
No. 2021AP1450-OA

In the Supreme Court of Wisconsin

BILLIE JOHNSON, ERIC O'KEEFE, ED PERKINS *and* RONALD ZAHN,
PETITIONERS,

BLACK LEADERS ORGANIZING FOR COMMUNITIES, VOCES DE LA
FRONTERA, LEAGUE OF WOMEN VOTERS OF WISCONSIN, CINDY FALLONA,
LAUREN STEPHENSON, REBECCA ALWIN, CONGRESSMAN GLENN
GROTHMAN, CONGRESSMAN MIKE GALLAGHER, CONGRESSMAN BRYAN
STEIL, CONGRESSMAN TOM TIFFANY, CONGRESSMAN SCOTT FITZGERALD,
LISA HUNTER, JACOB ZABEL, JENNIFER OH, JOHN PERSA, GERALDINE
SCHERTZ, KATHLEEN QUALHEIM, GARY KRENZ, SARAH J. HAMILTON,
STEPHEN JOSEPH WRIGHT, JEAN-LUC THIFFEAULT, *and* SOMESH JHA,
INTERVENORS-PETITIONERS,

v.

WISCONSIN ELECTIONS COMMISSION, MARGE BOSTELMANN, IN HER
OFFICIAL CAPACITY AS A MEMBER OF THE WISCONSIN ELECTIONS
COMMISSION, JULIE GLANCEY, IN HER OFFICIAL CAPACITY AS A MEMBER OF
THE WISCONSIN ELECTIONS COMMISSION, ANN JACOBS, IN HER OFFICIAL
CAPACITY AS A MEMBER OF THE WISCONSIN ELECTIONS COMMISSION,
DEAN KNUDSON, IN HIS OFFICIAL CAPACITY AS A MEMBER OF THE
WISCONSIN ELECTIONS COMMISSION, ROBERT SPINDELL, JR., IN HIS
OFFICIAL CAPACITY AS A MEMBER OF THE WISCONSIN ELECTIONS
COMMISSION, *and* MARK THOMSEN, IN HIS OFFICIAL CAPACITY AS A
MEMBER OF THE WISCONSIN ELECTIONS COMMISSION,
RESPONDENTS,

THE WISCONSIN LEGISLATURE, GOVERNOR TONY EVERS, IN HIS
OFFICIAL CAPACITY, *and* JANET BEWLEY, SENATE DEMOCRATIC
MINORITY LEADER, ON BEHALF OF THE SENATE DEMOCRATIC CAUCUS,
INTERVENORS-RESPONDENTS.

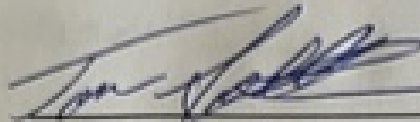
SECOND AFFIDAVIT OF TOM SCHREIBEL

STATE OF Florida)
) ss.
COUNTY OF Collier)

Tom Schreibel, being duly sworn on oath, deposes and says:

1. I continue to be retained as an expert by Intervenor-Petitioners Congressmen Glenn Grothman, Mike Gallagher, Bryan Steil, Tom Tiffany, and Scott Fitzgerald ("the Congressmen") in the above-captioned case, currently pending before this Court.
2. Attached as **Exhibit A** to this affidavit is a true and correct copy of my response expert report regarding the proposed congressional redistricting maps of other parties and the Congressmen's modified version of their Proposed Remedial Map, with attachments.
3. Attached as **Exhibit B** are true and correct copies of pictures of the Congressmen's modified version of the Proposed Remedial Map, which the Congressmen provided to me for my expert review.

FURTHER AFFIANT SAYETH NOT



TOM SCHREIBEL

SWORN AND SUBSCRIBED BEFORE ME

This 28th day of December, 2021

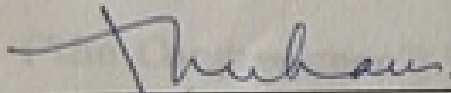
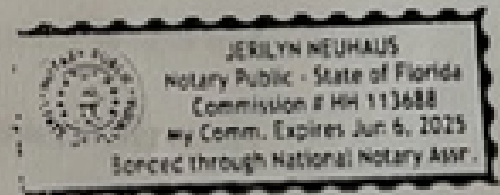
Notary Public, State of FLORIDA.
County of COLLIER.My Commission expires: 6-6-25

EXHIBIT A

No. 2021AP1450-OA

In the Supreme Court of Wisconsin

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PETITIONERS,

BLACK LEADERS ORGANIZING FOR COMMUNITIES, VOCES DE LA
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OFFICIAL CAPACITY AS A MEMBER OF THE WISCONSIN ELECTIONS
COMMISSION, *and* MARK THOMSEN, IN HIS OFFICIAL CAPACITY AS A
MEMBER OF THE WISCONSIN ELECTIONS COMMISSION,
RESPONDENTS,

THE WISCONSIN LEGISLATURE, GOVERNOR TONY EVERS, IN HIS
OFFICIAL CAPACITY, *and* JANET BEWLEY, SENATE DEMOCRATIC
MINORITY LEADER, ON BEHALF OF THE SENATE DEMOCRATIC CAUCUS,
INTERVENORS-RESPONDENTS.

RESPONSE EXPERT REPORT OF TOM SCHREIBEL

TABLE OF CONTENTS

EXECUTIVE SUMMARY	1
QUALIFICATIONS AND REQUIRED DISCLOSURES	4
STATEMENT OF ALL EXPERT OPINIONS	6
I. The Remedial Congressional Maps Proposed By The Governor, The Hunter Petitioners, And The Citizen Mathematicians	7
A. The Governor's Proposed Map	7
1. Summary Of Changes	7
2. Analysis Of Changes	8
B. The Hunter Petitioners' Proposed Map	11
1. Summary Of Changes	11
2. Analysis Of Changes	12
C. The Citizen Mathematicians' Proposed Map.....	14
1. Summary Of Changes	14
2. Analysis Of Changes	16
II. The Modified Version Of The Proposed Remedial Congressional Map.....	19

EXECUTIVE SUMMARY

My name is Tom Schreibel, and I continue to be retained as an expert by Intervenor-Petitioners Congressmen Glenn Grothman, Mike Gallagher, Bryan Steil, Tom Tiffany, and Scott Fitzgerald (“the Congressmen”) in the above-captioned case. I previously authored an expert report in this matter, which was filed with the Court on December 15, 2021. *See* Aff. of Tom Schreibel Ex. 1 at 14, *Johnson v. Wis. Elections Comm’n*, No.2021AP1450-OA (Wis. Dec. 15, 2021) (hereinafter “Schreibel Expert Rep.” or “December 15 Expert Report”).

My response expert report proceeds in two parts.

First, I describe and offer my expert opinions on the Governor’s Proposed Map, the Hunter Petitioners’ Proposed Map, and the Citizen Mathematicians And Scientists’ (“Citizen Mathematicians”) Proposed Map.

The Governor’s Proposed Map reapportions the State after moving 5.5% of the population to a new district. This map makes numerous significant changes that the Governor has not explained, and which appear inexplicable by reference to achieving population equality consistent with Wisconsin’s political geography. For example, the Governor’s Proposed Map moves several large communities out of District 4—which is already significantly underpopulated after the Census—and into District 1. That unnecessary change then spurs other changes in the Governor’s Proposed Map that are

similarly inexplicable and problematic, including changes between Districts 1 and 5, between Districts 4 and 5, and between Districts 1 and 2.

The Hunter Petitioners' Proposed Map reapportions Wisconsin after moving 6.8% of its population to a new district. This map too makes multiple substantial and problematic changes, which are unexplained and appear inexplicable with reference to achieving population equality consistent with Wisconsin's political geography. For example, the Hunter Petitioners' Proposed Map shifts people back and forth between Districts 1 and 5, with no offer explanation for these changes. The Hunter Petitioners' Proposed Map also unnecessarily alters District 6 by adding most of Sauk County to its eastern border, creating a bizarre, elongated district that stretches most of the State and that makes no sense with regard to Wisconsin's political geography. Finally, the Hunter Petitioners' Proposed Map needlessly adds a county split along the District 7/District 8 border, rather than reduce or eliminate District 8's southern appendages to reach reapportionment, which is a far more sensible change.

The Citizen Mathematicians' Proposed Map reapportions the State after moving 8.5% of the population to a new district. Like the previous two maps, the Citizen Mathematicians' Proposed Map makes significant unexplained and apparently inexplicable changes based on achieving population equality consistent with Wisconsin's political geography. For example, and like the Governor's Proposed Map, the Citizen Mathematicians' Proposed Map

needlessly adds large communities from District 4 to District 1—despite District 4’s significant underpopulation. This problematic change then causes the Citizen Mathematicians’ Proposed Map to make other unnecessary changes between Districts 4 and 5. Further, and also problematically, the Citizen Mathematicians’ Proposed Map swaps populations back-and-forth across Districts 1 and 5, with no basis in Wisconsin’s political geography. And while the Citizen Mathematicians defend their map based on its adherence to ward lines, such adherence is secondary to adherence to county and municipal lines, including because ward lines often change after congressional redistricting has begun. Finally, although the Citizen Mathematicians and their expert generally defend their proposed map as accounting for a list of communities of interest that they have identified, that list is flawed. It is based solely on submissions to the Governor’s “People’s Map Commission,” which are not representative of the entire State and which fail to provide sufficient data. Additionally, this list does not reflect Wisconsin’s political geography in reality, and the Citizen Mathematicians themselves do not faithfully adhere to it.

Second, I describe and offer my expert opinions on the modified version of the Congressmen’s Proposed Remedial Map. The modified version of the Proposed Remedial Map hews exceedingly close to the existing congressional districts map, even closer than the Proposed Remedial Map itself. Unlike the Proposed Remedial Map, the modified version of

the Proposed Remedial Map preserves District 3's long, narrow appendage, with only slight alterations to reach equal apportionment. Given the similarities between the Proposed Remedial Map and the modified version of the Proposed Remedial Map, the expert opinions that I provided in my December 15 Expert Report about the Proposed Remedial Map apply in full to the modified version of the Proposed Remedial Map—except to the extent the modified version retains District 3's narrow appendage into central Wisconsin. That said, the modified version is less optimal than the Proposed Remedial Map because it largely retains District 3's narrow appendage into central Wisconsin. In my opinion, the Proposed Remedial Map's removal of that narrow appendage in the course of equally reapportioning the State made more sense as a matter of Wisconsin's political geography, as I previously explained. Based on my review of the modified version of the Proposed Remedial Map, I conclude that it is preferable to the other proposed remedial congressional maps submitted here, except for the Congressmen's Proposed Remedial Map—and it outperforms all submitted maps on the narrow question of least population moved to new districts.

QUALIFICATIONS AND REQUIRED DISCLOSURES

I provided a statement of my qualifications as an expert on the subject of redistricting in Wisconsin in my December 15 Expert Report, *see* Schreibel Expert Rep. 5–9, which statement I incorporate by reference here. Further, I provided the required disclosures regarding my

compensation, any publications, and any prior expert testimony in my December 15 Expert Report, *see id.*, which I also incorporate here by reference.

As with my December 15 Expert Report, the Congressmen and their staff provided the factual and data materials that I considered in forming my opinions and in drafting this response report. I also have had conversations with the Congressmen's staff, who orally relayed facts and data that are themselves reflected in the materials that I received from the Congressmen and their staff. In addition to the materials disclosed in my December 15 Expert Report, the materials that I considered in forming my expert opinions for this response report are as follows:

- Memorandum to Speaker Robin Vos from the Legislative Reference Bureau, *People Moved In Congressional Redistricting Proposals For Johnson v. Wisconsin Elections Commission* (Dec. 27, 2021) ("People Moved In Congressional Redistricting Proposals LRB Memo," attached as Exhibit 1);
- Memorandum to Speaker Robin Vos from the Legislative Reference Bureau, *People Moved And Split Geography In Congressional Redistricting Proposals In Johnson v. Wisconsin Elections Commission* (Dec. 27, 2021) ("People Moved And Split Geography LRB Memo," attached as Exhibit 2);
- Memorandum to Speaker Robin Vos from the Legislative Reference Bureau, *Split Geographies In Congressmen's Revised Proposal In Johnson v. Wisconsin Elections Commission* (Dec. 27, 2021) ("Split Geographies In Congressmen's Revised Proposal LRB Memo," attached as Exhibit 3);
- Memorandum to Speaker Robin Vos from the Legislative Reference Bureau, *People Moved In*

Congressmen's Revised Proposal In Johnson v. Wisconsin Elections Commission (Dec. 27, 2021) ("People Moved In Congressmen's Revised Proposal LRB Memo," attached as Exhibit 4);

- Memorandum to Speaker Robin Vos from the Legislative Reference Bureau, *People Moved In Congressmen's Revised Proposal In Johnson v. Wisconsin Elections Commission [With Breakdown Of Data]* (Dec. 27, 2021) (attached as Exhibit 5);
- The parties' briefing, expert reports, and other materials regarding proposed remedial maps, filed with the Wisconsin Supreme Court in this matter on December 15, 2021, along with the related disclosures; and
- The CSV, PDF, and Shapefile formats of a modified version of the Congressmen's Proposed Remedial Congressional Map.

STATEMENT OF ALL EXPERT OPINIONS

My response expert report proceeds in two parts. First, I describe and offer my expert opinions on the Governor's Proposed Map, *infra* Part I.A, the Hunter Petitioners' Proposed Map, *infra* Part I.B, and the Citizen Mathematicians' Proposed Map, *infra* Part I.C. Second, I describe and offer my expert opinions on the modified version of the Congressmen's Proposed Remedial Congressional Map. *Infra* Part II.

I. The Remedial Congressional Maps Proposed By The Governor, The Hunter Petitioners, And The Citizen Mathematicians

A. The Governor's Proposed Map

1. Summary Of Changes

The Governor's Proposed Map reaches equal apportionment after moving 322,356 people, which represents 5.5% of the population into a new district (322,356 people moved divided by Wisconsin's total, post-Census population of 5,893,718). *See* People Moved In Congressional Redistricting Proposals LRB Memo at 1; People Moved And Split Geography LRB Memo at 1; Joint Stipulation of Facts And Law ("Joint Stip.") at 10, *Johnson v. Wis. Elections Comm'n*, No.2021AP1450-OA (Wis. Nov. 4, 2021); *see also* Gov. Tony Evers's Br. In Supp. Of Proposed Map at 10, *Johnson v. Wis. Elections Comm'n*, No.2021AP1450-OA (Wis. Dec. 15, 2021). The map makes various changes in District 1, District 2, District 4, and District 5. For example, the Governor's Proposed Map shifts multiple close-in Milwaukee suburbs from District 4—including St. Francis, Cudahy, and South Milwaukee—to District 1. Next, the proposed map moves all of Waukesha County out of District 1, placing it entirely in District 5. The map then splits the City of Whitewater between District 5 and District 1 and moves East Troy and portions of the City of Mukwonago from District 1 to District 5. Further west, the map also shifts all of the City of Beloit from District 2 into District 1, and it moves all of Wauwatosa and portions of West Allis from District 5 to District 4.

Finally, the Governor's Proposed Map makes minor changes elsewhere, such as adding District 2's portion of Richland County to District 3 and moving River Hills from District 6 to District 4 along the border of Milwaukee County. The Governor's Proposed Map splits 12 counties.

2. Analysis Of Changes

The Governor's Proposed Map is problematic in numerous respects, and each of the changes identified above are left unexplained by the Governor and appear inexplicable with reference to achieving population equality consistent with Wisconsin's existing political geography.

To begin, the changes in the Governor's Proposed Map between District 1 and District 4 are problematic. After the 2020 Census, District 4 was easily the most underpopulated congressional district in the State, requiring it to add significant population in order to reach equal apportionment. Joint Stip. Ex. C. Yet, the Governor's Proposed Map *removes* multiple communities with close ties to the City of Milwaukee from District 4 to District 1, including St. Francis, Cudahy, and South Milwaukee. This unexplained change requires the map to add even more people to District 4 from elsewhere in the State to reach equal population. This shift also gives District 1 a peculiar shape, adding a narrow appendage jutting well north into Milwaukee County. Finally, this change does not appear to be explicable based upon Wisconsin's political geography. St. Francis, Cudahy, and South Milwaukee are close-in Milwaukee suburbs with strong

historical, cultural, and economic ties to the City of Milwaukee. These cities are older-developed communities that are dissimilar to the more newly developed suburban Milwaukee communities found inside District 1's northern border, such as Franklin and Oak Creek. St. Francis, Cudahy, and South Milwaukee have traditionally been included in Milwaukee-based districts, and the Governor's Proposed Map seems to ignore this traditional connection.

The Governor's Proposed Map's two changes between District 1 and District 5 are also problematic.

First, the Governor's Proposed Map removes all of District 1's portion of Waukesha County—which typically falls within District 1's boundaries—into District 5. Again, this modification is left unexplained; however, the most likely reason for this change is a need to counteract the Governor's unexplained and unnecessary addition of communities like St. Francis, Cudahy, and South Milwaukee to District 1 from District 4, as described immediately above.

Second, the Governor's Proposed Map moves portions of Whitewater from District 5 to District 1 and then moves all of East Troy and the remaining portions of Mukwonago from District 1 to District 5. But since both District 1 and District 5 were underpopulated after the Census, swapping communities back-and-forth does not address these districts' malapportionment. Nor does the Governor explain how this swap furthers any other legitimate consideration: It does not reduce any county split, as the existing map's treatment of

Whitewater and Mukwonago already results in the splitting of county lines. And this change does not appear to be explicable based upon Wisconsin's political geography.

Next, the shift between District 4 and District 5 in the Governor's Proposed Map is similarly problematic. Given the changes discussed above, the Governor's Proposed Map created a significant overpopulation in District 5 and a significant underpopulation in District 4, a district that was already severely underpopulated after the Census. So, to equally apportion both Districts 4 and 5, the Governor's Proposed Map moves all of Wauwatosa and portions of West Allis into District 4. Given the size of these two communities, that is a dramatic shift of population into a new congressional district. This change appears to have been precipitated by needless adjustments between Districts 1 and 4 and Districts 1 and 5, discussed above. And it does not appear to be explicable based upon Wisconsin's political geography, as the Governor does not offer any explanation for this change.

Finally, the Governor's moving of the entirety of the City of Beloit from District 2 to District 1 is problematic. Here too, the Governor's Proposed Map could have avoided moving Beloit—which covers a significant number of people—by respecting the existing boundary between Districts 1 and 4. However, because the Governor's map without explanation moved large southern Milwaukee County communities from District 4 to District 1, shifting of Beloit to District 1 from District 2 also lacks any justification. Further, moving Beloit

to District 1 does not appear to be grounded in any considerations relating to Wisconsin's existing political geography.

In sum, the Governor's Proposed Map needlessly moves multiple southeast Wisconsin communities without reducing county or municipal splits, and without respecting the State's existing political geography—such as the ties between communities like St. Francis, Cudahy, and South Milwaukee with the City of Milwaukee. These needless modifications result in an unusual northern appendage to District 1, and they are paired with more unnecessary swaps in Walworth and Waukesha Counties.

B. The Hunter Petitioners' Proposed Map

1. Summary Of Changes

The Hunter Petitioners' Proposed Map bears some similarity to the Governor's Proposed Map, and it equally apportions the State while moving 410,502 people into new districts, which represents 6.96% of the population (410,502 people moved divided by Wisconsin's total, post-Census population of 5,893,718). *See* People Moved In Congressional Redistricting Proposals LRB Memo at 1; People Moved And Split Geography LRB Memo at 1; Joint Stip. At 10; *see also* Expert Rep. of Dr. Stephen Ansolabehere In Supp. Of Hunter Int.-Pet'rs at 10, *Johnson v. Wis. Elections Comm'n*, No.2021AP1450-OA (Wis. Dec. 15, 2021) (reaching approximately the same value by stating that "over 93.1% of Wisconsin's population ... do[es] not change districts").

Many of this map's significant changes affect Districts 1, 4, 5, and 6. For example, the Hunter Petitioners' Proposed Map moves District 1's portion of Waukesha County and significant portions of Walworth County into District 5. It then shifts parts of Wauwatosa and West Allis from District 5 to District 1, creating a thin peninsula at District 1's northern border, similar to the Governor's map. The map also takes most of Sauk County from District 2 and adds it to District 6, stretching District 6 from Lake Michigan to west of the Wisconsin River. Finally, the Hunter Petitioners' Proposed Map splits Shawano County between District 7 and District 8, introducing a county split that was not present in the existing congressional map. The Hunter Petitioners' Proposed Map splits 11 counties.

2. Analysis Of Changes

Like the Governor's Proposed Map, the Hunter Petitioners' Proposed Map is problematic in multiple respects, and each of the changes identified above are unexplained and appear inexplicable with reference to achieving population equality consistent with Wisconsin's existing political geography.

First, the map's multiple changes between District 1 and District 5 are problematic. The Hunter Petitioners' Proposed Map shifts people back and forth between District 1 and District 5 without providing any reason for these changes. Specifically, the proposed map adds portions of Wauwatosa and West Allis from District 5 to District 1, and then moves

District 1's portion of Waukesha County and part of its portion of Walworth County to District 5—although both Districts were underpopulated after the Census. The result is a narrow appendage to District 1 that juts north into the City of Milwaukee—similar to the narrow appendage added by the Governor's Proposed Map—that creates a peculiar shape for this district. Further, the Hunter Plaintiffs offer no justification of this drastic change based upon Wisconsin's existing political geography. Indeed, these changes are particularly odd considering the history, economy, and location of these communities. Western Milwaukee suburbs like Wauwatosa have deep economic ties to the City of Milwaukee and share manufacturing and suburban ties with the communities that dominate District 5. This is likely why these communities are traditionally located either in Milwaukee-based districts or districts with other western suburbs, like District 5. Thus, adding these communities to District 1, which is more southern, will conflict with this political geography and may confuse residents, for no discernible reason.

Second, the Hunter Petitioners' Proposed Map unnecessarily alters District 6 by adding most of Sauk County from District 2 to its western boundary. This creates a bizarre, elongated District 6 that stretches from the coast of Lake Michigan to west of the Wisconsin River. Further, the Hunter Petitioners do not attempt to explain how adding Sauk County to District 6 fits with Wisconsin's political

geography. Sauk County is a west-central Wisconsin county with ties to both Madison and western Wisconsin. District 6, however, centers predominantly around eastern Wisconsin cities along the shores of Lake Winnebago and Lake Michigan. Thus, Sauk County has much more in common with either Dane County or the counties of southwest Wisconsin than it does with Sheboygan or Winnebago Counties. In all, adding this far-west appendage to District 6 appears unnecessary, especially since District 6 did not require large changes to reach equal apportionment.

Finally, the Hunter Petitioners' Proposed Map creates a needless, unexplained split of Shawano County between District 7 and District 8. After the 2020 Census, District 8 was overpopulated, Joint Stip. Ex. C, and so had to lose population to its neighboring districts. The most logical place for District 8 to shed population was along its southern border, as that border contained two appendages jutting into Winnebago and Calumet Counties. However, the Hunter Petitioners' Proposed Map breaches the existing District 7/District 8 line, creating a new split of Shawano County in the process. The Hunter Petitioners do not offer any justification for these changes grounded in Wisconsin's political geography—nor is such a justification apparent.

C. The Citizen Mathematicians' Proposed Map

1. Summary Of Changes

The Citizen Mathematicians Proposed Map equally apportions Wisconsin after moving 499,510 people into new

districts, which is 8.5% of Wisconsin's population (499,510 people moved divided by Wisconsin's total, post-Census population of 5,893,718), and making multiple changes to Districts 1, 3, 4, 5, and 7, for example. *See* People Moved In Congressional Redistricting Proposals LRB Memo at 1; People Moved And Split Geography LRB Memo at 1; Joint Stip. at 10; *see also* Br. of Int.-Pet'rs Citizen Mathematicians & Scientists at 9, *Johnson v. Wis. Elections Comm'n*, No.2021AP1450-OA (Wis. Dec. 15, 2021) ("Citizen Math. Br."). Like the Governor's Proposed Map, the Citizen Mathematicians' Proposed Map adds multiple close-in Milwaukee County suburbs like St. Francis, Cudahy, and South Milwaukee to District 1 from District 4. Then, the Citizen Mathematicians' Proposed Map removes different, southwest Milwaukee County communities like Franklin from District 1 and adds them to District 5. So, like both the Governor's and the Hunter Petitioners' proposed maps, the Citizen Mathematicians' Proposed Map leaves District 1 with a narrow, northern peninsula. Further, the map moves District 1's portion of Waukesha County into District 5 and District 5's portion of Walworth County into District 1. Those changes split both Whitewater and Mukwonago between these two districts. Finally, the proposed map adds portions of Wauwatosa and West Allis from District 5 into District 4. The Citizen Mathematician's Proposed Map splits seven counties.

2. Analysis Of Changes

The Citizen Mathematicians' Proposed Map is problematic in multiple respects, and each of the changes identified above are unexplained and appear inexplicable with reference to achieving population equality consistent with Wisconsin's existing political geography.

Just like the Governor's Proposed Map, the Citizen Mathematician's map adds close-in Milwaukee suburban communities from District 4 like St. Francis, Cudahy, and South Milwaukee to District 1 without offering any explanation. Again, District 4 was significantly underpopulated after the Census, thus there is no reason to remove these large cities from this district. The Citizen Mathematicians' map goes even further than the Governor's map on this score, removing other communities in Milwaukee County from District 1—like Franklin—and adding them to District 5. Additionally, these unexplained shifts create a bizarre appendage at District 1's northern border and lacks a basis in Wisconsin's political geography—points that the Citizen Mathematicians and their expert fail to persuasively address—as I already explained above.

The Citizen Mathematicians' other proposed changes to District 1 and District 5 are similarly problematic. The Citizen Mathematicians' Proposed Map removes Waukesha County from District 1 and places it wholly within District 5, and then eliminates Walworth County from District 5 and puts it within District 1. But both districts were

underpopulated after the 2020 Census, so there appears to be no reasons based in seeking population equality to make these changes. Further, these changes needlessly split the cities of Whitewater and Mukwonago, both of which currently lie unsplit in their respective districts.

Additionally, and again like the Governor's Proposed Map, the Citizen Mathematicians' Proposed Map shifts parts of Wauwatosa and West Allis from District 5 to District 4 without explanation. So far as I can tell, the most plausible reason for the Citizen Mathematicians to shift both of these large communities from District 5 to District 4 is to offset the unnecessary removal of communities like St. Francis, Cudahy, and South Milwaukee from District 4, despite District 4's significant underpopulation. And, given the map's other changes to District 5, described above, the shift of Wauwatosa and West Allis from District 5 to District 4 means that District 5 both loses and gains population in Milwaukee County without explanation.

Further, I observe that the Citizen Mathematicians claim throughout their Brief that their proposed map largely adheres to ward lines. However, in my experience participating in the redistricting process for Wisconsin, respect for county and other municipal lines takes priority over respect for ward lines. This is because ward lines often change after the congressional redistricting process has begun, thus they cannot provide reliable guidance during the map-drawing process.

Finally, the Citizen Mathematicians’ and their expert claim that their map accounts for a list of communities of interest that they have identified across the State, but that list rests solely on submissions to the Governor’s “People’s Map Commission”—proposed maps that no party has submitted to this Court—not on any claimed expertise in Wisconsin politics of this expert. Citizen Math. Br. 34; Expert Rep. of Dr. Moon Duchin On Behalf Of Int-Pet’s Citizen Mathematicians at 11, 31–34, *Johnson v. Wis. Elections Comm’n*, No.2021AP1450-OA (Wis. Dec. 15, 2021) (“Duchin Expert Rep.”). The “People’s Map Commission” submissions are not, and do not claim to be, representative of actual communities across Wisconsin, *see* Duchin Expert Rep. 11—nor do they rest on sufficient data, as several rely on fewer than ten submissions, with one based on four submissions, *id.* at 31–34. Additionally, many of the listed communities are unmoored from the reality in Wisconsin: for example, the list divides Milwaukee and its close suburbs into multiple communities, even though this region predominantly shares economic, cultural, historical, and transportation-based interests; it identifies Central Wisconsin as a community without including Wausau or the important forest-products industry; and it describes the Oshkosh area as a community without mentioning its significant interest in manufacturing. *See id.* Finally, the Citizen Mathematicians do not faithfully follow their own list. They identify Whitewater as a

community, for example, yet divide it between District 1 and District 5. *See id.* at 31.

II. The Modified Version Of The Proposed Remedial Congressional Map

The Congressmen have provided me with a modified version of the Proposed Remedial Map for my review. This modified version results in an exceedingly low number of people moving districts, with minimal changes from the Congressmen's original proposal, the Proposed Remedial Map. The modified version of the Proposed Remedial Map moves a total of 226,723 people to a new district, representing 3.84% of Wisconsin's population (226,723 people moved divided by Wisconsin's total, post-Census population of 5,893,718). *See* People Moved And Split Geography LRB Memo at 1; People Moved In Congressmen's Revised Proposal LRB Memo at 1; Joint Stip. at 10. That number is well below any of the other proposed remedial maps submitted to this Court that I have reviewed.

I observe that the modified version of the Proposed Remedial map hews closely to the existing congressional districts map, like the Proposed Remedial Map itself. Specifically, the modified version of the Proposed Remedial Map retains all changes to the existing districts in the Proposed Remedial Map, except as to District 3's existing, narrow appendage into central Wisconsin, which appendage ends in Stevens Point. Put another way, the modified version of the Proposed Remedial Map differs from the Proposed

Remedial Map only by changing the line between District 3 and District 7. All other districts are identical to the districts in the Congressmen's Proposed Remedial Map.

The modified version of the Proposed Remedial Map preserves the long, narrow appendage of District 3, with slight alterations only to reach equal apportionment. Like the Proposed Remedial Map, the modified version of the Proposed Remedial Map shifts the southern and eastern portions of Portage County near the end of the appendage from District 3 to District 8 to equally apportion these districts, creating a county split. The modified version of the Proposed Remedial Map also slightly adjusts District 3's already-existing split of Chippewa County with District 7 to equalize these districts. Unlike the Proposed Remedial Map, the modified version of the Proposed Remedial Map retains several existing county splits between District 3 and District 7—owing to its retention of District 3's long, narrow appendage. Specifically, the line between District 3 and District 7 in the modified version splits Chippewa, Jackson, Monroe, Juneau, and Wood Counties, while the line between District 3 and District 8 splits Portage County. While retaining the long, narrow appendage of District 3 increases the number of county splits in the modified version of the Proposed Remedial Map, it reduces the number of individuals moved to new congressional districts. The modified version of the Proposed Remedial Map's minor changes to District 3's narrow appendage and northern border are consistent with the approach in the

Governor's Proposed Remedial Map, the Hunter Petitioners' Proposed Remedial Map, and the Citizen Mathematicians' Proposed Remedial Map.

The expert opinions that I provided in my initial expert report about the Congressmen's Proposed Remedial Map apply in full to the modified version of the Congressmen's Proposed Remedial Map, except to the extent the modified version retains District 3's narrow appendage into central Wisconsin. That is, in my expert opinion, the modified version properly accounts for the population shifts that Wisconsin experienced over the last decade: the Milwaukee-area districts generally move west, towards Madison and Green Bay, while Districts 3 and 7 generally move south, towards Madison's population growth. Schreibel Exp. Rep. 15–16; *see also id.* 17–30 (providing my full expert opinions with respect to each of the districts in the Proposed Remedial Map). Further, like the Proposed Remedial Map, where the modified version makes changes to account for population shifts, those changes themselves comport with Wisconsin's existing political geography. *See id.* 17–30. That said, the modified version is less optimal than the Congressmen's Proposed Remedial Map in that it largely retains District 3's narrow appendage into central Wisconsin. Removing that narrow appendage in the course of equally reapportioning the State made more sense as a matter of Wisconsin's political geography. Specifically, District 3 is centered in rural, western Wisconsin, so removing its narrow appendage into

central Wisconsin preserves its largely rural, western Wisconsin character. Further, Stevens Point—the end of District 3’s narrow appendage—has far more in common with District 7’s Wausau than with the largest municipalities in District 3, so moving it to District 7 likewise accords with Wisconsin’s political geography.

Reviewing the modified version of the Congressmen’s Proposed Remedial Map, it equally apportions Wisconsin into eight congressional districts, just like their Proposed Remedial Map. Specifically, Districts 2, 3, 5, 6, 7, and 8 have 736,715 people, while Districts 1 and 4 have 736,714 people. Further, as noted above, the modified version moves 226,723 people into a new district, representing 3.84% of Wisconsin’s population. As for county and municipal splits, the modified version of the Congressmen’s Proposed Remedial Map splits 14 counties and 22 municipalities, according to an analysis by the Legislative Reference Bureau. *See Split Geographies In Congressmen’s Revised Proposal LRB Memo at 1.*

Based on my review of the modified version of the Congressmen’s Proposed Remedial Map, I conclude that it is preferable to all of the other proposed remedial congressional maps, except for the Congressmen’s Proposed Remedial Map. With only 3.84% of Wisconsin’s population moved, the modified version moves fewer people than any other proposed remedial map that I have reviewed. Further, where changes were required to the existing districts due to population shifts, the modified version’s adjustments accord with

Wisconsin's political geography except—as already explained—for its retention of District 3's long, narrow appendage.*

* Regarding overall municipal splits, each of the parties proposing remedial congressional maps appear to have calculated their map's splits using different data and/or different methodology. Accordingly, differences in overall municipal splits do not appear to assist in evaluating any of the proposed congressional maps. That said, an individual proposed district's treatment of municipal splits is still probative to whether that district respects Wisconsin's political geography.

Dated: December 28, 2021.

Respectfully submitted,



TOM SCHREIBEL

EXHIBIT 1

Richard A. Champagne, Chief
Legal 608.504.5801 • Research 608.504.5802



One East Main Street, Suite 200
Madison, WI 53703 • <http://legis.wisconsin.gov/lrb>

MEMORANDUM

TO: Speaker Robin Vos

FROM: Legislative Reference Bureau

DATE: December 27, 2021

SUBJECT: People moved in congressional redistricting proposals for *Johnson v. Wisconsin Elections Commission*.

You requested information related to the congressional redistricting proposals in *Johnson v. Wisconsin Elections Commission*. Specifically, you asked for data on how many individuals are moved in or out of their current law congressional district by each proposal. That is, how many people who reside in district #X in the current map would be moved out of district #X, and how many would be moved into district #X.

Congressional Redistricting Proposal	Total People Moved
SB 622	381,829
Hunter	410,502
Citizen Mathematicians	499,510
Gov. Evers	322,356
Congressmen-Revised	226,723

We hope you find this information useful. Please let us know if you have any questions or if we can provide any additional assistance.

EXHIBIT 2

Richard A. Champagne, Chief
Legal 608.504.5801 • Research 608.504.5802



One East Main Street, Suite 200
Madison, WI 53703 • <http://legis.wisconsin.gov/lrb>

MEMORANDUM

TO: Speaker Robin Vos

FROM: Legislative Reference Bureau

DATE: December 27, 2021

SUBJECT: People moved and split geography in congressional redistricting proposals in *Johnson v. Wisconsin Elections Commission*.

You requested information related to the congressional redistricting proposals in *Johnson v. Wisconsin Elections Commission*. Specifically, you asked for the number of county and municipal splits in each proposal. You also asked for data on how many individuals are moved in or out of their current law congressional district by each proposal. That is, how many people who reside in district #X in the current map would be moved out of district #X, and how many would be moved into district #X. The data provided in this memorandum on geographic splits is derived from the Legislative Technology Services Bureau's WISE-District Application.

Congressional Redistricting Proposal	Total People Moved	Number of County Splits	Number of Municipal Splits
SB 622	381,829	10	16
Hunter	410,502	11	13
Citizen Mathematicians	499,510	7	13
Gov. Evers	322,356	12	25
Congressmen-Revised	226,723	14	22

We hope you find this information useful. Please let us know if you have any questions or if we can provide any additional assistance.

EXHIBIT 3

Richard A. Champagne, Chief
Legal 608.504.5801 • Research 608.504.5802



One East Main Street, Suite 200
Madison, WI 53703 • <http://legis.wisconsin.gov/lrb>

MEMORANDUM

TO: Speaker Robin Vos

FROM: Legislative Reference Bureau

DATE: December 27, 2021

SUBJECT: Split geographies in Congressmen's revised proposal in *Johnson v. Wisconsin Elections Commission*.

You requested information related to the revised congressional redistricting proposal that you provided from the Congressmen Intervener-Petitioners in *Johnson v. Wisconsin Elections Commission*. Specifically, you asked for a breakdown of the number of people in each congressional district within counties and municipalities that are split. The data provided in this memorandum is derived from the Legislative Technology Services Bureau's WISE-District Application.

Split geographies

The proposal splits 14 counties and 22 municipalities.

County Splits in Congressmen's Revised Proposal

Split County	Proposed Districts (Residents)
Calumet	6 (39,738); 8 (12,704)
Chippewa	3 (35,025); 7 (31,272)
Columbia	5 (6,166); 6 (52,324)
Dodge	5: (70,653); 6 (18,743)
Jackson	3 (19,174); 7 (1,971)

Juneau	3 (20,806); 7 (5,912)
Milwaukee	1 (95,887), 4 (736,714), 5 (106,888)
Monroe	3 (41,589); 4 (4,685)
Portage	7 (34,225); 8 (36,152)
Rock	1 (91,840), 2 (71,847)
Sauk	2 (25,951), 3 (39,812)
Walworth	1 (94,667), 5 (11,811)
Waukesha	1 (87,442), 5 (319,536)
Wood	3 (43,820); 7 (30,387)

Municipal Splits in Congressmen's Proposal

County	Split Municipality	Proposed Districts (Residents)
Calumet	Village of Harrison	6 (5,434), 8 (6,984)
Calumet	Town of Woodville	6 (42), 8: (808)
Chippewa	Town of Edson	3 (700); 7 (441)
Dodge	Town of Fox Lake	5 (248); 6 (2,340)
Dodge	Town of Trenton	5 (175); 6 (1,044)
Jackson	Town of Alma	3 (622); 7 (411)
Juneau	Town of Clearfield	3 (155); 7 (547)
Juneau	Town of Germantown	3 (789); 7 (830)
Juneau	Town of Lisbon	3 (1,737); 7 (13)
Milwaukee	City of Wauwatosa	4 (39,627); 5 (8,760)
Monroe	Town of La Grange	3 (122); 7 (1,826)
Monroe	City of Tomah	3 (9,509); 7 (61)

Portage	Town of Hull	3 (4,193); 8 (1,094)
Portage	Town of Plover	3 (17); 8 (1,548)
Rock	Town of Turtle	1 (1,250), 2 (1,143)
Sauk	City of Baraboo	2 (4,486); 3 (8,070)
Sauk	Town of Baraboo	2 (679); 3 (1,137)
Walworth	Town of Whitewater	1 (1,343); 5 (90)
Waukesha	Village of Dousman	1 (2,411); 5 (8)
Waukesha	City of New Berlin	1 (6,828); 5 (33,623)
Waukesha	City of Waukesha	1 (66); 5 (71,092)
Waukesha	Town of Waukesha	1 (6,897); 5 (1,560)

According to the Department of Administration's Demographic Services Center, there currently are 57 municipalities that are split between two or more counties as of January 2021.¹ Therefore, the data on split geographies may reflect the overall number of municipal splits rather than being an indicator of a district not drawn according to traditional redistricting principles.

We hope you find this information useful. Please let us know if you have any questions or if we can provide any additional assistance.

¹ "Population and Housing Unit Estimates – Minor Civil Division Final Population Estimates," Department of Administration, Demographic Services Center, accessed October 19, 2021, <https://doa.wi.gov/pages/home.aspx>.

EXHIBIT 4

Richard A. Champagne, Chief
Legal 608.504.5801 • Research 608.504.5802



One East Main Street, Suite 200
Madison, WI 53703 • <http://legis.wisconsin.gov/lrb>

MEMORANDUM

TO: Speaker Robin Vos

FROM: Legislative Reference Bureau

DATE: December 27, 2021

SUBJECT: People moved in Congressmen's revised proposal in *Johnson v. Wisconsin Elections Commission*.

You requested information related to the revised congressional redistricting proposal that you provided from the Congressmen Intervener-Petitioners in *Johnson v. Wisconsin Elections Commission*. Specifically, you asked how many persons would be moved into or out of each district by the revised proposal as compared to the districts as they exist under current law. That is, how many people who reside in district #X in the current map are moved out of district #X by the Congressmen's revised proposal, and how many were moved into district #X. Please note that the statewide total population moved is a double-count of all individuals moved, as a person moved out of one district is also counted as a person moved into another district. Statewide, 226,723 individuals change districts under the Congressmen's revised proposal.

District	Population Moved Out	Population Moved In	Total Population Moved
1	70	9,406	9,476
2	52,751	70	52,821
3	40,338	43,420	83,758
4	0	41,319	41,319
5	39,702	40,762	80,464
6	42,454	51,408	93,862
7	4	4186	4,190
8	51,404	36,152	87,556
Statewide	226,723	226,723	453,446 (226,723 individuals)

We hope you find this information useful. Please let us know if you have any questions or if we can provide any additional assistance.

EXHIBIT 5

Richard A. Champagne, Chief
Legal 608.504.5801 • Research 608.504.5802



One East Main Street, Suite 200
Madison, WI 53703 • <http://legis.wisconsin.gov/lrb>

MEMORANDUM

TO: Speaker Robin Vos

FROM: Legislative Reference Bureau

DATE: December 27, 2021

SUBJECT: People moved in Congressmen's revised proposal in *Johnson v. Wisconsin Elections Commission*.

You requested information related to the revised congressional redistricting proposal that you provided from the Congressmen Intervener-Petitioners in *Johnson v. Wisconsin Elections Commission*. Specifically, you asked how many persons would be moved into or out of each district by the revised proposal as compared to the districts as they exist under current law. That is, how many people who reside in district #X in the current map are moved out of district #X by the Congressmen's revised proposal, and how many were moved into district #X. Please note that the statewide total population moved is a double-count of all individuals moved, as a person moved out of one district is also counted as a person moved into another district. Statewide, 226,723 individuals change districts under the Congressmen's revised proposal.

District	Population Moved Out • District Moved To	Population Moved In • District Moved From	Total Population Moved
1	70 • Dist. 2: 70	9,406 • Dist. 2: 9,335 • Dist. 5: 71	9,476
2	52,751 • Dist. 1: 9,355	70 • Dist. 1: 70	52,821
3	40,338 • Dist. 7: 4,186 • Dist. 8: 36,152	43,420 • Dist. 2: 43,416 • Dist. 7: 4	83,758

4	0	41,319 • Dist. 5: 39,627 • Dist. 6: 1,692	41,319
5	39,702 • Dist. 1: 71 • Dist. 4: 39,627 • Dist. 6: 4	40,762 • Dist. 6: 40,762	80,464
6	42,454 • Dist. 4: 1,692 • Dist. 5: 40,762	51,408 • Dist. 5: 4 • Dist. 8: 51,404	93,862
7	4 • Dist. 3: 4	4,186 • Dist. 3: 4,186	4,190
8	51,404 • Dist. 6: 51,404	36,152 • Dist. 3: 36,152	87,556
Statewide	226,723	226,723	453,446 (226,723 individuals)

We hope you find this information useful. Please let us know if you have any questions or if we can provide any additional assistance.

EXHIBIT B

