

WISCONSIN VOTER FILE ANALYSIS

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About the Author

Jeffrey O’Donnell has been a professional software and database engineer for 40 years. During that time, he has worked or consulted for numerous Fortune 500 companies, including Rockwell International, Westinghouse Electric, Mellon Bank, and U.S Steel. He has been working with Microsoft SQL Server since its inception and has designed and worked with software data systems containing hundreds of millions of data points.

Introduction

An analysis of the Wisconsin voter file revealed significant “red flags” in the data, some in concert and some in addition to the issues identified in the report authored by Jay Valentine (the “Valentine Report”). These anomalies are summarized below, but generally center around the use of non-“best practices” in the database design, and non-standardized processes by which voters are added. As a result, highly suspicious issues have been found in the data.

General Information and Observations

Data from the August version of the Wisconsin Voter Roll and History export has been used to create this report. The file contains 7,098,448 separate voter records. According to World Population Review, the population of Wisconsin is currently approximately 5,852,490. Based upon these numbers, it seems probable that voters are never actually removed from the database, but rather a status field is used to set them to “Inactive”.

The Wisconsin Elections Commission’s site lists the number of “of age” Wisconsin citizens at the time of the 2020 General election as 4,536,417.

In the file, 3,529,835 are listed as “active” voters. This indicates that approximately 60% of Wisconsin citizens are registered as active voters.

In the November 2020 election, the voting method used by Wisconsin Voters broke down as:

Absentee	1,970,059
At Polls	1,338,575
Total	3,308,634

If there are 4,536,417 of-age voters, and 3,308,634 of them voted, then the state-wide turnout for the national election would calculate as 72.9%. The percent of active voters who cast a vote was 93.7%.

The Wisconsin Elections Commission’s site reports the presidential vote total as 3,297,352. The number of votes reported for the various U. S. House Races in Wisconsin totals only 3,238,051. Thus, the state undervotes / unreported Write-In totals would have to be 10,593 for the Presidential race, and 70,583 for the House races in order to make the numbers from the two sources match. Because Wisconsin does not disclose total vote or card counts, an investigation is necessary to determine if these numbers reconcile.

Registration Number Dangerous Practice Summary

As outlined in the Valentine Report, the registration number field is a string rather than an actual number, with inconsistent “0” paddings, i.e. zeros have been added at the beginning of the registration number field. This is a dangerous practice to employ in a database because duplicate numeric values can exist with differing numbers of zeroes as padding. This caused duplication of the “numeric” values of registered voters.

My findings on the duplicates are:

157,758 voters have the same registration number if the “zero padding” is disregarded and they are interpreted numerically.

In 62,175 of these cases, multiple voters with the same numeric registration number are listed as active

In 52,720 of these cases, multiple voters with the same numeric registration number voted in November 2020

It is also found that these registration numbers are not sequentially allocated. For instance, if the last registration given was 10, database best practices would dictate that the next voter added would automatically be assigned 11. This method of automatically allocating sequential identification numbers eliminates human error and removes the possibility of intentionally placing new records between two existing records, which happens regularly in the Wisconsin Registration System. Because of how registration numbers are allocated, it is impossible to determine the actual entry order of voters into the system, which makes investigation of the sequence in which voters were entered impossible.

Wisconsin’s method of registration number creation also allowed 16 records with non-numeric registration numbers to exist in the system.

Registration Number Length Analysis

In most database systems which use an identification field that is not numeric, there is a standardized field length. For instance, driver’s license numbers in most states are not numeric, but all have the same number of characters.

The registration number strings in the Wisconsin Voter file show a variety of lengths. For analysis purposes, here are each “length of registration number”, the number of occurrences, and the earliest and latest application dates of each length.

Length	Occurrences	Earliest Application Date	Latest Application Date
1	13	2006-04-04	2012-06-05
2	24	2005-11-08	2020-04-07
3	54	2006-04-04	2020-11-03
4	1	2007-04-03	2007-04-03
6	3	2008-05-28	2008-10-01
7	1	2006-04-04	2006-04-04
8	61783	1917-10-29	2021-08-16
9	1596226	1918-01-01	2021-11-03
10	5440341	1900-01-01	2021-11-18
11	1	2006-03-29	2006-03-29
15	1	2006-11-07	2006-11-07

*Note: Lengths of registration numbers assigned in 2020 or 2021 are indicated in **bold***

This indicates that registration numbers of lengths 8, 9, and 10 are still being commonly used, and the reason that they are not standardized is not known. It could be understood if the registration number length used in different counties or precincts was not the same when they were merged together, but the recent use of three different lengths would remove that possibility. This is another “red flag”, because the differing lengths could indicate that multiple entities are creating these records, and not

just the Election Commission. The WEC procedure manuals which dictate how registration numbers are created should be made public in order to provide public confidence in the procedure.

Sequential Voter Registration ID Analysis – Supplemental Analysis

As noted in the Valentine Report, there were consistent sequential gaps in voter registration IDs. Although gaps themselves could be remnants of voters moving out of state, it's very unusual that these consistent gaps span thousands of voter registration IDs. Registration IDs where gaps of 10 sequential numbers were present appear to be very prevalent with voter IDs that started with a 7. Also, there is no definable pattern between the sequences and the application dates. This is further proof that the numbers are **not** assigned sequentially, nor are they being auto-assigned by a computer as expected.

Application Date Analysis (Active Voters Only)

The voter file contains the application date for each voter. An analysis of these dates shows the following ranges of years that currently active voters have been registered:

Years Registered	Voters
120+	9
110-119	121,251
100-109	12
90-99	41
80-89	491
70-79	6,884
60-69	18,658
50-59	60,501
40-49	95,840
30-39	186,846
20-29	815,882
10-19	2,176,300
0-9	47,067

Please note that these are not ages of voters. The Wisconsin voter file did not contain Birth Dates, for an unknown reason. These numbers represent how many years the active voters have been registered. Thus, each voter in a category is at least 18 years older than yearly figures identified above.

The most obvious “red flag” in this table is the 120K+ voters who have, according to the system, been registered between 100 and 119 years. This is explained by the following table, which lists the 5 dates in history where, according to the voter file, the most people were registered who are still active:

#	Date	Voters (still active)
1	2020-11-03	205,355
2	2018-11-06	181,047
3	2004-11-02	176,022
4	2016-11-08	136,190
5	1918-01-01	119,283

Sitting in 5th place all time is the improbable date of 1/1/1918, with 119,283 voters. The most likely reason for this would seem to be some date-type incompatibility in a merge. However, analyzing the application source field (where merges are listed) revealed it to be empty in more than 112,000 cases. This is a red flag because these records are obviously inaccurate. Should there be some reason that the records were created with those incorrect dates, then the next question is why no steps were taken to correct them.

It should be noted that the total count of voters with the 1/1/1918 application date, active or inactive, is 569,277. This is far too large a number to be explained simply.

November 3, 2020 was the single most significant registration date in Wisconsin's history with 205,355 people registering to vote that day. Given the findings of the Legislative Audit Bureau ("LAB") detailed in their October 2021 Report, and the use of API's granting third parties access to Wisconsin's registration database, such numbers raise a number of significant red flags.

For example, the LAB Report detailed the WEC's and other elections officials' lack of cooperation noting that the City of Madison refused to let the LAB auditors handle absentee ballots despite their county (Dane County) having the highest percentage of absentee ballots in the state at 74.4 percent of ballots. [LAB Report at 6] The LAB also stated that county clerks for Milwaukee County and the Town of Little Suamico refused access to their ballots. Combined, these areas accounted for 623,700 of the 3.3 million ballots cast in the November 2020 election. (18.9 percent). Lab Report at 7. The LAB also noted that three WEC members refused to speak with the auditors. *Id.* at 5.

The LAB also found that, nearly 220,404 voters said they were indefinitely confined in the 2020 election—thereby avoiding statutory voter identification requirements—including 169,901 individuals (77.1 percent) who indicated for the *first time* that they were indefinitely confined. [LAB Report at 50]. Moreover, according to WEC's data, 48,554 of those first-time individuals (22.0 percent) had not previously voted by methods that required them to have provided photo identification or did not have photo identifications on file with clerks. [LAB Report 51].

Lastly, according to the LAB Report, in 2020, 957,977 Wisconsinites registered to be a new voter. Of that figure, 45,665 new voters registered with driver's license information that did *not* match DMV records or 4.8% of registrants. Of the 45,665 total non-matches, 63.1 percent were from a name non-match, meaning the name submitted by the new voter on the ballot application did not match the name on file at the DOT. [Lab Report at 21-22]

All of the above issues, raise significant red flags as to whether Wisconsin's registration database contains a material number of illegal voters or voters who are not who they say they are.

Voters Who Voted in November 2020 but are now inactive

Focusing on 2021, the data shows that 779,237 voters, around 10% of the total voter roll and 22% of all active voters, registered within the six months prior to and including November 3, 2020. Of those, 31,872 (about four percent) are now listed as inactive. These 31,872 voters should be investigated to determine why they were removed. Wisconsin Public Radio reported on August 4, 2021, that the WEC had removed 174,307 voters from the rolls that had not voted in four years, and another 31,854 who

were on a 2019 voter list because of a lawsuit. None of these 31,872 people would seem to be on either of these lists of removals.

Perhaps partially because of this anomaly, Wisconsin lists 42,114 voters currently marked as “inactive” who voted in the 2020 Election. This is another “reg flag” because there would be few reasons to remove a voter from the rolls when they had voted just ten months earlier. The number of voters involved would seem to be more than can be explained by any known reason.

Inactive Voters Registered Prior to 2016 and Have Not Voted in at least Four Years

When reviewing the voter registration database, it was noted that just under 2.8M inactive voters were registered prior to 2016 but hadn’t voted in 4 years. Given the known vulnerabilities with the Wisconsin registration database API, it would be possible to switch these voters to active at any time as needed by a nefarious actor to vote those individuals without their knowledge. An investigation into whether that event occurred could be undertaken by examining the computer log files for the Wisconsin registration database.

Additionally, 9,749 active voters who were registered prior to 2016 and voted in November 2020, had not participated in any election since at least November 2015. Going back even farther, 1,578 voters who had been registered prior to 2011 and had **never voted** in any election since and including 2011 are recorded as having voted in 2020. These are additional “red flags” because it may indicate that votes were cast in their name as they were not considered likely to vote for themselves.

Conclusion

The irregularities and red flags found by both this report and the “Valentine Report” indicate a huge potential for nefarious actors to access the Wisconsin voter registration system and allow them to manipulate any voter’s status. There needs to be an investigation by competent outside database experts to explain the causes of the specific anomalies stated in the reports. This investigation needs to determine the complete database structures, hosting locations, access lists, and to examine the system log files for evidence of external intrusion. The investigation also needs to determine if third party voter organizations have been granted access to the system to create, manipulate, or improperly utilize voter records in contravention of state law.

In addition, the procedures and standards for creating and updating voter registration records must be determined, published, and rigorously followed. Only by these actions can we assure the public that their duly appointed election officials, have been, are being, and will be faithful executors of the duties with which they are entrusted.