

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF WISCONSIN**

WILLIAM WHITFORD, ROGER ANCLAM,)
EMILY BUNTING, MARY LYNNE DONOHUE,)
HELEN HARRIS, WAYNE JENSEN,)
WENDY SUE JOHNSON, JANET MITCHELL,)
ALLISON SEATON, JAMES SEATON,)
JEROME WALLACE, and DONALD WINTER,)

No. 15-cv-421-bbc

Plaintiffs,)

v.)

GERALD C. NICHOL, THOMAS BARLAND,)
JOHN FRANKE, HAROLD V. FROEHLICH,)
KEVIN J. KENNEDY, ELSA LAMELAS, and)
TIMOTHY VOCKE,)

Defendants.)

SECOND DECLARATION OF DR. KENNETH MAYER

Pursuant to 28 U.S.C. § 1746, I, Dr. Kenneth Mayer, hereby declare as follows:

1. I am one of the plaintiffs’ expert witnesses in the above captioned case. I make this declaration based on my personal knowledge and in order to provide a further analysis and comparison of the 2002-2010 and 2012 vote distribution by ward data requested by and filed with the Court on June 10, 2016 (Dkt. 152). This report is a true and correct statement of my opinions and conclusions, applying the principles of my academic discipline and scholarship in the field to a reasonable degree of scientific certainty.

2. I had previously gathered the 2012 Presidential vote totals by ward from the LTSB for the original expert report I authored in this case (Dkt. 54, Tr. Ex. 2; Dkt. 152-2).

Defendants' expert Professor Goedert then used the 2012 data I gathered to create Figure 1 in his expert report (Dkt. 51, Tr. Ex. 136 at 22).

3. To gather the data for Wisconsin wards as they were constituted prior to being redrawn for the purposes of Act 43, I downloaded the 2008 Presidential vote totals by ward (representing the wards as they existed 2002-2010) as a zip file titled "2008 Election Data by Ward" from the Legislative Technology Services Bureau ("LTSB") website at <https://legis.wisconsin.gov/ltsb/gis/data/>.

4. Upon downloading the zip file, the next step was to validate the 2008 LTSB data. This was necessary because the 2012 LTSB data contained a number of errors that required correction, as detailed in my original expert report (Dkt. 54, Tr. Ex. 2, at 11, 59-62). I validated the 2008 data by looking for vote percentages above 100% and examining reporting unit data in several municipalities that had inaccuracies in the 2012 data. I found no material errors.

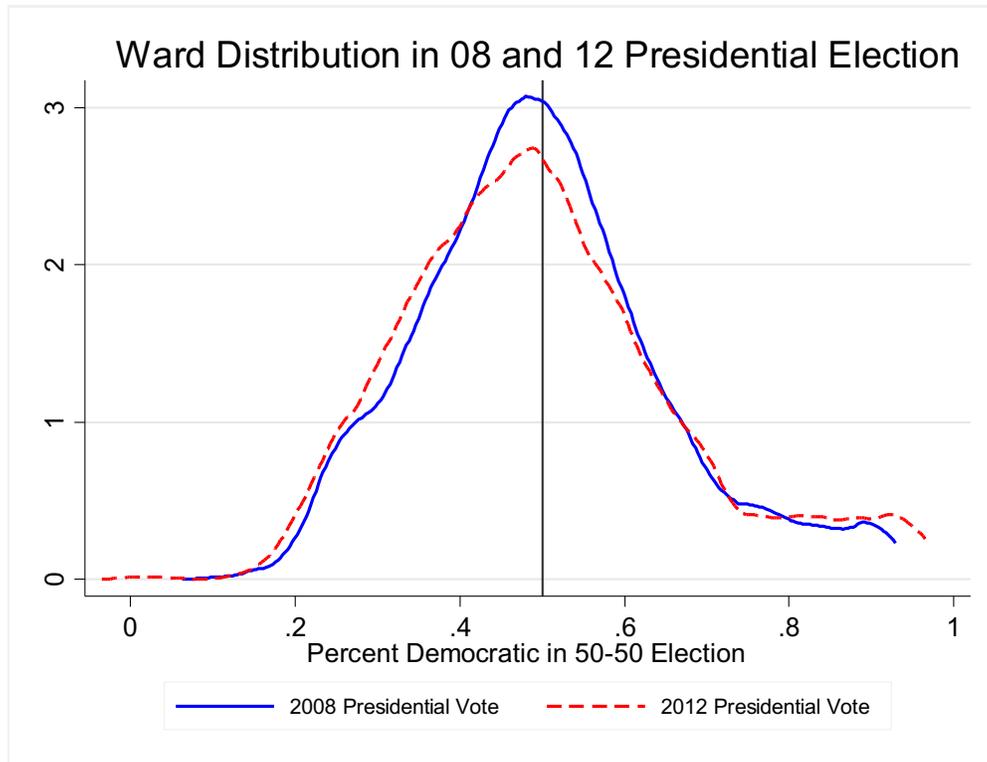
5. After validating the 2008 data, I gathered the 2008 Presidential vote totals by ward and the 2012 Presidential vote totals by ward in a spreadsheet. However, comparing the 2008 vote totals and the 2012 vote totals alone does not provide useful information, because the ward boundaries and names are not the same. In addition, the total number of wards in the 2000s and post-Act 43 are not the same, and the number of wards in some municipalities also changes. To make a more useful comparison between the data, I needed to compare the ward vote *distributions*.

6. Thus, I next determined the ward-level percentage of the two-party vote that the Democratic presidential candidate Barack Obama received in the 2008 presidential election for each ward in the LTSB data.

7. I then applied a uniform swing to each ward, based on the Democratic statewide percentage in that election (which Obama won with 57.1% of the statewide two-party vote), subtracting 7.1% from each ward's Democratic vote percentage. This results in an estimate of the 2008 Democratic vote by ward in a 50-50 election, and is identical to the method that Professor Goedert and I previously used to analyze the 2012 presidential election results by ward.

8. Next, I used the estimate of the 2008 Democratic vote by ward in a 50-50 election to generate a kernel density curve in Stata, replicating what I did in Figure C of my Rebuttal Report (Dkt. 95, Tr. Exs. 114, 107). Each ward was weighted by its share of the total number of votes cast in the presidential election (which has the effect of placing more emphasis on wards with more votes).

9. For the sake of comparability, I then plotted this kernel density curve in the same chart as the kernel density curve for the 2012 presidential election results by ward. This allows for a direct comparison of the ward vote distribution between the 2008 curve (using the 2000s wards) and the 2012 curve (using the current wards).



10. The first important point about the 2008 and 2012 distributions is that their shapes are relatively similar. Both distributions are quite symmetric. Both have peaks near the 50% Democratic point. And both have Democratic and Republican tails of comparable size.

11. However, it is also evident that the 2008 distribution is *more* symmetric than the 2012 distribution. In the region between 40% Democratic and 60% Democratic, the 2008 distribution is modestly to the right of the 2012 distribution, indicating a more equal number of wards on either side of the 50% point. The 2008 distribution also has a less pronounced Democratic tail than the 2012 distribution.

12. These differences between the distributions are exactly what we would expect given the ways in which the wards were designed in each decade. In the 2000s, as in all previous decades, the wards were drawn prior to the Assembly districts, and thus more accurately reflect the State's underlying political geography. But in the 2010s, for the first time in Wisconsin's

history, the wards were drawn *after* the Assembly districts. The 2010s wards therefore reveal some of the same pro-Republican bias that characterizes the current Assembly districts.

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

Dated this 10th day of June, 2016.

A handwritten signature in black ink that reads "Kenneth Mayer". The signature is written in a cursive style with a long horizontal stroke at the end.

KENNETH MAYER