Exh. 1

An Analysis of Surveys Regarding Absentee Ballots Across Several States

William M. Briggs

November 23, 2020

1 Summary

Survey data was collected from individuals in several states, sampling those who the states listed as not returning absentee ballots. The data was provided by Matt Braynard.

The survey asked respondents whether they (a) had ever requested an absentee ballot, and, if so, (b) whether they had in fact returned this ballot. From this sample I produce predictions of the total numbers of: **Error #1**, those who were recorded as receiving absentee ballots *without* requesting them; and **Error #2**, those who returned absentee ballots but whose votes went missing (i.e. marked as unreturned).

The sizes of both errors were large in each state. The states were Georgia, Michigan, Wisconsin, and Arizona where ballots were across parties. Pennsylvania data was for Republicans only.

2 Analysis Description

Each analysis was carried out separately for each state. The analysis used (a) the number of absentee ballots recorded as unreturned, (b) the total responding to the survey, (c) the total of those saying they did not request a ballot, (d) the total of those saying they did request a ballot, and of these (e) the number saying they returned their ballots. I assume survery respondents are representative and the data is accurate.

From these data a simple parameter-free predictive model was used to calculate the probability of all possible outcomes. Pictures of these probabilities were derived, and the 95% prediction interval of the relevant numbers was calculated. The pictures appear in the Appendix at the end. They are summarized here with their 95% prediction intervals.

Error #1: being recorded as sent an absentee ballot without requesting one.

Error #2: sending back an absentee ballot and having it recorded as not returned.

State	Unreturned ballots	Error #1	Error #2
Georgia	138,029	16,938–22,771	31,559–38,866
Michigan	139,190	29,611–36,529	27,928–34,710
Pennsylvania*	165,412	32,414–37,444	26,954–31,643
Wisconsin	96,771	16,316–19,273	13,991–16,757
Arizona	518,560	208,333–229,937	78,714–94,975

*Number for Pennsylvania represent Republican ballots only.

Ballots that were not requested, and ballots returned and marked as not returned were classed as *troublesome*. The estimated average number of troublesome ballots for each state were then calculated using the table above and are presented next.

State	Unreturned ballots	Estimated average troublesome ballots	Percent
Georgia	138,029	53,489	39%
Michigan	139,190	62,517	45%
Pennsylvania*	165,412	61,780	37%
Wisconsin	96,771	29,594	31%
Arizona	518,560	303,305	58%

*Number for Pennsylvania represent Republican ballots only.

3 Conclusion

There are clearly a large number of troublesome ballots in each state investigated. Ballots marked as not returned that were never requested are clearly an error of some kind. The error is not small as a percent of the total recorded unreturned ballots.

Ballots sent back and unrecorded is a separate error. These represent votes that have gone missing, a serious mistake. The number of these missing ballots is also large in each state.

Survey respondents were not asked if they received an unrequested ballot whether they sent these ballots back. This is clearly a lively possibility, and represents a third possible source of error, including the potential of voting twice (once by absentee and once at the polls). No estimates or likelihood can be calculated for this potential error due to absence of data.

4 Declaration of William M. Briggs, PhD

1. My name is William M. Briggs. I am over 18 years of age and am competent to testify in this action. All of the facts stated herein are true and based on my personal knowledge.
2. I received a Ph.D of Statistics from Cornell University in 2004.
3. I am currently a statistical consultant. I make this declaration in my personal capacity.
4. I have analyzed data regarding responses to questions relating to mail ballot requests, returns and related issues.
5. I attest to a reasonable degree of professional certainty that the resulting analysis are accurate.

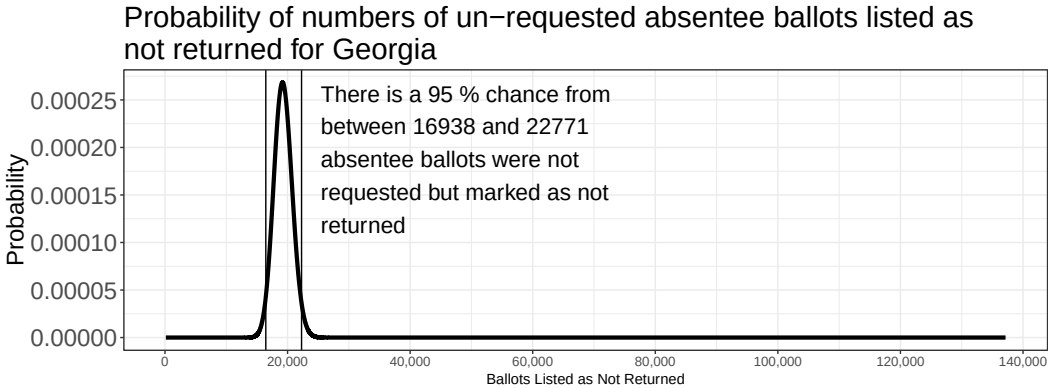
I declare under the penalty of perjury that the foregoing is true and correct.

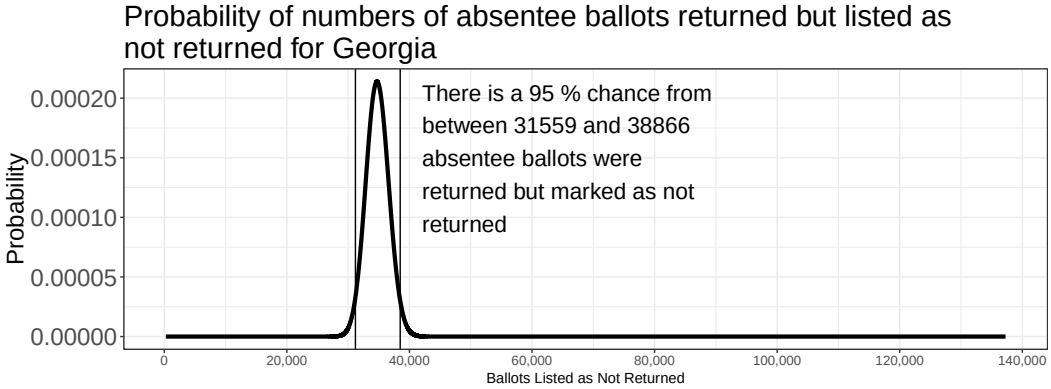
23 November 2020

William M. Briggs

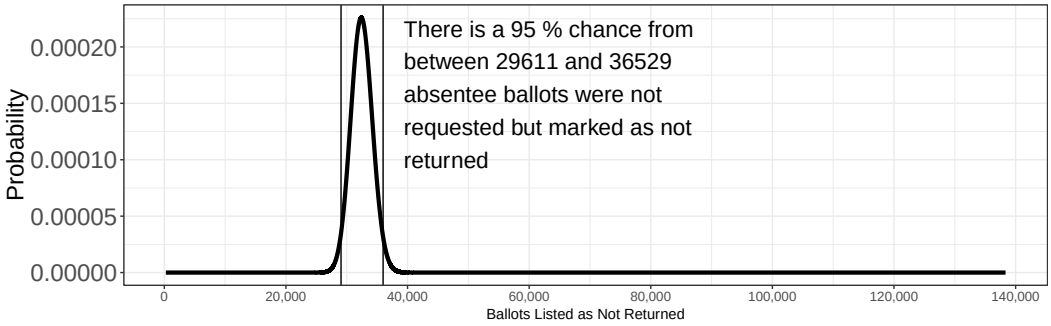
5 Appendix

The probability pictures for each state for each outcome as mentioned above.

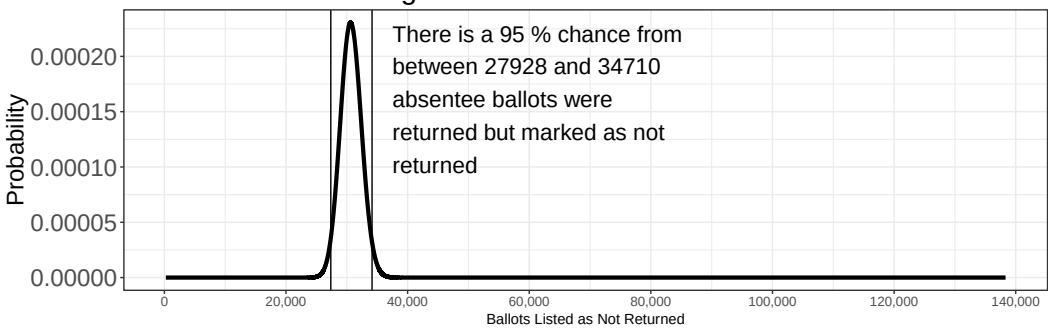




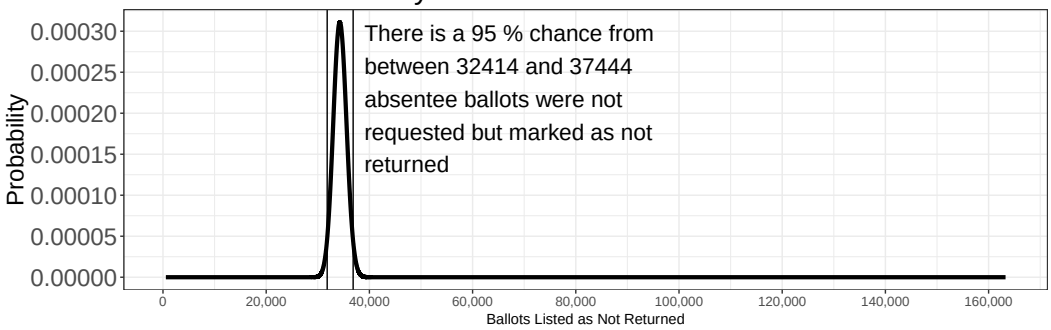
Probability of numbers of un−requested absentee ballots listed as not returned for Michigan



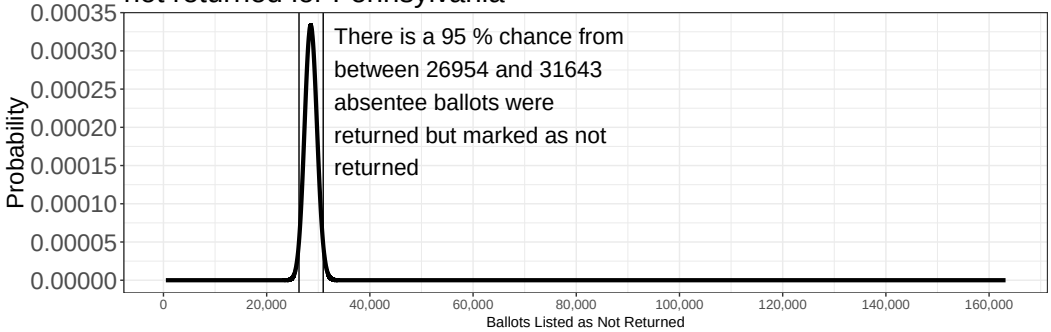
Probability of numbers of absentee ballots returned but listed as not returned for Michigan



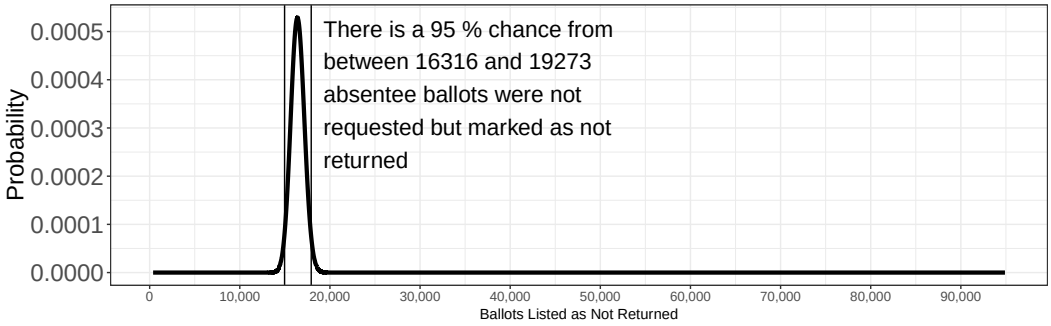
Probability of numbers of un−requested absentee ballots listed as not returned for Pennsylvania



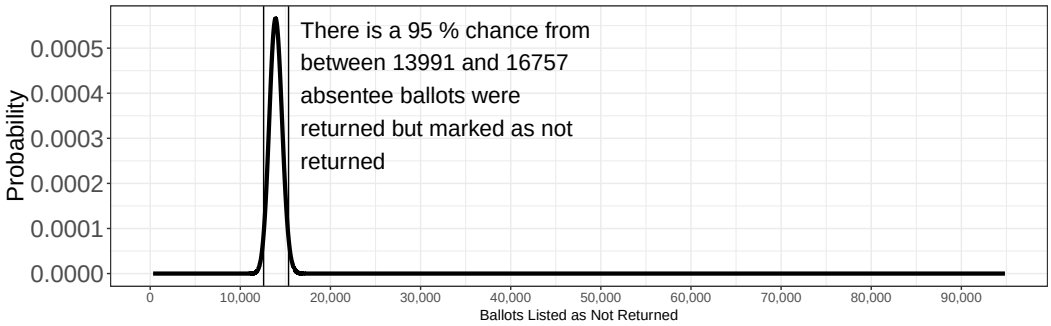
Probability of numbers of absentee ballots returned but listed as not returned for Pennsylvania



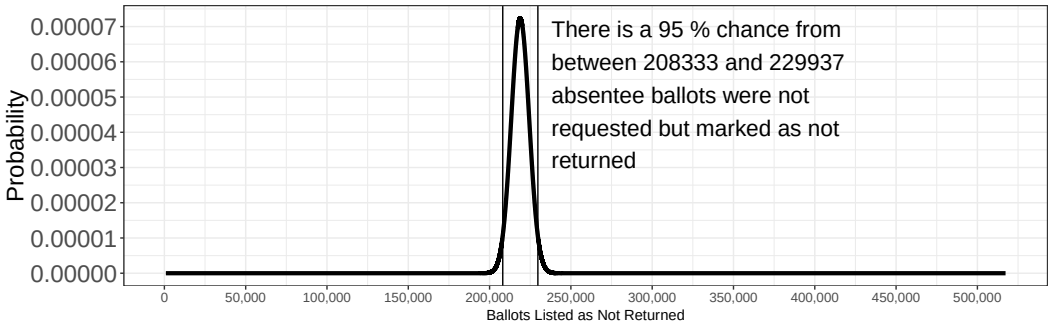
Probability of numbers of un−requested absentee ballots listed as not returned for Wisconsin



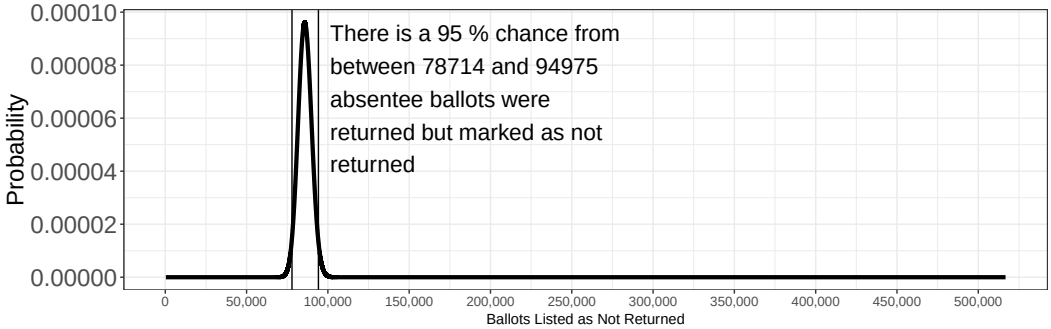
Probability of numbers of absentee ballots returned but listed as not returned for Wisconsin



Probability of numbers of un−requested absentee ballots listed as not returned for Arizona



Probability of numbers of absentee ballots returned but listed as not returned for Arizona



0276 GA Unreturned_Absentee Live ID Topline

			11/16/2020	11/17/2020
15179	**Completes**		**8143**	**7036**
184	**Q5=01 or 02**	status = C	64	120
13,479	**Answering Machines**	status = AM	7090	6389
1,516	**up/RC**	status = R, IR, RC, DC	989	527
4,902	**Numbers/Language**	status = D, BC,WN, NE	2436	2466
0	**MA**	status = MA	0	0
58.45%	**List Penetration**			
34,355	**Data Loads**		34,355	

Q1 - May I please speak to <lead on screen>?		**Response**	**16-Nov**	**17-Nov**
767	65.28%	1. Reached Target [Go to Q2].	446	321
255	21.70%	[Go to Q2].	165	90
153	13.02%	X = Refused <Go to CLOSE A>	104	49
385	32.77%	Q = Hangup <Go to CLOSE A>	267	118
1,175	**100.00%**	**Sum of All Responses**	**982**	**578**

Q2 - Did you request an absentee ballot?		**Response**	**16-Nov**	**17-Nov**
591	61.31%	1. Yes. [Go to Go to Q3].	343	248
128	13.28%	2. No. [Go to Q4].	84	44

39	4.05%	member confirmed “Yes” [Go to	24	15
14	1.45%	member confirmed “No” [Go to Q4]	11	3
40	4.15%	5. Unsure. [Go to Q3].	26	14
82	8.51%	moment. [Go to Close A]	48	34
70	7.26%	X = Refused <Go to CLOSE A>	42	28
58	6.02%	Q = Hangup <Go to CLOSE A>	33	25
964	**100.00%**	**Sum of All Responses**	**611**	**411**

Q3 - Did you mail back that ballot?		**Response**	**16-Nov**	**17-Nov**
240	38.52%	1. Yes. [Go to Go to Q4].	149	91
317	50.88%	2. No. [Go to Close A].	174	143
17	2.73%	member confirmed “Yes” [Go to	10	7
9	1.44%	member confirmed “No” [Go to Close A]	4	5
24	3.85%	5. Unsure. [Go to Close A].	14	10
11	1.77%	moment. [Go to Close A]	8	3
5	0.80%	X = Refused <Go to CLOSE A>	5	0
7	1.12%	Q = Hangup <Go to CLOSE A>	3	4
623	**100.00%**	**Sum of All Responses**	**367**	**263**

Q4 - Can you please give us the best phone number to reach you at?		**Response**	**16-Nov**	**17-Nov**
313	82.15%	01 = Yes <Go to Q5>	205	108
49	12.86%	02 = No <Go to Q5>	26	23
19	4.99%	X = Refused <Go to CLOSE A>	13	6
18	4.72%	Q = Hangup <Go to CLOSE A>	10	8

381	**100.00%**	**Sum of All Responses**	**254**	**145**

Q5 - May we please have an email address to follow-up as well?		**Response**	**16-Nov**	**17-Nov**
99	28.86%	01 = Yes <Go to CLOSE B>	64	35
229	66.76%	02 = No <Go to CLOSE B>	144	85
15	4.37%	X = Refused <Go to CLOSE A>	11	4
19	5.54%	Q = Hangup <Go to CLOSE A>	12	7
343	**100.00%**	**Sum of All Responses**	**231**	**131**

MI Unreturned Live Agent - Mass Markets

			11/15/2020	11/16/2020	11/17/2020	
3,815	**Completes**		**-**	**990**	**2,825**	
248	**Q4=01**	1-Completed Survey	-	36	212	
1,257	**VM Message Left**	2-Message Delivered VM	-	388	869	
2,310	**up/RC**	3-Refused	-	566	1,744	
62,569	**No Answer**	4-No Answer	-	15,482	47,087	
3,644	**Numbers/Language**	5-Bad Number	-	570	3,074	
100.00%	**List Penetration**					
70,030	**Data Loads**					

Q1 - May I please speak to <lead on screen>?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
958	23.65%	A-Reached Target	-	158	800
142	3.51%	Uncertain	-	57	85
2,950	72.84%	X = Refused	-	883	2,067
0	0.00%				
4,050	**100.00%**	**Sum of All Responses**	**-**	**1,098**	**2,952**

Q2 - Did you request Absentee Ballot in state of MI?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
752	49.64%	A-Yes [Go to Q3]	-	167	585

239	15.78%	B-No [Go to Q4]	-	39	200
50	3.30%	Member) [Go to Q3]	-	5	45
17	1.12%	Member) [Go to Q4]	-	2	15
37	2.44%	E-Unsure [Go to Close A]	-	4	33
11	0.73%	Moment [Go to Close A]	-	2	9
409	27.00%	X = Refused	-	63	346
1,515	**100.00%**	**Sum of All Responses**	**-**	**282**	**1,233**

Q3 - Did you mail your ballot back?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
232	21.28%	A-Yes [Go to Q4]	-	41	191
472	43.30%	B-No [Go to Close A]	-	109	363
10	0.92%	Member) [Go to Q4]	-	2	8
28	2.57%	Member) [Go to Close A]	-	2	26
22	2.02%	Close A]	-	5	17
326	29.91%	X = Refused	-	60	266
			-		
1,090	**100.00%**	**Sum of All Responses**	**-**	**219**	**871**

Q4 - Can you please give us the best phone number to reach you at?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
246	69.89%	A-Yes (Capture Number) [Go to Q5]	-	36	210
106	30.11%	B-Refused [Go to Q5]	-	27	79

0	0.00%				
0	0.00%				
352	**100.00%**	**Sum of All Responses**	**-**	**63**	**289**

Q5 - Can you provide us your email address?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
18	7.26%	01-Yes [Go to Close B]	-	5	13
230	92.74%	02-No [Go to Close B]	-	31	199
0	0.00%				
248	**100.00%**	**Sum of All Responses**	**-**	**36**	**212**

WI Unreturned Live Agent - Mass Markets

			11/15/2020	11/16/2020	11/17/2020
4,614	**Completes**		**-**	**3,483**	**1,131**
433	**Completed survey** - Q4=0**	1-Completed Survey	-	300	133
1,053	**VM Message Left**	2-Message Delivered VM	-	804	249
3,128	**Refused/Early Hang up/RC**	3-Refused	-	2,379	749
50,712	**No Answer**	4-No Answer	-	40,391	10,321
1,944	**Bad/Wrong Numbers/Langu**	5-Bad Number	-	1,289	655
100.00%	**List Penetration**				
57,271	**Data Loads**				

Q1 - May I please speak to <lead on screen>?		**Response**	11/15/2020	11/16/2020	11/17/2020
2,261	64.69%	A-Reached Target + B-What Is This About? / Uncertain	-	1,343	475
1,677	47.98%	X = Refused	-	1,202	475
0	0.00%				
3,495	**100.00%**	**Sum of All Responses**	**-**	**2,545**	**950**

Q2 - Did you request Absentee Ballot in state of WI?		**Response**	11/15/2020	11/16/2020	11/17/2020
1,699	62.39%	A-Yes [Go to Q3]	-	1,374	325

379	13.92%	B-No [Go to Q4]	-	240	139
32	1.18%	C-Yes (per Spouse/family Member) [Go to Q3]	-	16	16
4	0.15%	D-No (per Spouse/family Member) [Go to Q4]	-	-	4
44	1.62%	E-Unsure [Go to Close A]	-	25	19
4	0.15%	F-Not Available At The Moment [Go to Close A]	-	2	2
561	20.60%	X = Refused	-	405	156
2,723	**100.00%**	**Sum of All Responses**	**-**	**2,062**	**661**

Q3 - Did you mail your ballot back?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
316	14.67%	A-Yes [Go to Q4]	-	238	78
1,286	59.70%	B-No [Go to Close A]	-	1,069	217
9	0.42%	C-Yes (per Spouse/family Member) [Go to Q4]	-	4	5
15	0.70%	D-No (per Spouse/family Member) [Go to Close A]	-	8	7
28	1.30%	E-Unsure / Refused [Go to Close A]	-	24	4
500	23.21%	X = Refused	-	314	186
			-		
2,154	**100.00%**	**Sum of All Responses**	**-**	**1,657**	**497**

Q4 - Can you please give us the best phone number to reach you at?		Response	11/15/2020	11/16/2020	11/17/2020
432	80.00%	A-Yes (Capture Number) [Go to Q5]	-	300	132
108	20.00%	B-Refused [Go to Q5]	-	77	31
0	0.00%				
0	0.00%				
540	**100.00%**	**Sum of All Responses**	**-**	**377**	**163**

Q5 - Can you provide us your email address?		Response	11/15/2020	11/16/2020	11/17/2020
50	11.55%	01-Yes [Go to Close B]	-	37	13
383	88.45%	02-No [Go to Close B]	-	263	120
0	0.00%				
433	**100.00%**	**Sum of All Responses**	**-**	**300**	**133**

0270 PA Absentee Live ID Topline

			11/9/2020	11/10/2020	11/11/2020
18037	**Completes**		**4419**	**13618**	**0**
834	**survey** - Q4=01**	status = C	178	656	
14,203	**Machines**	status = AM	3465	10738	
3,000	**Hang up/RC**	status = R, IR, RC, DC	776	2224	
3,521	**Numbers/Languag**	status = D, BC,WN, NE	556	2965	
0	**MA**	status = MA			
87.70%	**List Penetration**				
24,581	**Data Loads**		24,581		

Q1 - May I please speak to <lead on screen>?		**Response**	**9-Nov**	**10-Nov**	**11-Nov**
2,262	75.86%	1. Reached Target [Go to Q2].	593	1,669	
422	14.15%	Q2].	102	320	
298	9.99%	X = Refused <Go to CLOSE A>	77	221	
739	24.78%	Q = Hangup <Go to CLOSE A>	160	579	
2,982	**100.00%**	**Sum of All Responses**	**932**	**2789**	**0**

Q2 - Did you request an absentee ballot?		**Response**	**9-Nov**	**10-Nov**	**11-Nov**
1,114	43.91%	1. Yes. [Go to Go to Q3].	331	783	
531	20.93%	2. No. [Go to Q4].	131	400	

36	1.42%	confirmed “Yes” [Go to Q3]	12	24	
25	0.99%	confirmed “No” [Go to Q4]	9	16	
91	3.59%	5. Unsure. [Go to Q3].	25	66	
89	3.51%	moment. [Go to Close A]	17	72	
544	21.44%	A]	105	439	
107	4.22%	X = Refused <Go to CLOSE A>	29	78	
147	5.79%	Q = Hangup <Go to CLOSE A>	36	111	
2,537	**100.00%**	**Sum of All Responses**	**695**	**1989**	**0**

Q3 - Did you mail back that ballot?		**Response**	**9-Nov**	**10-Nov**	**11-Nov**
452	39.75%	1. Yes. [Go to Go to Q4].	90	362	
632	55.58%	2. No. [Go to Close A].	229	403	
11	0.97%	confirmed “Yes” [Go to Q4]	1	10	
11	0.97%	confirmed “No” [Go to Close A]	4	7	
15	1.32%	5. Unsure. [Go to Close A].	6	9	
2	0.18%	moment. [Go to Close A]	0	2	
14	1.23%	X = Refused <Go to CLOSE A>	5	9	
13	1.14%	Q = Hangup <Go to CLOSE A>	8	5	
1,137	**100.00%**	**Sum of All Responses**	**343**	**807**	**0**

Q4 - Can you please give us the best phone number to reach you at?		**Response**	**9-Nov**	**10-Nov**	**11-Nov**
834	87.61%	01 = Yes <Go to CLOSE B>	178	656	
118	12.39%	X = Refused <Go to CLOSE A>	36	82	
67	7.04%	Q = Hangup <Go to CLOSE A>	17	50	
952	**100.00%**	**Sum of All Responses**	**231**	**788**	**0**

AZ Unreturned Live Agent - Mass Markets

			11/15/2020	11/16/2020	11/17/2020	
5,604	**Completes**		**745**	**1,881**	**2,978**	
684	**Q4=01**	1-Completed Survey	116	212	356	
1,945	**VM Message Left**	2-Message Delivered VM	90	657	1,198	
2,975	**up/RC**	3-Refused	539	1,012	1,424	
74,437	**No Answer**	4-No Answer	6,764	25,056	42,617	
1,663	**Numbers/Language**	5-Bad Number	245	384	1,034	
100.00%	**List Penetration**					
81,708	**Data Loads**					

Q1 - May I please speak to <lead on screen>?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
1,812	40.05%	A-Reached Target	307	554	951
335	7.40%	Uncertain	80	124	131
2,377	52.54%	X = Refused	382	854	1,141
0	0.00%				
4,524	**100.00%**	**Sum of All Responses**	**769**	**1,532**	**2,223**

Q2 - Did you request Absentee Ballot in state of AZ?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
1,120	45.00%	A-Yes [Go to Q3]	210	361	549

885	35.56%	B-No [Go to Q4]	162	286	437
24	0.96%	Member) [Go to Q3]	5	9	10
21	0.84%	Member) [Go to Q4]	3	10	8
72	2.89%	E-Unsure [Go to Close A]	10	18	44
7	0.28%	[Go to Close A]	-	1	6
360	14.46%	X = Refused	45	69	246
2,489	**100.00%**	**Sum of All Responses**	**435**	**754**	**1,300**

Q3 - Did you mail your ballot		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
344	16.16%	A-Yes [Go to Q4]	67	112	165
696	32.69%	B-No [Go to Close A]	116	237	343
11	0.52%	Member) [Go to Q4]	2	2	7
9	0.42%	Member) [Go to Close A]	1	4	4
14	0.66%	Close A]	3	4	7
1,055	49.55%	X = Refused	201	326	528
2,129	**100.00%**	**Sum of All Responses**	**390**	**685**	**1,054**

Q4 - Can you please give us the best phone number to reach you at?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
678	82.48%	A-Yes (Capture Number) [Go to Q5]	116	212	350
144	17.52%	B-Refused [Go to Q5]	38	50	56

0	0.00%				
0	0.00%				
822	**100.00%**	**Sum of All Responses**	**154**	**262**	**406**

Q5 - Can you provide us your email address?		**Response**	**11/15/2020**	**11/16/2020**	**11/17/2020**
127	18.57%	01-Yes [Go to Close B]	24	36	67
557	81.43%	02-No [Go to Close B]	92	176	289
0	0.00%				
684	**100.00%**	**Sum of All Responses**	**116**	**212**	**356**

William M. Briggs, PhD
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1. Experience

(1) 2016: Author of *Uncertainty: The Soul of Modeling, Probability & Statistics*, a book which argues for a complete and fundamental change in the philosophy and practice of probability and statistics. Eliminate hypothesis testing and estimation, and move to verifiable predictions. This includes AI and machine learning. Call this The Great Reset, but a good one.

(2) 2004-2016 Adjunct Professor of Statistical Science, Cornell University, Ithaca, New York
I taught a yearly Masters course to people who (rightfully) hate statistics. Interests: philosophy of science & probability, epistemology, epidemiology (ask me about the all-too-common epidemiologist fallacy), Bayesian statistics, medicine, climatology & meteorology, goodness of forecasts, overconfidence in science; public understanding of science, limitations of science, scientism; scholastic metaphysics (as it relates to epistemology).

(3) 1998-present. Statistical consultant, Various companies
Most of my time is spent coaxing people out of their money to tell them they are too sure of themselves. All manner of analyses cheerfully undertaken. Example: Fraud analysis; I created the *Wall Street Journal's* College Rankings. I consultant regularly at Methodist and other hospitals, start-ups, start-downs, and with any instition willing to fork it over.

(4) 2003-2010. Research Scientist, New York Methodist Hospital, New York
Besides the usual, I sit/sat on the Institutional Review Committee to assess the statistics of proposed research. I was an Associate Editor for *Monthly Weather Review* (through 2011). Also a member of the American Meteorological Society's Probability and Statistics Committee (through 2011). At a hospital? Yes, sir; at a hospital. It rains there, too, you know.

(5) Fall 2007, Fall 2010 Visiting Professor of Statistics, Department of Mathematics, Central Michigan University, Mt. Pleasant, MI
Who doesn't love a visit from a statistician? Ask me about the difference between "a degree" and "an education."

(6) 2003-2007, Assistant Professor Statistics, Weill Medical College of Cornell University, New York, New York
Working here gave me a sincere appreciation of the influences of government money; grants galore.

(7) 2002-2003. Gotham Risk Management, New York
A start-up then, after Enron's shenanigans, a start-down. We set future weather derivative and weather insurance contract prices that incorporated information from medium- and long-range weather and climate forecasts.

(8) 1998-2002. DoubleClick, New York
Lead statistician. Lot of computer this and thats; enormous datasets.

(9) 1993-1998. Graduate student, Cornell University

Meteorology, applied climatology, and finally statistics. Was Vice Chair of the graduate student government; probably elected thanks to a miracle.

(10) 1992-1993. National Weather Service, Sault Ste. Marie, MI
Forecast storms o' the day and launched enormous balloons in the name of Science. My proudest moment came when I was able to convince an ancient IBM-AT machine to talk to an *analog*, 110 baud, phone-coupled modem, all using BASIC!

(11) 1989-1992. Undergraduate student, Central Michigan University
Meteorology and mathematics. Started the local student meteorology group to chase tornadoes. Who knew Michigan had so few? Spent a summer at U Michigan playing with a (science-fiction-sounding) lidar.

(12) 1983-1989. United States Air Force
Cryptography and other secret stuff. Shot things; learned pinochle. I adopted and became proficient with a fascinating and versatile vocabulary. Irritate me for examples. TS/SCI, etc. security clearance (now inactive).

2. Education

(1) Ph.D., 2004, Cornell University. Statistics.
(2) M.S., 1995, Cornell University. Atmospheric Science.
(3) B.S., Summa Cum Laude, 1992, Central Michigan University. Meteorology and Math.

3. Publications

3.0.1. *Popular.*

(1) Op-eds in various newspapers; articles in *Stream*, *Crisis Magazine*, *The Remnant*, *Quadrant*, *Quirks*; blog with ∼70,000 monthly readers. Various briefs submitted to government agencies, such as California Air Resources Board, Illinois Department of Natural Resources. Talks and holding-forths of all kinds.

3.0.2. *Books.*

(1) Richards, JW, WM Briggs, and D Axe, 2020. *UThe Price of Panic: How the Tyranny of Experts Turned a Pandemic into a Catastrophe*. Regnery. Professors Jay Richards, William Briggs, and Douglas Axe take a deep dive into the crucial questions on the minds of millions of Americans during one of the most jarring and unprecedented global events in a generation.

(2) Briggs, WM., 2016. *Uncertainty: The Soul of Modeling, Probability & Statistics*. Springer. Philosophy of probability and statistics. A new (old) way to view and to use statistics, a way that doesn't lead to heartbreak and pandemic over-certainty, like current methods do.

(3) Briggs, WM., 2008 *Breaking the Law of Averages: Real Life Probability and Statistics in Plain English*. Lulu Press, New York. Free text for undergraduates.

(4) Briggs, WM., 2006 *So You Think You're Psychic?* Lulu Press, New York. Hint: I'll bet you're not.

3.0.3. *Methods.*

(1) Briggs, WM and J.C. Hanekamp, 2020. Uncertainty In The MAN Data Calibration & Trend Estimates. *Atmospheric Environment,* In review.
(2) Briggs, WM and J.C. Hanekamp, 2020. Adjustments to the Ryden & McNeil Ammonia Flux Model. *Soil Use and Management,* In review.
(3) Briggs, William M., 2020. Parameter-Centric Analysis Grossly Exaggerates Certainty. In *Data Science for Financial Econometrics*, V Kreinovich, NN Thach, ND Trung, DV Thanh (eds.), In press.
(4) Briggs, WM, HT Nguyen, D Trafimow, 2019. Don't Test, Decide. In *Behavioral Predictive Modeling in Econometrics*, Springer, V Kreinovich, S Sriboonchitta (eds.). In press.
(5) Briggs, William M. and HT Nguyen, 2019. Clarifying ASA's view on p-values in hypothesis testing. *Asian Journal of Business and Economics*, 03(02), 1–16.
(6) Briggs, William M., 2019. Reality-Based Probability & Statistics: Solving The Evidential Crisis (invited paper). *Asian Journal of Business and Economics*, 03(01), 37–80.
(7) Briggs, William M., 2019. Everything Wrong with P-Values Under One Roof. *In Beyond Traditional Probabilistic Methods in Economics*, V Kreinovich, NN Thach, ND Trung, DV Thanh (eds.), pp 22—44.
(8) Briggs, WM, HT Nguyen, D Trafimow, 2019. The Replacement for Hypothesis Testing. *In Structural Changes and Their Econometric Modeling*, Springer, V Kreinovich, S Sriboonchitta (eds.), pp 3—17.
(9) Trafimow, D, V Amrhein, CN Areshenkoff, C Barrera-Causil, ..., WM Briggs, (45 others), 2018. Manipulating the alpha level cannot cure significance testing. *Frontiers in Psychology*, *9*, 699. doi.org/10.3389/ fpsyg.2018.00699.
(10) Briggs, WM, 2018. Testing, Prediction, and Cause in Econometric Models. In *Econometrics for Financial Applications*, ed. Anh, Dong, Kreinovich, and Thach. Springer, New York, pp 3–19.
(11) Briggs, WM, 2017. The Substitute for p-Values. *JASA*, 112, 897–898.
(12) J.C. Hanekamp, M. Crok, M. Briggs, 2017. Ammoniak in Nederland. *Enkele kritische wetenschappelijke kanttekeningen.* V-focus, Wageningen.
(13) Briggs, WM, 2017. Math: Old, New, and Equalitarian. *Academic Questions*, 30(4), 508–513.
(14) Monckton, C, W Soon, D Legates, ... (several others), WM Briggs 2018. On an error in applying feedback theory to climate. In submission (currently *J. Climate*).
(15) Briggs, WM, JC Hanekamp, M Crok, 2017. Comment on Goedhart and Huijsmans. *Soil Use and Management*, 33(4), 603–604.
(16) Briggs, WM, JC Hanekamp, M Crok, 2017. Response to van Pul, van Zanten and Wichink Kruit. *Soil Use and Management*, 33(4), 609–610.
(17) Jaap C. Hanekamp, William M. Briggs, and Marcel Crock, 2016. A volatile discourse - reviewing aspects of ammonia emissions, models, and atmospheric concentrations in The Netherlands. *Soil Use and Management*, 33(2), 276–287.

(18) Christopher Monckton of Brenchley, Willie Soon, David Legates, William Briggs, 2015. Keeping it simple: the value of an irreducibly simple climate model. *Science Bulletin*. August 2015, Volume 60, Issue 15, pp 1378–1390.
(19) Briggs, WM, 2015. The Third Way Of Probability & Statistics: Beyond Testing and Estimation To Importance, Relevance, and Skill. *arxiv.org/abs/1508.02384*.
(20) Briggs, WM, 2015. The Crisis Of Evidence: Why Probability And Statistics Cannot Discover Cause. *arxiv.org/abs/1507.07244*.
(21) David R. Legates, Willie Soon, William M. Briggs, Christopher Monckton of Brenchley, 2015. Climate Consensus and 'Misinformation': A Rejoinder to Agnotology, Scientific Consensus, and the Teachingand Learning of Climate Change. *Science and Education*, 24, 299–318, DOI 10.1007/s11191-013-9647-9.
(22) Briggs, WM, 2014. The Problem Of Grue Isn't. *arxiv.org/abs/1501.03811*.
(23) Christopher Monckton of Brenchley, Willie Soon, David Legates, William Briggs, 2014. Why models run hot: results from an irreducibly simple climate model. *Science Bulletin*. January 2015, Volume 60, Issue 1, pp 122-135.
(24) Briggs, WM, 2014. Common Statistical Fallacies. *Journal of American Physicians and Surgeons*, Volume 19 Number 2, 58–60.
(25) Aalt Bast, William M. Briggs, Edward J. Calabrese, Michael F. Fenech, Jaap C. Hanekamp, Robert Heaney, Ger Rijkers, Bert Schwitters, Pieternel Verhoeven, 2013. Scientism, Legalism and Precaution—Contending with Regulating Nutrition and Health Claims in Europe. *European Food and Feed Law Review*, **6**, 401–409.
(26) Legates, DR, Soon, W, and Briggs, 2013. Learning and Teaching Climate Science: The Perils of Consensus Knowledge Using Agnotology. *Science and Education*, DOI 10.1007/s11191-013-9588-3.
(27) Briggs, WM, 2012. On Probability Leakage. *arxiv.org/abs/1201.3611*.
(28) Briggs, WM, 2012. Why do statisticians answer questions no one ever asks? *Significance*. Volume 9 Issue 1 Doi: 10.1111/j.1740-9713.2012.00542.x. 30–31.
(29) Briggs, WM, Soon, W, Legates, D, Carter, R, 2011. A Vaccine Against Arrogance. *Water, Air, & Soil Pollution*: Volume 220, Issue 1 (2011), Page 5-6
(30) Briggs, WM, and R Zaretzki, 2009. Induction and falsifiability in statistics. *arxiv.org/abs/math/0610859*.
(31) Briggs, WM, 2011. Discussion to A Gelman. Why Tables are Really Much Better than Graphs. *Journal Computational and Graphical Statistics*. Volume 20, 16–17.
(32) Zaretzki R, Gilchrist MA, Briggs WM, and Armagan A, 2010. Bias correction and Bayesian analysis of aggregate counts in SAGE libraries. *BMC Bioinformatics*, 11:72doi:10.1186/1471-2105-11-72.
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(36) Briggs, WM, 2007. On the changes in number and intensity of North Atlantic tropical cyclones *Journal of Climate*. **21**, 1387-1482.
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(44) Briggs, WM, and D Ruppert, 2005. Assessing the skill of Yes/No Predictions. *Biometrics*. **61(3)**, 799-807. PMID: 16135031.
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(51) Briggs, WM, and DS Wilks, 1996. Extension of the CPC long-lead temperature and precipitation outlooks to general weather statistics. *Journal of Climate*, **9**, 3496-3504.

3.0.4. *Applications.*

(1) Jamorabo, Daniel, Renelus, Benjamin, Briggs, WM, 2019. "Comparative outcomes of EUS-guided cystogastrostomy for peripancreatic fluid collections (PFCs): A systematic review and meta-analysis, 2019. *Therapeutic Advances in Gastrointestinal Endoscopy*, in press.

(2) Benjamin Renelus, S Paul, S Peterson, N Dave, D amorabo, W Briggs, P Kancharla, 2019. Racial disparities with esophageal cancer mortality at a high-volume university affiliated center: An All ACCESS Invitation, *Journal of the National Medical Association*, in press.

(3) Mehta, Bella, S Ibrahim, WM Briggs, and P Efthimiou, 2019. Racial/Ethnic variations in morbidity and mortality in Adult Onset Still's Disease: An analysis of national dataset", *Seminars in Arthritis and Rheumatism*, doi: 10.1016/j.semarthrit.2019.04.0044.

(4) Ivanov A, Dabiesingh DS, Bhumireddy GP, Mohamed A, Asfour A, Briggs WM, Ho J, Khan SA, Grossman A, Klem I, Sacchi TJ, Heitner JF. Prevalence and Prognostic Significance of Left Ventricular Noncompaction in Patients Referred for Cardiac Magnetic Resonance Imaging. *Circ Cardiovasc Imaging*. 2017 Sep;10(9). pii: e006174. doi: 10.1161/CIRCIMAGING.117.006174.

(5) Ivanov A, Kaczkowska BA, Khan SA, Ho J, Tavakol M, Prasad A, Bhumireddy G, Beall AF, Klem I, Mehta P, Briggs WM, fpaSacchi TJ, Heitner JF, 2017. Review and Analysis of Publication Trends over Three Decades in Three High Impact Medicine Journals. *PLoS One*. 2017 Jan 20;12(1):e0170056. doi: 10.1371/journal.pone.0170056.

(6) A. Ivanova, G.P. Bhumireddy, D.S. Dabiesingh, S.A. Khana, J. Hoa N. Krishna, N. Dontineni, J.A Socolow, W.M. Briggs, I. Klem, T.J. Sacchi, J.F. Heitner, 2016. Importance of papillary muscle infarction detected by cardiac magnetic resonance imaging in predicting cardiovascular events. *International Journal of Cardiology*. Volume 220, 1 October 2016, Pages 558–563. PMID: 27390987.

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and the Medical Knowledge Core Competency. *J Grad Med Educ.* 2013 Sep;5(3):464-7. PMID: 24404311.

(11) Annika Krystyna, D Kumari, R Tenney, R Kosanovic, T Safi, WM Briggs, K Hennessey, M Skelly, E Enriquez, J Lajeune, W Ghani and MD Schwalb, 2013. Hepatitis c antibody testing in African American and Hispanic men in New York City with prostate biopsy. *Oncology Discovery*, Vol 1. DOI: 10.7243/2052-6199-1-1.

(12) Ziad Y. Fayad, Elie Semaan, Bashar Fahoum, W. Matt Briggs, Anthony Tortolani, and Marcus D'Ayala, 2013. Aortic mural thrombus in the normal or minimally atherosclerotic aorta: A systematic review and meta-analysis of the available literature. *Ann Vasc Surg.*, Apr;27(3):282-90. DOI:10.1016/j.avsg.2012.03.011.

(13) Elizabeth Haines, Gerardo Chiricolo, Kresimir Aralica, William Briggs, Robert Van Amerongen, Andrew Laudenbach, Kevin O'Rourke, and Lawrence Melniker MD, 2012. Derivation of a Pediatric Growth Curve for Inferior Vena Caval Diameter in Healthy Pediatric Patients. *Crit Ultrasound J.* 2012 May 28;4(1):12. doi: 10.1186/2036-7902-4-12.

(14) Wei Li, Piotr Gorecki, Elie Semaan, William Briggs, Anthony J. Tortolani, Marcus D'Ayala, 2011. Concurrent Prophylactic Placement of Inferior Vena Cava Filter in gastric bypass and adjustable banding operations: An analysis of the Bariatric Outcomes Longitudinal Database (BOLD). *J. Vascular Surg.* 2012 Jun;55(6):1690-5. doi: 10.1016/j.jvs.2011.12.056.

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