TO: Judges Shirley, Poovey, and Layton

FROM: Special Masters

DATE: February 23, 2022

SUBJECT: Special Masters' Report – Analysis and Recommendations

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Introduction

Pursuant to the trial court's "Order Appointing Special Masters" on February 16, 2022, ¶ 6, the undersigned now file the following report with the three-judge panel in this case.

Motion for Disqualification

In its Order Appointing the three Special Masters, the Court authorized the undersigned Special Masters (hereinafter "Special Masters") to "hire research and technical assistants and advisors reasonably necessary to facilitate [our] work." We subsequently retained Dr. Bernard Grofman, Dr. Tyler Jarvis, Dr. Eric McGhee, and Dr. Samuel Wang to assist us in satisfying our duties as Special Masters. The Curriculum Vitae for each of these individuals (hereinafter referred to as "advisors") is attached to this report. In this same Order, this Court also ordered the "parties and non-parties may not engage in any *ex parte* communication with the Special Masters about the subject matter of this litigation." *Id.*

We have been informed that Legislative Defendants have filed a motion in this case requesting that this Court disqualify Dr. Wang and Dr. Jarvis as advisors to the Special Masters and take further steps to destroy any work product completed by them and otherwise prohibit the undersigned from considering any information or materials obtained from them. We have investigated this matter and below is a detailed review of our findings.

On February 18, 2022, at 1:01 pm, Dr. Wang emailed Dr. Mattingly requesting the underlying data utilized in his analysis of the 2021 redistricting plans. On this same date at 1:57 p.m., Dr. Mattingly responded, and correspondence between Dr. Wang and Dr. Mattingly continued through February 20, 2022 at 10:23 a.m.

On February 18, 2022, at 1:21 p.m., Dr. Wang emailed Dr. Pedgen, expert for Harper Plaintiffs, seeking the underlying data Dr. Pedgen utilized in his analysis of the 2021 redistricting plans. On this same date at 2:31 p.m., Dr. Pedgen responded to Dr. Wang's inquiry, directing him to use the method utilized by Dr. Mattingly, expert for Harper Plaintiffs and Plaintiff Common Cause. On February 19, 2022, at 6:59 a.m., Dr. Wang responded to Dr. Mattingly's correspondence.

On February 19, 2022, at 4:46 p.m., Dr. Jarvis contacted Dr. Mattingly to request clarification on Dr. Mattingly's analysis and underlying data. Later that day, at 8:13 p.m., Dr. Jarvis contacted Dr. Herschlag, Dr. Mattingly's colleague at Duke University, regarding Dr. Herschlag's analysis and underlying data supporting his analysis of the 2021 redistricting plans to which Dr. Herschlag responded on that same date. All email correspondence between Dr. Wang and Dr. Jarvis and the plaintiff experts Mattingly and Pegden is attached to this report and the email correspondence attached is all of the communication that occurred between the advisors and any of the experts of the parties.

The undersigned acknowledge the technical breach of this Court's mandate that no *ex parte* communication occur between parties and non-parties with the Special Masters. The undersigned, however, respectfully recommend that the Court deny the motion for the following reasons:

- First, these communications between the advisors and Drs. Mattingly and Herschlag do not appear to have been made in bad faith and constitute the only communications between them, written or otherwise. The advisors immediately ceased contact with Drs. Mattingly and Herschlag, and have provided copies of the communications. Therefore, all parties are privy to the extent of the communications.

- Second, their communications directed at experts for Harper Plaintiffs were solely for the purpose of proceeding as quickly as possible within the abbreviated time frame allotted for the remedial process.

- Third, the Special Masters emphasize that, while the communications were in the context of the advisors' preliminary steps to evaluate the 2022 Remedial Plans, the communications sought background information pertaining to the earlier analysis of the 2021 Redistricting Plans performed by Drs. Pegden, Mattingly, and Herschlag in the merits stage of this case that was ultimately received and relied upon by the Court at trial. Additionally, as was later determined, the information sought by Dr. Wang and by Dr. Jarvis was publicly available on Dr. Hershlag's website at the time of the communications questioned herein by the Legislative Defendants.

- Finally, though the analysis provided by Drs. Wang and Jarvis was helpful and consistent with the analysis of our other expert advisors, it was not determinative of any recommendations made by the Special Masters to the court.

Review of Proposed Remedial Plans

Pursuant to the North Carolina Supreme Court's opinion, any plan with a mean-median difference of 1% or less (*Harper*, 2022-NCSC-17 at ¶ 166) and an efficiency gap below 7% (*Harper*, 2022-NCSC-17 at ¶ 167) should be considered presumptively constitutional. Additionally, as the Supreme Court recognized, other metrics may be instructive (*Harper*, 2022-NCSC-17 at ¶ 168). The Special Masters considered the full Order and Opinion of the North Carolina Supreme Court along with, the submissions from all of the parties as well as the reports of the advisors and reached the following conclusions:

I. Proposed Remedial House Plan

The advisors as well as the experts of the parties ("experts") all found the efficiency gap of the proposed remedial House plan to be less than 7%. The majority of the advisors and experts found the mean-median difference of the proposed remedial House plan to be less than 1%. In addition to these facts, the Special Masters considered the findings of the advisors on the partisan symmetry analysis, the declination metrics, and their opinions on partisan bias and evidence of partisan gerrymandering. Considering all of this information as well as the totality of circumstances, the Special Masters conclude under the metrics identified by the North Carolina Supreme Court that the proposed remedial House plan meets the test of presumptive constitutionality. Further the Special Masters did not find substantial evidence to overcome the presumption of constitutionality and recommend to the trial court that it give appropriate deference to the General Assembly and uphold the constitutionality of the remedial House plan.

II. Proposed Remedial Senate Plan

All of the advisors and experts found the efficiency gap of the proposed remedial Senate plan to be less than 7%. The majority of the advisors and experts found the mean-median difference of the proposed remedial Senate plan to be less than 1%. In addition to these facts, the Special Masters considered the findings of the advisors on the partisan symmetry analysis, the declination metrics, and their opinions on partisan bias and evidence of partisan gerrymandering. Considering all of this information as well as the totality of circumstances, the Special Masters conclude under the metrics identified by the North Carolina Supreme Court the remedial Senate plan meets the test of presumptive constitutionality. Further the Special Masters did not find substantial evidence to overcome the presumption of constitutionality and recommend to the trial court that it give appropriate deference to the General Assembly and uphold the constitutionality of the remedial Senate plan.

III. Proposed Remedial Congressional Plan

Unlike the proposed remedial House and Senate plans, there is substantial evidence from the findings of the advisors that the proposed congressional plan has an efficiency gap above 7% and a mean-median difference of greater than 1%. The Special Masters considered this evidence along with the advisors' findings on the partisan symmetry analysis and the declination metrics. There is disagreement among the parties as to whether the proposed remedial congressional plan meets the presumptively constitutional thresholds suggested by the Supreme Court. The Special Masters, considering the reports of their advisors and the experts of the parties while giving appropriate deference to the General Assembly, are of the opinion that the proposed remedial congressional plan fails to meet the threshold of constitutionality and recommend that the Trial Court reject the proposed remedial congressional plan as being unconstitutional.

Given the recommendation that the Trial Court reject the proposed remedial congressional plan, and consistent with the instructions from the three-judge panel and the Order of the Supreme Court of North Carolina, the Special Masters have submitted a modified version of the proposed remedial congressional plan submitted by the Legislative Defendants. It is our opinion that the attached plan satisfies the requirements of the Supreme Court.

The following data files for the modified congressional plan are included with this report:

1. Block equivalency files in .CSV format for each district and the plan as a whole;
2. Environmental Systems Research Institute, Inc. (ESRI) shapefiles for each district and the plans as a whole;
3. Color maps in .PDF format of the plan as a whole;
4. Population totals and deviations for each district based on the 2020 Census P.L. 94-171 dataset; and
5. Note: due to time constraints, the functional equivalent of what the General Assembly includes in its "stat pack" is not included with this report; however, if requested we will endeavor to obtain this from Dr. Grofman.

In redrawing certain district lines, the undersigned considered all of the submitted plans and related commentary. Being mindful that the Constitution of North Carolina provides that the General Assembly has the responsibility of redistricting, we focused on the proposed remedial congressional plan submitted by the Legislative Defendants. On that basis, the Special Masters worked solely with Dr. Bernard Grofman and his assistant to amend the Legislative Defendants' plan to

enhance its consistency with the opinion of the Supreme Court of North Carolina, the Constitutions of the United States and of North Carolina, and the expressed will of the General Assembly.

Dr. Grofman prepared a preliminary exemplar map at the Special Masters' request and thereafter at the instruction of the Special Masters prepared three maps for consideration. One of these maps raised potential VRA concerns and so was discarded. A second map did not meet the 1% threshold for mean-median difference and so was likewise discarded. The Special Masters then modified the third prepared map in order to improve the efficiency gap and mean-median difference scores as well as compactness and contiguity measures.

The following parties were involved in the process of redrawing the plans:

a. Robert F. Orr
b. Robert H. Edmunds, Jr.
c. Thomas W. Ross
d. Dr. Bernard N. Grofman
e. Zachary R. Griggy (Research Assistant to Dr. Grofman)
f. Adam H. Steele, Senior Judicial Fellow (for administrative purposes only)
g. Alison J. Rossi, Judicial Fellow (for administrative purposes only)
h. Danielle Smith, Judicial Fellow (for administrative purposes only)

Dave's Redistricting App was used in the redrawing of the plan.

The Special Masters believe the modified congressional plan recommended for adoption to the Trial Court achieves the partisan fairness and "substantially equal voting power" required by the Supreme Court of North Carolina without diluting votes under the Voting Rights Act while maintaining the number of county splits, retaining equal population, compactness, and contiguity, as well as respecting municipal boundaries. Dr. Grofman's analysis of the modified congressional plan recommended by the Special Masters indicates that the plan has an efficiency gap of 0.63%, a mean-median difference of 0.69%, seat bias of 0.28%, and vote bias of 0.10%. According to Dr. Grofman, "this is the most non-dilutive plan in partisan terms of any map that has been submitted to the Court."

Accordingly, the Special Masters recommend to the Trial Court that it order the State of North Carolina to utilize the modified congressional plan prepared by the Special Masters in the 2022 Congressional election.

This the 23rd day of February 2022.

Robert H. Edmunds, Jr.

Robert F. Orr

Thomas W. Ross

Acknowledgement

We would like to thank the advisors, Dr. Grofman, Dr. Jarvis, Dr. McGhee, and Dr. Wang for their analysis and advice in the extremely compressed timeframe. Additionally, we would like to thank the Judicial Fellows, Adam Steele, Alison Rossi, and Danielle Smith for their administrative support and assistance in preparing this report and for the long hours of work in bringing this matter to a conclusion.