight) ¹	2	0.74%	Sequoia Counties -	Insight+	2	2	0	0.61%
			Sequoia Counties -	400-C	0	0	2	1.33%
Premier Counties (w/OS or OSx) ²	33	0.57%	Premier Counties -	AVOS	27	30	26	0.64%
			Premier Counties -	AVOSX	5	2	2	0.47%
			Premier Counties -	PCS	0	0	4	0.74%
ES&S M Counties (w/ M100) ³	14	0.89%	ES&S Counties -	M100 ⁵	15	15	13	0.89%
ES&S D Counties (w/ DS200)	13	0.92%	ES&S Counties -	DS200	18	18	0	0.76%
			ES&S Counties -	M650	0	0	19	0.98%
			ES&S Counties -	DS850 ⁶	0	0	1	0.62%
ES&S O Counties (w/Optech) ⁴	5	0.60%						
Percent of votes "Not Valid":⁷		0.75%						0.75%
County % Mean:⁸		0.74%						0.75%
% Standard Deviation:⁹		0.33%						0.25%

Notes:

- 1 Sequoia counties are Indian River and Palm Beach. They use the Optech Insight Plus scanner, and the AVC Edge touchscreen for HAVA compliance.
- 2 Hillsborough and Sarasota used the Accuvote OSx as precinct count scanners and the AuoMark ballot marker for HAVA compliance; the remaining Premier counties used the Accuvote OS precinct count scanners and the Accuvote TSx touchscreen for HAVA compliance.
- 3 ES&S blended counties using the ES&S M100 precinct scanners also had the option of using the M650 high-speed scanner.
- 4 The ES&S Optech counties in 2008 were: Clay, Holmes, Santa Rosa, St. Johns, and Washington. By 2010, Clay, Santa Rosa, and St. Johns had upgraded to the DS200 and M650; Holmes and Washington had upgraded to the M100.
- 5 Marion County upgraded their M100 precinct scanners to DS200s for the 2012 election; there was no change in their high-speed scanner, the M650.
- 6 In 2012 Duval county, previously a Premier county using AVOSx and AVOS scanners, changed vendors to ES&S. For the 2012 election, they had the DS200s and the DS850.
- 7 The "Percent of votes not valid" is the result of total "not valid" votes divided by the total votes statewide.

- 8 The county-wide mean is the sum of the counties' individual percentages, divided the number of counties in the data set.
- 9 The standard deviation of all the counties' values, in percentage form.

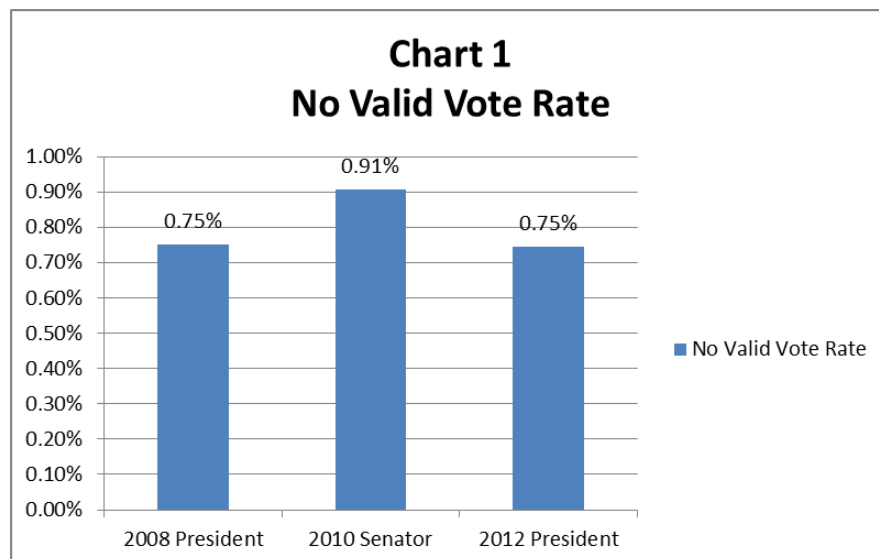
Table 3 compares the 'no valid vote' rate for the first contest on the ballot—the senatorial contest in 2010, and the presidential contest in 2012. The results support the conclusions of earlier reports, which state that the 'no valid vote' rate is contest-dependent. In light of the results in Table 2 that show an unchanged rate for the presidential contest from 2008 to 2012, the 'no valid vote' rate shows a 0.16% difference between the 2010 senatorial contest and the 2012 presidential contest. **Chart 1** illustrates, over the three general election years, the spike in no valid votes in 2010.

Table 3
First Contest on the Ballot, 2010 vs. 2012
"No Valid Vote" by Voting System

Voting System	Type	2010 Senator				2012 President			
		No. of Counties			No Valid Vote	No. of Counties			No Valid Vote
		EV	ED	AB		EV	ED	AB	
Sequoia Counties -	Insight+	2	2	0	0.79%	2	2	0	0.61%
Sequoia Counties -	400-C	0	0	2	1.02%	0	0	2	1.33%
Premier Counties -	AVOS ¹	27	31	26	0.67%	27	30	26	0.64%
Premier Counties -	AVOSX	6	2	3	0.51%	5	2	2	0.47%
Premier Counties -	PCS	0	0	4	0.70%	0	0	4	0.74%
ES&S Counties -	M100 ²	16	16	13	0.85%	15	15	13	0.89%
ES&S Counties -	DS200	16	16	0	1.19%	18	18	0	0.76%
ES&S Counties -	M650	0	0	19	1.11%	0	0	19	0.98%
ES&S Counties -	DS850	--	--	--		0	0	1	0.62%
Percent of votes "Not Valid":					0.91%				0.75%
County % Mean:					0.95%				0.75%
% Standard Deviation:					0.52%				0.25%

Notes:

- 1 The only Premier AVOS/AVOSX county to change was Duval, who moved to ES&S in 2012 and now uses the DS200s and DS850.
- 2 The only other county to change scanners was Marion, who upgraded their M100s to DS200s.



The undervote and overvote rates for the presidential contests for 2008 and 2012 are shown in **Table 4**. The undervote statewide mean increased by 0.02%, and the overvote statewide mean decreased by the same amount, 0.02%. The county percent mean increased slightly for undervotes by 0.06%, and decreased for overvotes by 0.05%.

Table 4

**Presidential Contest, 2008 vs. 2012
Undervote and overvote rate by voting system**

2008 President				2012 President						
Voting System (Type)	No. of Counties	UV	OV	Voting System	Type	No. of Counties			UV	OV
						EV	ED	AB		
Sequoia Counties (w/ Insight)	2	0.30%	0.27%	Sequoia Counties - Insight+		2	2	0	0.27%	0.22%
				Sequoia Counties - 400-C		0	0	2	0.58%	0.59%
Premier Counties (w/OS or OSx)	33	0.24%	0.09%	Premier Counties - AVOS		27	30	26	0.27%	0.11%
				Premier Counties - AVOSX		5	2	2	0.17%	0.08%
				Premier Counties - PCS		0	0	4	0.25%	0.25%
ES&S M Counties (w/ M100)	14	0.40%	0.20%	ES&S Counties - M100		15	15	13	0.43%	0.23%
ES&S D Counties (w/ DS200)	13	0.25%	0.47%	ES&S Counties - DS200		18	18	0	0.25%	0.33%
				ES&S Counties - M650		0	0	19	0.32%	0.44%
				ES&S Counties - DS850		0	0	1	0.62%	0.00%
ES&S O Counties (w/Optech)	5	0.27%	0.11%							
State-wide mean:			0.26%						0.28%	0.26%
County % Mean:			0.29%						0.35%	0.18%
% Standard Deviation:			0.26%						0.20%	0.13%

The 2012 undervotes rate during early voting, as shown in **Table 5**, is consistent with the rate for 2008, increasing from 0.17% to 0.19%.

The overvotes rate during early voting, also shown in **Table 5**, remained unchanged at 0.15%.

Table 5

**Presidential Contest, 2008 vs. 2012
Early Voting undervote and overvote rate by voting system**

2008 President				2012 President					
Voting System (Type)	No. of Counties	UV	OV	Voting System	Type	No. of Counties			
						EV	UV	OV	
Sequoia Counties (w/ Insight)	2	0.16%	0.10%	Sequoia Counties - Insight+		2	0.27%	0.12%	
				Sequoia Counties - 400-C ¹		0			
Premier Counties (w/OS or OSx)	33	0.16%	0.02%	Premier Counties - AVOS		27	0.19%	0.05%	
				Premier Counties - AVOSX		5	0.12%	0.02%	
				Premier Counties - PCS		0			
ES&S M Counties (w/ M100)	14	0.35%	0.15%	ES&S Counties - M100		15	0.30%	0.19%	
ES&S D Counties (w/ DS200)	13	0.17%	0.29%	ES&S Counties - DS200		18	0.18%	0.21%	
				ES&S Counties - M650		0			
				ES&S Counties - DS850		0			
ES&S O Counties (w/Optech)	5	0.16%	0.03%						
State-wide mean:			0.17%					0.19%	0.15%
County % Mean:			0.20%					0.26%	0.11%
% Standard Deviation:			0.34%					0.18%	0.11%

Notes:

1 Central count tabulators (the Sequoia 400-C, Premier PCS, and ES&S M650 and DS850) are not applicable for early voting or Election Day.

For Election Day ballots, the undervotes rate increased from 0.26% to 0.28% from 2008 to 2012 (Table 6). The overvotes rate decreased from 0.28% to 0.27% during the same period.

Table 6

Presidential Contest, 2008 vs. 2012

Election Day undervote and overvote rate by voting system

2008 President				2012 President				
Voting System (Type)	No. of Counties	UV	OV	Voting System	Type	No. of Counties		
						ED	UV	OV
Sequoia Counties (w/ Insight)	2	0.29%	0.31%	Sequoia Counties - Insight+		2	0.27%	0.27%
				Sequoia Counties - 400-C ¹		0		
Premier Counties (w/OS or OSx)	33	0.23%	0.04%	Premier Counties - AVOS		30	0.27%	0.07%
				Premier Counties - AVOSX		2	0.20%	0.07%
				Premier Counties - PCS		0		
ES&S M Counties (w/ M100)	14	0.38%	0.23%	ES&S Counties - M100		15	0.40%	0.28%
ES&S D Counties (w/ DS200)	13	0.27%	0.54%	ES&S Counties - DS200		18	0.30%	0.41%
				ES&S Counties - M650		0		
				ES&S Counties - DS850		0		
ES&S O Counties (w/Optech)	5	0.27%	0.03%					
State-wide mean:			0.26%				0.28%	0.27%
County % Mean:			0.29%				0.33%	0.18%
% Standard Deviation:			0.26%				0.18%	0.17%

Notes:

1 Central count tabulators (the Sequoia 400-C, Premier PCS, and ES&S M650 and DS850) are not applicable for early voting or Election Day.

In Table 7, the undervotes rate for absentee ballots remained the same in 2012, but the overvotes rate decreased from 0.43% to 0.36%.

Table 7

Presidential Contest, 2008 vs. 2012

Absentee undervote and overvote rate by voting system

2008 President				2012 President				
Voting System (Type)	No. of Counties	UV	OV ¹	Voting System	Type	No. of Counties		
						AB	UV	OV
Sequoia Counties (w/ Insight)	2	0.48%	0.34%	Sequoia Counties - Insight+		0		
				Sequoia Counties - 400-C		2	0.58%	0.58%
Premier Counties (w/OS or OSx)	33	0.35%	0.27%	Premier Counties - AVOS		26	0.36%	0.25%
				Premier Counties - AVOSX		2	0.31%	0.45%
				Premier Counties - PCS		4	0.25%	0.24%
ES&S M Counties (w/ M100)	14	0.57%	0.19%	ES&S Counties - M100		13	0.95%	0.19%
ES&S D Counties (w/ DS200)	13	0.30%	0.59%	ES&S Counties - DS200		0		
				ES&S Counties - M650		19	0.32%	0.43%
				ES&S Counties - DS850		1	0.59%	0
ES&S O Counties (w/Optech)	5	0.52%	0.45%					
State-wide mean:			0.35%				0.35%	0.36%
County % Mean:			0.44%				0.53%	0.27%
% Standard Deviation:			0.44%				0.37%	0.22%

Notes:

1 Counties are required to comply with section 101.6414(5), F.S., which requires an absentee ballot to be duplicated for all valid votes in the event the original ballot has an overvoted contest. Thus, a duplicate ballot with valid votes actually changes an overvoted contest into an undervoted contest.

The results of invalid write-in ballots are consistent from 2008 to 2012, as shown in **Table 8**. The state-wide mean decreased by 0.01%, from 0.22% to 0.21%.

Table 8

**Presidential Contest, 2008 vs. 2012
Invalid Write-in vote rate by voting system**

2008 President			2012 President					
Voting System (Type)	No. of Counties	Invalid WI	Voting System	Type	No. of Counties			Invalid WI
					EV	ED	AB	
Sequoia Counties (w/ Insight)	2	0.17%	Sequoia Counties - Insight+		2	2	0	0.12%
			Sequoia Counties - 400-C		0	0	2	0.16%
Premier Counties (w/OS or OSx)	33	0.25%	Premier Counties - AVOS		27	30	26	0.26%
			Premier Counties - AVOSX		5	2	2	0.23%
			Premier Counties - PCS		0	0	4	0.25%
ES&S M Counties (w/ M100)	14	0.29%	ES&S Counties - M100		15	15	13	0.23%
ES&S D Counties (w/ DS200)	13	0.20%	ES&S Counties - DS200		18	18	0	0.18%
			ES&S Counties - M650		0	0	19	0.22%
			ES&S Counties - DS850		0	0	1	0.00%
ES&S O Counties (w/Optech)	5	0.21%						
State-wide mean:		0.22%						0.21%
County % Mean:		0.22%						0.24%
% Standard Deviation:		0.09%						0.08%

Table 9 examines the overvotes and undervotes by voting method for 2012. As expected, the overvotes and undervotes increased from early voting to Election Day; however, the absentee voting method was clearly the most undervoted and overvoted voting method. This pattern held true for every type of tabulation device, except for overvotes on the M100.

Table 9

**Presidential Contest, 2012
Over/Undervotes by Voting Method**

		2012 President								
Voting System	Type	Early Voting		Election Day			Absentees			
		No. of Counties	UV	OV	No. of Counties	UV	OV	No. of Counties	UV	OV
Sequoia Counties - Insight+		2	0.27%	0.12%	2	0.27%	0.27%	0		
Sequoia Counties - 400-C		0			0			2	0.58%	0.58%
Premier Counties - AVOS		27	0.19%	0.05%	30	0.27%	0.07%	26	0.36%	0.25%
Premier Counties - AVOSX		5	0.12%	0.02%	2	0.20%	0.07%	2	0.31%	0.45%
Premier Counties - PCS		0			0			4	0.25%	0.24%
ES&S Counties - M100		15	0.30%	0.19%	15	0.40%	0.28%	13	0.95%	0.19%
ES&S Counties - DS200		18	0.18%	0.21%	18	0.30%	0.41%	0		
ES&S Counties - M650		0			0			19	0.32%	0.43%
ES&S Counties - DS850		0			0			1	0.59%	0
State-wide mean:			0.19%	0.15%		0.28%	0.27%		0.35%	0.36%
County % Mean:			0.26%	0.11%		0.33%	0.18%		0.53%	0.27%
% Standard Deviation:			0.18%	0.11%		0.18%	0.17%		0.37%	0.22%

When the distribution of undervotes and overvotes is viewed in the context of the distribution of total ballots cast by voting method, it becomes even clearer that the absentee voting method produces the most undervotes and overvotes. **Chart 2** illustrates the distribution of total ballots cast by voting method in the 2012 General Election, showing that Election Day clearly garnered the most ballots cast. Absentee voting, almost as popular as early voting, had the fewest ballots cast in the election.

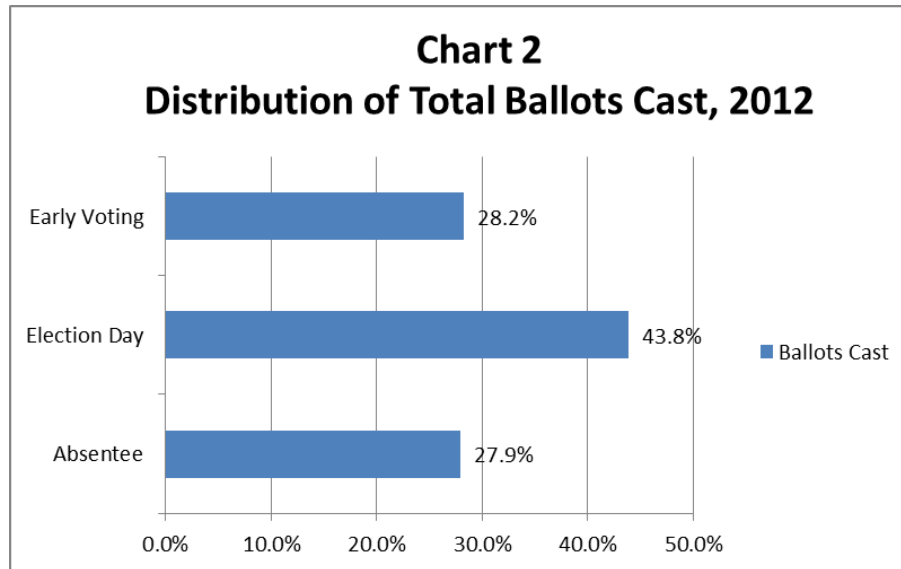
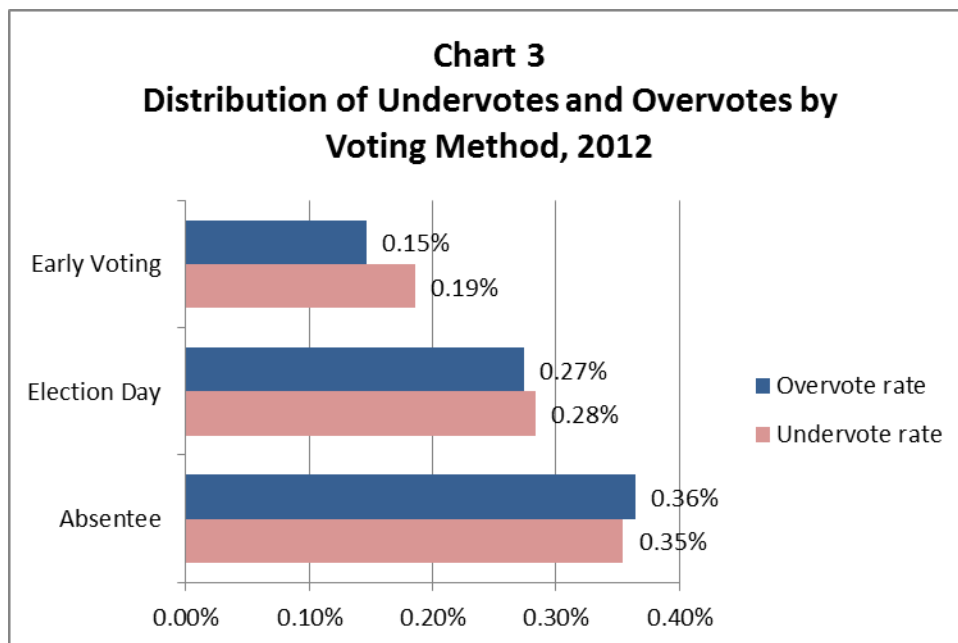
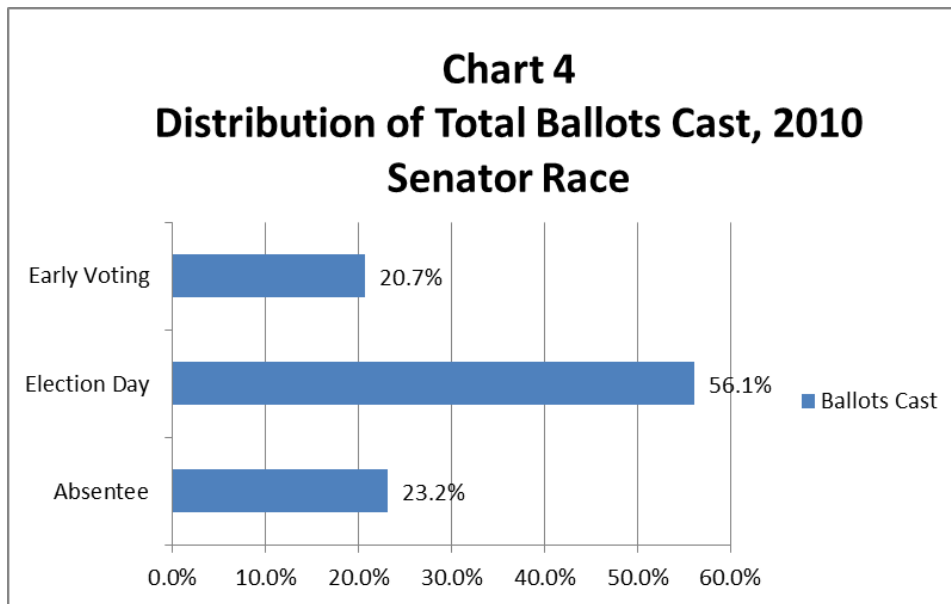


Chart 3, in contrast, shows that the majority of both overvotes and undervotes are, by far, cast via absentee. The comparison of charts 2 and 3 demonstrates that, although absentee voting was the least-used method of casting a ballot, it generated the most undervotes and overvotes in the election by a significant margin. Because this pattern generally held true for every tabulation device (see Table 9), the finding is more likely attributable to a factor other than tabulation device.



Applying this same analysis to the 2010 senatorial contest shows a similar pattern with historical data, supporting the conclusion that the absentee voting method generates more than its share of overvotes and undervotes. **Chart 4** illustrates the distribution by voting method of the total ballots cast in the first contest on the ballot (senatorial contest) in 2010. Election Day in 2010 produced, by even a wider margin than in 2012, the majority of ballots cast.



The distribution of overvotes and undervotes by voting method for the 2010 senatorial contest in **Chart 5** again shows that more overvotes and undervotes are cast via absentee than any other voting method, far out of proportion to the total ballots cast, and therefore consistent with the 2012 data. The 2008 data does not allow for this comparison, as it was not segregated by voting method.

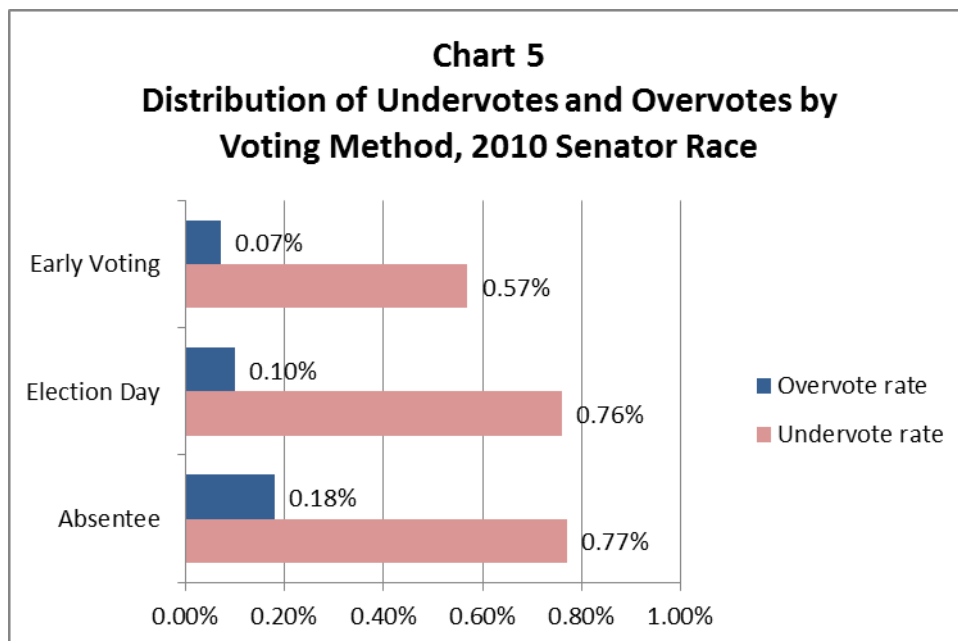


Table 10 compares the undervote and overvote rates for the first contest on the ballot for 2010 and 2012. The data collected was by tabulator for both years, so this comparison allows for detail at the tabulator level. The results show that, consistent with other findings, the undervote rate drops from the senatorial to the presidential contest, and the overvote rate increases. This change is seen for each tabulator type.

Table 10

**First Contest on the Ballot, 2010 vs. 2012
Undervotes and Overvotes by Voting System**

Voting System	Type	2010 Senator					2012 President				
		No. of Counties			UV	OV	No. of Counties			UV	OV
		EV	ED	AB			EV	ED	AB		
Sequoia Counties - Insight+		2	2	0	0.64%	0.11%	2	2	0	0.27%	0.22%
Sequoia Counties - 400-C		0	0	2	0.85%	0.17%	0	0	2	0.58%	0.59%
Premier Counties - AVOS		27	31	26	0.56%	0.02%	27	30	26	0.27%	0.11%
Premier Counties - AVOSX		6	2	3	0.43%	0.02%	5	2	2	0.17%	0.08%
Premier Counties - PCS		0	0	4	0.62%	0.08%	0	0	4	0.25%	0.25%
ES&S Counties - M100		16	16	13	0.68%	0.08%	15	15	13	0.43%	0.23%
ES&S Counties - DS200		16	16	0	0.93%	0.16%	18	18	0	0.25%	0.33%
ES&S Counties - M650		0	0	19	0.84%	0.27%	0	0	19	0.32%	0.44%
ES&S Counties - DS850		--	--	--			0	0	1	0.62%	0.00%
State-wide mean:					0.72%	0.11%					
County % Mean:					0.81%	0.07%					
% Standard Deviation:					0.50%	0.07%					
							0.28%	0.26%			
							0.35%	0.18%			
							0.20%	0.13%			

Method of Casting a Vote

The method of casting a vote is a factor in the overvote and undervote rates. When compared with early voting and Election Day, the absentee voting method clearly produces a higher number of overvotes and undervotes. While the absentee voting method only comprised about 28% of total ballots cast, it generated the greatest number of overvotes and undervotes in the election. This finding echoes the findings of earlier reports, which concluded that the absentee voting method currently does not provide a mechanism for informing a voter of their overvote or undervote before their ballot is finally cast.

It is worthy to note that some counties set up their precinct tabulators to prevent overvotes, thus possibly skewing the counts for those particular counties.

Identification of Problems with the Ballot Design

Due to revisions to some of the Florida election laws passed by the 2011 Florida Legislature, there were some changes to ballot design between the 2008 and 2012 elections, including the removal of a provision which had previously required that “headers” be placed on ballots for federal, state, congressional, and non-partisan races.

There is nothing in the compiled presidential contest data to indicate that there was voter confusion during the election as a result of ballot design and/or ballot instructions issues, though there were instances of long lines at some of the early voting sites and at the polls on Election Day in some counties. It is theorized that one of the reasons for the lines was because the ballot was quite lengthy. To bolster the supposition that ballot design was not a factor in the long queues, data from the 2008 presidential race was compared with the data gathered for the 2012 presidential race. The nominal difference shown in the compiled data clearly demonstrates that these elements had no bearing on the presidential contest. While undervote rates increased

slightly from 2008 to 2012, overvote rates and the invalid write-in rate decreased by about the same percentages (except for absentee overvotes, which decreased substantially more than other category rates). There are no readily apparent variables which indicate why this change took place.

Identification of Voting System Design or Process Issues

Analysis of the detailed information submitted by Florida counties did not reveal any anomalies with the voting equipment.

Conclusion

The results of analysis of the overvotes and undervotes in the 2012 General Election do not show any considerable changes, compared to previous elections. Overvote and undervote rates are comparable to the rates found in the previous presidential election—the overall undervote rate increased by 0.02% to 0.28%, and the overvote rate decreased by the same amount to 0.26%. The invalid write-in rate remained almost unchanged, increasing only 0.01% to 0.21%. When compared to the first contest on the ballot in 2010 (senatorial contest), rates are consistent with expectations, further supporting previous reports' findings that overvote and undervote rates are influenced by contest. The statewide “no valid vote” rate is unchanged from the previous presidential election, remaining at 0.75%.

The method of casting a vote has been found to be a factor affecting the number of overvotes and undervotes. When compared with early voting and Election Day, the absentee voting method clearly produces a higher number of overvotes and undervotes.

There is nothing in the compiled presidential contest data to indicate that there was voter confusion during the election as a result of ballot design and/or ballot instructions issues. Long lines at the polls may have been influenced by factors other than ballot design and/or instructions. Because overvote and undervote rates appear to be consistent with the results of the 2008 presidential election results, and that the only ballot design differences between the two elections were the removal of the headers requirement, the conclusion is that the ballot design and/or instructions were not at issue in the 2012 presidential race results.

Analysis of the detailed information submitted by Florida counties did not reveal any anomalies with the voting equipment.

Recommendations

The Department again conveys that an inherent bias exists for reporting lower than actual *overvote* rates (or conversely higher than actual *undervote* rates) due to the current requirement in section 101.5614(5), Florida Statutes for duplicating a ballot. Counties are required to duplicate an absentee ballot with an overvoted contest as a ballot with all valid votes. This process has the unintended effect of changing an overvoted contest into an undervoted contest.

In addition, polling place procedures in some counties may also enhance this bias. In counties that use ES&S DS200, the voter can override the tabulator to cast such a ballot without interaction or assistance from the poll worker. However, in counties that use precinct tabulators such as the Sequoia Insight Plus, Premier AVOS, Premier AVOSX, and ES&S M100, the poll worker has to override the tabulator when a voter chooses to cast a blank ballot or a ballot with an overvoted contest. For some counties that do not allow the poll worker to override the tabulation device, the poll worker places the blank ballot or overvoted ballot in an emergency bin. Consequently, those ballots are later duplicated without the overvoted contest in the same manner as stated above for absentee ballots.

In summary, there are times that these processes, in essence, incorrectly express an overvoted contest as an undervoted contest, which could hinder identification and reporting of an issue with a voting system and/or underrepresent an *overvote* error rate. It is recommended, at a minimum, that the poll worker permit a voter who chooses to vote a rejected (overvoted) ballot to immediately cast the ballot in all precinct tabulators (not just the ES&S DS200), in lieu of placing the overvoted ballot in the emergency bin.