

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

DONNA CURLING, et al.,

Plaintiffs,

v.

BRAD RAFFENSPERGER, et al.,

Defendants.

Civil Action No.
1:17-cv-02989-AT

DECLARATION OF CHRISTOPHER BRILL

Pursuant to 28 U.S.C. § 1746, I, Christopher Brill, hereby declare as follows:

1. Since 2013, I have been employed as a Senior Data Analyst with TargetSmart Communications LLC, where my duties and responsibilities include, but are not limited to, collecting and analyzing political, electoral, consumer, demographic and other datasets; product development; and strategic consulting.
2. Since 2006, I have devoted my career to the study of political processes in the United States generally, with a particular focus on research and analyses of political and electoral data, from precinct level to nationwide in scope.

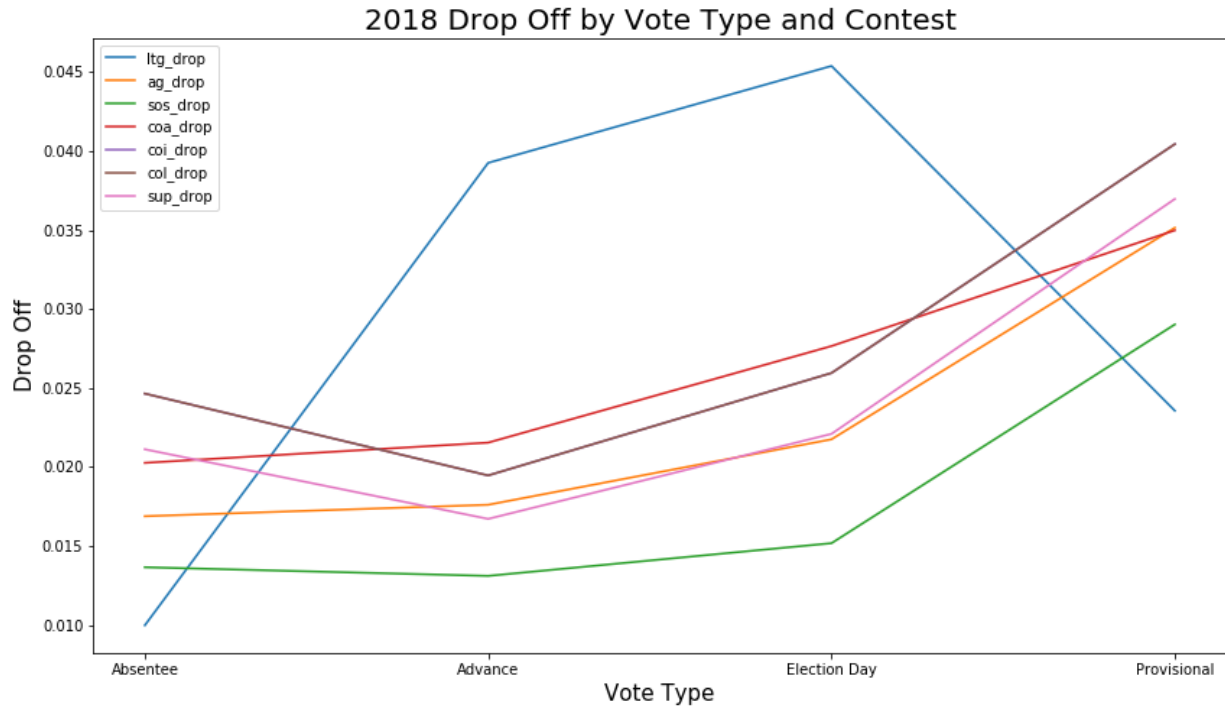
3. My experience includes, but is not limited to, research and analyses of statewide voter files to identify socio-economic, geographic and other characteristics of voter file data.
4. I also have experience comparing and matching political and electoral data, including voter file data, against large and complex datasets; analyzing the results of such comparisons and matching; and identifying strengths and weaknesses in the methods, protocols and algorithms used in performing these kinds of analyses.
5. My experience also includes identifying reasons for false positive and false negative results when comparing or matching such data across large datasets and developing best practices for optimizing accurate matches and comparisons of data.
6. I obtained a Bachelor of Arts degree in Political Science from the University of New Mexico 2006. My current resume is attached and incorporated herein by reference as Exhibit A.
7. I have been retained by Plaintiffs' counsel in this matter to conduct analyses of the November 6, 2018 general election vote results in Georgia, in particular to analyze the undervote in statewide contests, including the Lieutenant Governor's election; to offer my opinions concerning said data and analyses

based upon by background, training and experience; and to prepare a preliminary report summarizing my analyses of this data and opinions.

8. I am not billing Plaintiffs' counsel for my services in this matter.
9. My report and accompanying affidavit and exhibits, which include my curriculum vitae, were filed with the court in *Coalition for Good Governance v. Raffensperger*, No. 2018CV31348 (Fulton Cty. Sup. Ct.), and are attached hereto as Exhibit A.
10. The sources used for the analysis are from officially published election result tabulations made available by the Georgia Secretary of State, as well as publicly available individual voter file data.
11. My opinions are based upon currently available information. I reserve the right to amend, supplement and update my opinions and report if additional information is made known to me during the pendency of this litigation.
12. It is typical in Georgia and other states that in major elections, almost everyone who casts a ballot votes for the race at the "top of the ticket," which is followed by a slight decline in the number of votes cast in the statewide down-ballot races that follow.

13. In gubernatorial elections dating back to 2002, the undervote rate for down-ballot statewide offices in Georgia has ranged from one to two percent, and has never exceeded 3.1 percent.
14. In the 2018 general election, however, the Lieutenant Governor contest between Geoff Duncan and Sarah Riggs Amico, had an undervote rate of 4.0 percent. Thousands fewer votes were cast in the Lieutenant Governor's race than would have been expected based on historic voter participation rates.
15. I have analyzed election results in the more than 2,600 voting precincts in Georgia using a series of data manipulation tools, including an internal license of 'Alteryx' a well-known analytics platform commonly used by experts in the field, as well as additional analysis via open sourced Python data libraries. The methodology and code for my analysis is attached hereto as Exhibit B.
16. The undervote rate in the November 2018 Lieutenant Governor's race among votes cast in person on DRE machines on Election Day was approximately 4.5 percent.
17. The undervote rate in the Lieutenant Governor's race among votes cast in person on DRE machines during early voting was approximately 3.9 percent.
18. The undervote rate in the November 2018 Lieutenant Governor's race among absentee votes cast by paper ballot was approximately 1 percent.

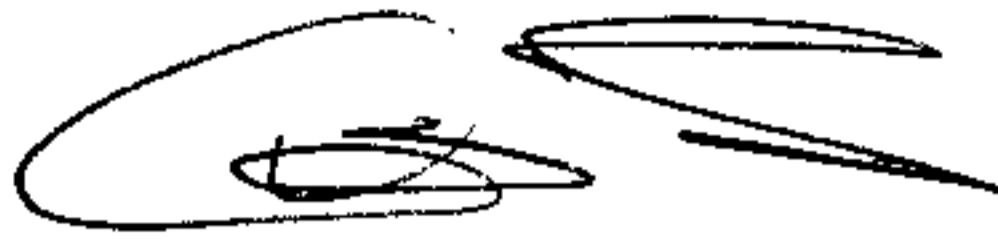
19.A chart comparing the undervote in the Lieutenant Governor’s race by (1) in person Election Day vote; (2) in person advance vote; and (3) absentee vote is below:



	ltg_drop	ag_drop	sos_drop	coa_drop	coi_drop	col_drop	sup_drop
vote_type							
Absentee	0.00998766	0.0168936	0.0136643	0.0202705	0.0246538	0.0246538	0.0211293
Advance	0.039255	0.0176167	0.0131164	0.02155	0.0194733	0.0194733	0.0167233
Election Day	0.0453874	0.0217586	0.0151843	0.0276606	0.0259563	0.0259563	0.0221039
Provisional	0.0235713	0.0351501	0.0290299	0.0349847	0.0404433	0.0404433	0.0369696

20.I declare under penalty of perjury that the foregoing is true and correct.

Executed on June 21, 2019 in Phoenix, Arizona.

A handwritten signature in black ink, consisting of several loops and a long horizontal stroke extending to the right.

Christopher Brill

Exhibit A

**IN THE SUPERIOR COURT OF FULTON COUNTY
STATE OF GEORGIA**

**COALITION FOR GOOD
GOVERNANCE, RHONDA J.
MARTIN, SMYTHE DUVAL, AND
JEANNE DUFORT,**

**Plaintiffs,
v.**

**ROBYN A. CRITTENDEN,
Secretary of State of Georgia,
et al.,**

Defendants.

**CIVIL ACTION FILE
NO. 2018CV31348**

AFFIDAVIT OF CHRISTOPHER BRILL

Appeared before me, the undersigned officer duly authorized to administer oaths, Christopher Brill, who after being duly sworn states as follows:

1. Since 2006, I have devoted my career to the study of political processes in the United States generally, with a particular focus on research and analyses of political and electoral data, from precinct level to nationwide in scope.

2. My experience includes, but is not limited to, research and analyses of statewide voter files to identify socio-economic, geographic and other characteristics of voter file data.

3. I also have experience comparing and matching political and electoral data, including voter file data, against large and complex datasets; analyzing the results of such comparisons and matching; and identifying strengths and weaknesses in the methods, protocols and algorithms used in performing these kinds of analyses.

4. My experience also includes identifying reasons for false positive and false negative results when comparing or matching such data across large datasets and developing best practices for optimizing accurate matches and comparisons of data.

5. Since 2013, I have been employed as a Senior Data Analyst with TargetSmart Communications LLC, where my duties and responsibilities include, but are not limited to, collecting and analyzing political, electoral, consumer, demographic and other datasets; product development; and strategic consulting.

6. I obtained a Bachelor of Arts degree in Political Science from the University of New Mexico 2006. My current resume is attached and incorporated herein by reference as Exhibit B.

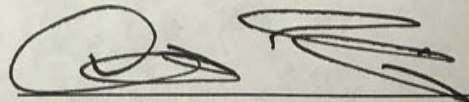
7. I have been retained by Plaintiffs' counsel in this matter to conduct analyses of the November 6th 2018 general election vote results in GA, with a focus on the under voting that took place with respect to the Lt. Governor's election; to offer my opinions concerning said data and analyses based upon by background,

training and experience; and to prepare a preliminary report summarizing my analyses of this data and opinions.

8. The sources used for the analysis are from officially published election result tabulations made available by the Secretary of State, as well as publicly available individual voter file data.

9. My preliminary report is attached and incorporated herein by reference as Exhibit A.

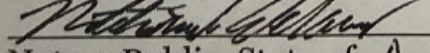
10. My opinions and preliminary report for the Coalition for Good Governance are based upon the information that has currently been made available to me and is accurate to the best of my knowledge and belief, and I would testify to these opinions if called upon to do so. I reserve the right to amend, supplement and otherwise update my opinions and report if additional information is made known to me during the pendency of this litigation.



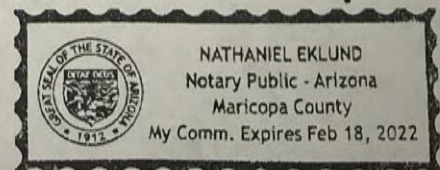
Christopher Brill

Sworn to and subscribed before me:

On this 7th day of January, 2019


Notary Public, State of Arizona

My Commission Expires: Feb. 18, 2022



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To: Marilyn Marks
From: Christopher Brill, Senior Data Analyst
Date: January 5th 2019
Subject: Exhibit A: Analysis of the 2018 Georgia Lt. Governor undervote

Research Summary

The purpose of this analysis is to examine for possible irregularities in the number of votes cast for the 2018 Lieutenant Governor's election in Georgia. TargetSmart was approached by Marilyn Marks, Executive Director, for the Coalition for Good Governance to examine what appeared to be a significantly lower number of votes being cast for the Lt. Governor's election than all other statewide constitutional offices in the November 6, 2018 election

TargetSmart is considered an industry leader in voter data and political campaign services. In addition to maintaining a nationwide voter file, TargetSmart also maintains a nationwide repository of election results allowing us to examine electoral trends across states and time. For this project, the lead researcher also has over a dozen years' experience collecting and analyzing publicly available election results.

The primary question we want to probe: "was the undervote that occurred during the Lt. Governor election consistent with historic patterns and do the factors that we know contribute to higher rates of under voting apply to this election?"

After an initial examination of the state, county and precinct level results from the 2018 election in Georgia it is our initial conclusion that the vote totals published cast substantial doubt on the final vote total of the Lt. Governor election. The undervote that occurred for the Lt Governor election is simply not consistent with patterns of undervote seen previously in Georgia, or around the country.

Defining Under voting

Before presenting our case, it may help to define terms. Quite simply, an undervote occurs when a voter decides, or by accident, does not vote for a specific office or issue on the ballot. While voters might have countless motivations while in the voting booth on what they do and do not vote for, when it comes to under voting there are generally 3 variables that are most associated with high undervote rates:

- 1) **Low visibility:** If an election on a ballot is not well known to the public, is further down the ballot, or both then a higher undervote is likely to occur. For instance, an office such as 'Community College District Board' might generally suffer from high rates of under voting because voters are not familiar with the office or do not know any of the candidates.
- 2) **Non-Partisan/Lack of partisan cues:** If an election on a ballot is non-partisan, that election may experience a higher rate of under voting. Research shows that voters tend to use a candidate's party affiliation as a 'cue' for whether they should vote one way or another, even if they are unsure who the candidate is. When this cue is not present for non-partisan elections, more voters are likely to skip the contest altogether, resulting in higher rates of under voting.
- 3) **Uncompetitive election/Only one major party on the ballot:** If an election is not competitive, or only one major party has a candidate on the ballot, and is near assured victory before Election Day, under voting tends to be higher. The lower the stakes of the election, the higher the under voting tends to be.

A Focus on the Lt. Governor Election

When the vote totals for the 2018 Lt. Governor election are compared to the other 8 statewide constitutional offices an anomaly becomes visible: Tens of thousands of fewer votes were cast for Lt Governor than any of the other elected offices at the top of the ballot. Table 1 below compares the number of votes cast for Governor in 2018 to the remaining statewide, partisan, constitutional offices.

Table 1: Total 2018 Undervote by Office

Office	2018	Under Vote	Drop Off vs Gov
Governor	3,939,328		
Lt. Governor	3,780,304	-159,024	4.0%
Secretary of State	3,883,594	-55,734	1.4%
Attorney General	3,862,370	-76,958	2.0%
Commissioner of Agriculture	3,843,480	-95,848	2.4%
Commissioner of Insurance	3,861,625	-77,703	2.0%
State School Superintendent	3,862,464	-76,864	2.0%
Commissioner of Labor	3,849,450	-89,878	2.3%

Based on our understanding of the factors that encourage higher rates of under voting (as outlined in the previous section), the Lt. Governor's election would not seem to contain any of the defining variables we usually see when higher than normal under voting occurs. The Lt Governor's election, position wise on the ballot, was directly below one of the most competitive and highly publicized elections for Governor in years. The election was partisan, and the election was extremely competitive (much like other statewide offices on the ballot), with the winner receiving just 51.6% of the vote. **In short, there is little reason to suspect that under voting should be higher for Lt Governor than any of the other 8 constitutional offices based on its competitiveness, position on the ballot or its partisan classification.** Yet, under voting was more than *two times higher* than under voting for Attorney General, and *three times higher* than that for Secretary of State. The question becomes, why?

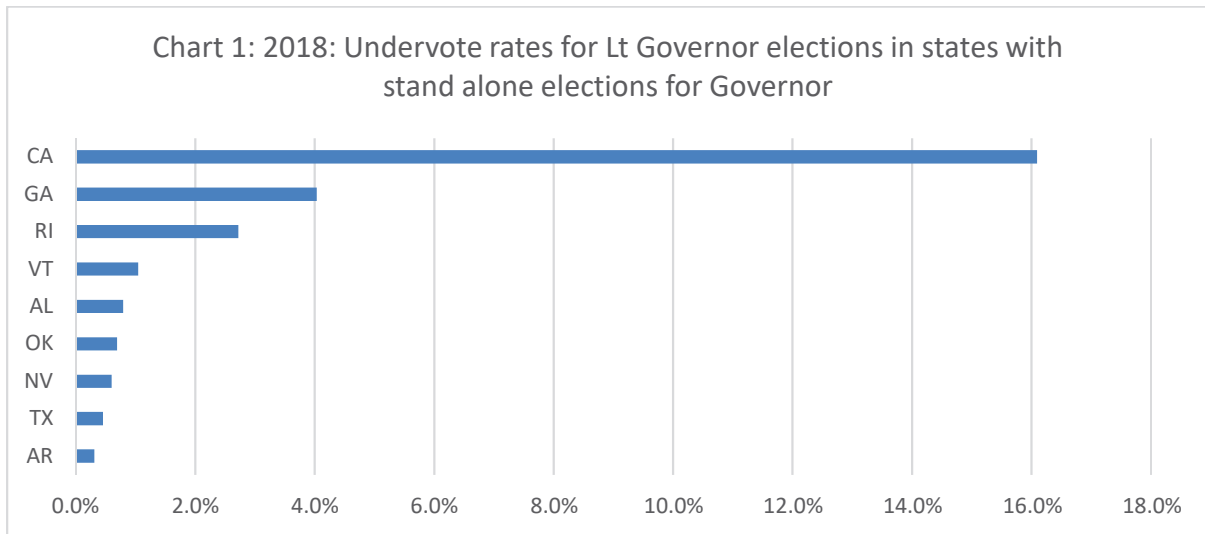
This anomaly becomes more apparent when examining past elections. Table 2 below compares drop off percentages for each of the state's 8 constitutional offices by election cycle since 2002:

Table 2: % Decrease in votes cast compared to that years gubernatorial contest

	2018	2014	2010	2006	2002
Lt. Governor	4.0%	0.8%	0.3%	1.2%	0.9%
Secretary of State	1.4%	0.9%	0.9%	2.8%	1.0%
Attorney General	2.0%	1.0%	0.9%	2.3%	2.8%
Commissioner of Agriculture	2.4%	1.6%	1.2%	1.8%	2.1%
Commissioner of Insurance	2.0%	1.2%	1.2%	2.4%	2.1%
State School Superintendent	2.0%	1.0%	0.9%	1.1%	1.2%
Commissioner of Labor	2.3%	1.7%	1.6%	3.1%	2.8%

In this context, the historic nature of the undervote becomes clear: Since 2002, the undervote percentage compared to Governor, for all constitutional offices has averaged 1.6%. The 4% drop-off seen here is more than 3 standard deviations away from that mean, further indicating the drop-off seen here is an extreme outlier. Overall, the 4% drop-off between Lt Governor and Governor is the largest gap seen in a mid-term this century in Georgia.

Finally, a quick comparison to similar Lt Governor elections that took place elsewhere in 2018 highlights the strangeness of the result in GA. Chart 1 below examines the undervote rate in the 9 states with stand alone elections for Lt. Governor in 2018:



Out of all states, only CA had a higher undervote percentage. Why? Because in 2018, due to California's top two primary set up, just two Democratic candidates were on the ballot- there were no Republican candidates or third-party candidates for voters to choose from; again, an ingredient for higher rates of under voting. Minus California, GA's Lt Governor under vote was the highest among all Lt Governor contests in the country in 2018.

Georgia's 2018 State Representative Elections

Second, an examination of the county and precinct level data from the 2018 election raises additional questions about the reasonableness of the Lt. Governor reported vote tallies. Specifically, if we go even further down the ballot, and examine state representative, otherwise known as 'state house' elections, we see Lt Governor vote totals that are even lower than those for non-competitive state representative elections.

To recap, there were 180 state representative seats up for election in 2018, with as many as 110 of those seats 'uncontested', meaning only 1 major party had a general election candidate on the ballot to choose from. Not surprisingly, this number of uncontested seats resulted in a smaller number of votes cast for state representative. In total just 3,470,967 votes were cast for a state representative in Georgia, or 468,351 fewer votes than cast for Governor, an aggregate drop off of almost 12%. Again, this makes sense based on our knowledge of under voting: uncompetitive or uncontested elections tend to yield smaller vote totals.

With that context present, an analysis of the votes cast across the state's 2,636 precincts show that, inexplicably, more votes were cast for State Representative than Lt Governor in *1,012 precincts, or 38% of all precincts*. Further, in 137 of those 1,012 precincts, the Democratic candidate for State Representative received 100% of the total votes cast for that contest. Ultimately this raises the question: **Why would more voters in a precinct vote in an uncontested or uncompetitive State Representative election than for an election further up the ballot that is contested and competitive?**

To further illustrate this point, we compare state representative vote totals to another statewide election with what appear to be normal rates of under voting: Attorney General. In total there were just 410 precincts where there were more votes cast for State Representative than Attorney General. **In just**

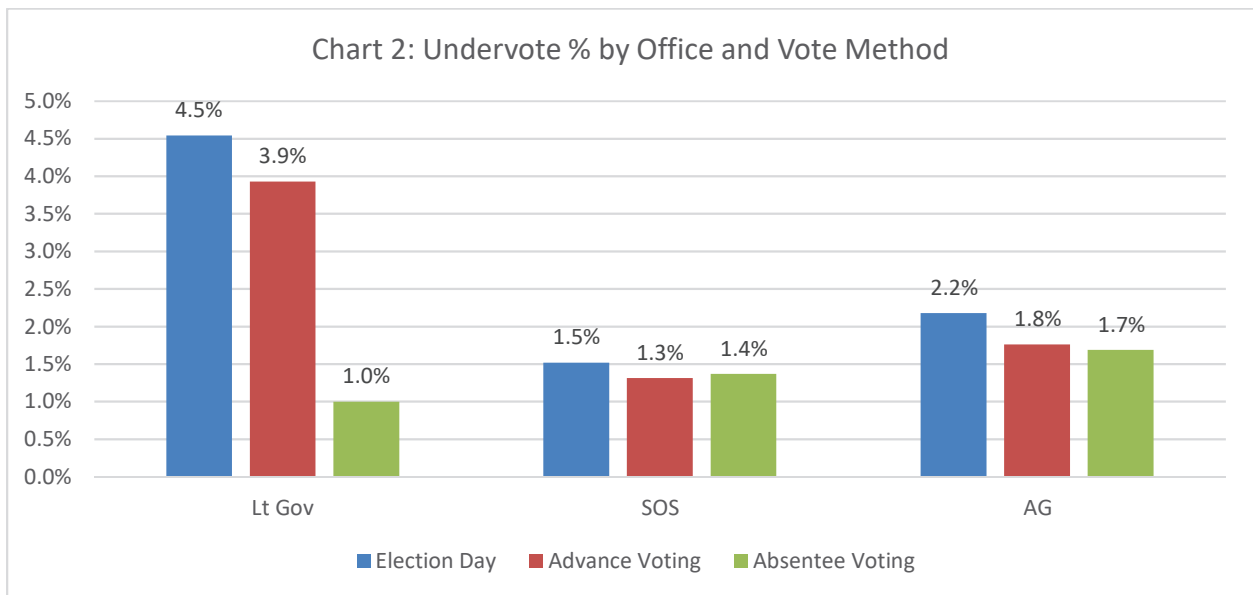
two of those precincts did the Democratic candidate for State Representative receive 100% of the votes. This would line up with our established expectations: if a down ballot election such as state representative, garnered more votes than a statewide election, it would be in precincts with more locally competitive representative elections, and not where candidates are receiving 100% of the vote.

Addressing Voter Choice and Vote Method

We believe that the data presented thus far, combined with the necessary context around what variables accompany higher rates of under voting, shows striking irregularities in the total vote for Lt Governor, that ultimately call into question the accuracy of the vote and the legitimacy of the outcome

With that said, we can't ultimately rule out with 100% certainty that a group of voters decided, *intentionally*, to not vote for Lt. Governor. However, what makes this intention even more unlikely is how the under vote for Lt Governor breaks down when comparing **vote method**. In this context, vote method refers to how a voter decided to cast their ballot- either through mail in absentee, in person early voting (or 'advance voting') and finally Election Day voting at the polls. Early voting and Election Day voting are conducted on electronic machines and mail in absentee is voted on paper ballots.

After examining county level results released by the Secretary of State, we found that there were significant differences in the Lt Governor under vote, depending on the method of vote. For instance, the voting machine election day under vote was approximately 4.5%, while the undervote was as little as 1% among absentee by mail voters, who voted on paper. This is an additional oddity in the data, especially when, as chart 2 demonstrates below, under vote rates are more consistent across method of voting for other offices such as Secretary of State (SOS) and Attorney General (AG):



According to data on the GA voter file, absentee voters tended to skew somewhat older, more Democratic (according to our partisanship modeling) and more African American; but it is unlikely that such a modest skew could have accounted for such a large difference in the under vote between absentee and election day voters. **Therefore, if voters were deliberately under voting in the Lt Governor election, why would that not be consistent across all vote methods? Instead, we would speculate that the key difference here is the technology that is being used to administer absentee votes vs in person votes, and not differences in the voters who selected one vote method or the other.**

Conclusion

In conclusion, based on our analysis of the publicly available data, it is our opinion that the undervote totals reflected in the Lt Governor's race are extremely suspect and irregular and cast a serious doubt over the accuracy of the final vote count and the certified outcome of the Lt. Governor's contest.

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Exhibit B

Christopher A. Brill

826 E Lamar Rd
Phoenix AZ 85014

602-295-3389
cbrillaz@gmail.com

Employment History

Senior Data Analyst

TARGETSMART COMMUNICATIONS

Phoenix, AZ. Feb 2013 to Present

- Currently provide support and data analysis to progressive issue and candidate campaigns as well as 501c(3) and c(4) organizations around the United States with a focus on helping clients optimize and execute outreach programs.
- Currently manage the data and targeting efforts for Arizona based progressive coalitions such as Arizona Wins and One Arizona.
- Lead project manager for TargetSmart's 'ElectionBase': a nationwide precinct level election database, merged with voter file and other data sets, in order to provide comprehensive district level profiles and Democratic performance projections.
- Lead client services representative for a wide range of organizations such as America Votes and the Democratic Legislative Campaign Committee (DLCC)

National Data Director

DEMOCRATIC NATIONAL COMMITTEE (DNC)

Washington D.C. Aug 2011 to Jan 2013

- Managed a 7-figure budget as well as a team of 9 people and was responsible for the day to day operations of the DNC data department including data acquisition, analysis and data support services.
- Lead director for the committee's national voter file. Coordinated with the presidential campaign, other national committees and all 50 state parties on voter file, data services and support needs.
- Managed day-to-day vendor and consultant relationships in relation to the national voter file, as well as developed in-house data testing to inform vendor selection process.

Acquisitions Manager

DEMOCRATIC NATIONAL COMMITTEE (DNC)

Washington D.C. Apr 2010 to Aug 2011

- Led the data acquisition team at the DNC and was responsible for acquiring voter file data nationwide as well as establishing a national voter file and data update schedule.
- Provided voter file and data support to state party committees, other national party committees such as the DCCC, DSCC and Organizing for America.

Elections and Targeting Director

ARIZONA DEMOCRATIC PARTY (ADP)

Phoenix AZ. June 2008- April 2010

- Developed and implemented the Coordinated Campaign's vote by mail application chase program in 2008 as well as Permanent Early Voter sign up programs in 2009.
- Compiled and aggregated data to provide daily and weekly briefings with campaign principals, partner organizations and ADP staff.
- Provided voter targeting and data assistance to campaigns, elected officials and party leaders.

Voter File Director

ARIZONA DEMOCRATIC PARTY (ADP)

Phoenix AZ. June 2006- June 2008

- Maintained statewide voter file by coordinating with state, county and city election officials, party staff and data vendors.
- Cultivated relationships with key ADP stakeholders with the goal of promoting the use of a single statewide voter file for local party affiliates and candidates.
- Developed voter file training programs for state party staff, volunteers and candidates.

Skills and Core Competencies

- Core competencies include project management, data acquisition, manipulation and cleaning (data wrangling) visualization, research, and analysis.
- Proficient in multiple progressive software platforms such as NGP-VAN, Blocks, Q-Tool, M-Tool, RegTrak, Grassroots Unwired and Hustle.
- Proficient in data manipulation using tools such as using SQL, R, Vertica and Alteryx.
- Proficient in mapping platforms using ArcGis and Google Fusion Tables.
- Proficient in Microsoft Office products including Outlook, Excel, Word and PowerPoint.

Education

UNIVERSITY OF NEW MEXICO, Albuquerque NM. 2002-2006
Studies leading to a BACHELORS of ARTS in Political Science