

APPENDIX

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[J-20-2022]

**IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT**

**BAER, C.J., TODD, DONOHUE, DOUGHERTY,
WECHT, MUNDY, BROBSON, JJ.**

CAROL ANN CARTER, : No. 7 MM 2022
MONICA PARRILLA, :
REBECCA POYOUROW, :
WILLIAM TUNG, : ARGUED: February 18,
ROSEANNE MILAZZO, : 2022
BURT SIEGEL, SUSAN :
CASSANELLI, LEE :
CASSANELLI, LYNN :
WACHMAN, MICHAEL :
GUTTMAN, MAYA :
FONKEU, BRADY HILL, :
MARY ELLEN :
BALCHUNIS, TOM :
DEWALL, STEPHANIE :
MCNULTY AND JANET :
TEMIN, :

Petitioners

v.

LEIGH M. CHAPMAN, IN
HER OFFICIAL
CAPACITY AS THE
ACTING SECRETARY OF
THE COMMONWEALTH

OF PENNSYLVANIA; :
JESSICA MATHIS, IN :
HER OFFICIAL :
CAPACITY AS :
DIRECTOR FOR THE :
PENNSYLVANIA :
BUREAU OF ELECTION :
SERVICES AND :
NOTARIES, :

Respondents :

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PHILIP T. GRESSMAN; :
RON Y. DONAGI; :
KRISTOPHER R. TAPP; :
PAMELA GORKIN; DAVID :
P MARSH; JAMES L. :
ROSENBERGER; AMY :
MYERS; EUGENE :
BOMAN; GARY GORDON; :
LIZ MCMAHON; :
TIMOTHY G. FEEMAN; :
AND GARTH ISAAK, :

Petitioners :

v. :

LEIGH M. CHAPMAN, IN :
HER OFFICIAL :
CAPACITY AS THE :
ACTING SECRETARY OF :

THE COMMONWEALTH :
OF PENNSYLVANIA; :
JESSICA MATHIS, IN :
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DIRECTOR FOR THE :
PENNSYLVANIA :
BUREAU OF ELECTION :
SERVICES AND :
NOTARIES, :
: :
Respondents :

OPINION

**OPINION FILED: March
9, 2022**

**DECIDED: February 23,
CHIEF JUSTICE BAER 2022**

I. Introduction

Pennsylvania’s current congressional districting plan is irrefutably unconstitutional based upon the reapportionment of the House of Representatives following the 2020 Decennial Census conducted pursuant to Article I, Section 2 of the United States Constitution. Due to this Commonwealth’s loss of population relative to the nation as a whole, Pennsylvania’s allotted number of congressional representatives declined from eighteen to seventeen. As a result, Pennsylvania now requires a new congressional districting plan drawn with only seventeen

districts for the upcoming May 17, 2022, Primary Election.

Because the General Assembly and the Governor failed to agree upon a congressional redistricting plan, this Court was tasked with that “unwelcome obligation.” *League of Women Voters of Pennsylvania v. Commonwealth*, 178 A.3d 737, 823 (Pa. 2018) (“*LWV II*”). This is not uncharted territory, as a similar scenario unfolded following the inability of the political branches to enact a plan in the wake of the 1990 Decennial Census. In *Mellow v. Mitchell*, 607 A.2d 204 (Pa. 1992), this Court assumed plenary jurisdiction of an action originating in the Commonwealth Court and designated a Commonwealth Court judge as master to conduct hearings, make findings of fact, and render conclusions of law before the Court decided on an appropriate redistricting plan. *Mellow*, 607 A.2d at 206. The same procedure was adhered to in this case.

Our Special Master expended tremendous effort by expeditiously conducting hearings, making extensive findings of fact, providing a comprehensive report to this Court analyzing the merits of the various congressional redistricting plans submitted before it, and ultimately recommending the adoption of the plan created by the Pennsylvania Legislature in House Bill 2146 (“H.B. 2146”), which Governor Tom Wolf vetoed on January 26, 2022. We acknowledge and thank her for her effort.

After deliberating and affording due consideration to our Special Master’s findings and recommendation and reviewing de novo the relative merit of the submitted congressional plans, the Court respectfully declined to adopt the Special Master’s analysis and ultimate plan selection. Rather, on February 23, 2022, we entered a per

curiam order, directing that the Pennsylvania primary and general elections for seats in the United States House of Representatives commencing in 2022 shall be conducted in accordance with the plan submitted to the Special Master by the Carter Petitioners, who we name herein below (“Carter Plan”).¹ Our order indicated that an opinion would follow, and this opinion is filed in accordance therewith.

In full cognizance that the redistricting of congressional districts falls squarely within the purview of the General Assembly, U.S. CONST., art. I, § 4, cl. 1, we have fulfilled our obligation to select a redistricting plan only because the Legislature was unable to do so.² In making our selection, we were guided by our decision in *LWV II*, where we applied the traditional core districting criteria requiring that congressional districts be compact, contiguous, as nearly equal in population as practicable, and which minimize divisions of political subdivisions, while taking into consideration the subordinate historical considerations, such as communities of interests, the

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1. Justices Todd, Mundy, and Brobson dissented as to the selection of the Carter Plan as the congressional redistricting plan.
 2. The Elections Clause of the United States Constitution provides that the “Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations, except as to the Places of chusing Senators.” U.S. CONST., art. I, § 4, cl. 1. Congress passed 2 U.S.C. § 2a, pursuant to the Elections Clause, which provides that, following the decennial census and reapportionment, the Clerk of the House of Representatives shall “send to the executive of each State a certificate of the number of Representatives to which such State is entitled” and the state shall be redistricted “in the manner provided by the law thereof.”

preservation of prior district lines, and the protection of incumbents. *LWV II*, 178 A.3d at 816-17. Finally, we have ensured that the congressional districting plan that we adopted does not violate Pennsylvania’s Free and Equal Elections Clause by “dilut[ing] the potency of an individual’s ability to select the congressional representative of his or her choice,” *id.* at 816, and complies with the Voting Rights Act, 52 U.S.C. § 10301.³

This Court acknowledges that there is no perfect re-districting plan. Each map involves trade-offs between the requisite traditional core redistricting criteria, as well as the subordinate historical redistricting considerations. The task of balancing these criteria and considerations is better suited to the Commonwealth’s political branches, rather than the judiciary. Nevertheless, given our unwelcomed circumstance, we have endeavored to adopt a plan that, as phrased in *League of Women Voters of Pennsylvania v. Commonwealth*, 181 A.3d 1083, 1087 (Pa. 2018) (“*LWV III*”), is “superior or comparable” to all of the plans submitted on the designated criteria.

As evidenced by the views expressed by our esteemed colleagues and the Special Master, reasonable minds can disagree in good faith as to which submitted plan best balances the requisite criteria and considerations. Nevertheless, for the reasons set forth below, we adopt the plan submitted to the Special Master by the Carter Petitioners as the 2022 Congressional Redistricting Plan.

3. The Free and Equal Elections Clause provides that “Elections shall be free and equal; and no power, civil or military, shall at any time interfere to prevent the free exercise of the right of suffrage.” PA. CONST. art. I, § 5.

II. Procedural History

This matter commenced on December 17, 2021, when two separate petitions for review were filed in the Commonwealth Court’s original jurisdiction. At Commonwealth Court docket number 464 M.D. 2021, Carol Ann Carter *et al.* (collectively referred to as “Carter Petitioners”) presented a petition for review.⁴ The Carter Petitioners identified themselves as citizens of the United States who are registered to vote in Pennsylvania. They named as respondents to their petition Veronica Degraffenreid, in her capacity as then-Acting Secretary of the Commonwealth of Pennsylvania,⁵ and Jessica Mathis, in her capacity as Director for the Pennsylvania Bureau of Election Services and Notaries (collectively referred to as “Respondents”). At Commonwealth Court docket number 465 M.D. 2021, Philip T. Gressman, et al. (collectively referred to as “Gressman Petitioners”) filed a petition for review.^{6 7} The Gressman Petitioners identified themselves as United States citizens who are regis-

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4. Additional Carter Petitioners included: Monica Parrilla, Rebecca Poyourow, William Tung, Roseanne Milazzo, Burt Siegel, Susan Cassanelli, Lee Cassanelli, Lynn Wachman, Michael Guttman, Maya Fonkeu, Brady Hill, Mary Ellen Balchunis, Tom DeWall, Stephanie McNulty, and Janet Temin.
 5. Leigh Chapman later became the Acting Secretary of the Commonwealth of Pennsylvania and was substituted for Acting Secretary Degraffenreid.
 6. Additional Gressman Petitioners were Ron Y. Donagi, Kristopher R. Tapp, Pamela Gorkin, David P. Marsh, James L. Rosenberger, Amy Myers, Eugene Boman, Gary Gordon, Liz McMahan, Timothy G. Feeman, and Garth Isaak.
 7. We will refer to the Carter Petitioners and the Gressman Petitioners collectively as “Petitioners.”

tered to vote in Pennsylvania. They further described themselves as “leading professors of mathematics and science[.]” Gressman Petitioners’ Petition for Review, 12/17/2021, at ¶10. The Gressman Petitioners also designated Respondents as the opposing parties.

The petitions for review were substantially similar in their alleged facts, claims presented, and relief requested. Factually, Petitioners asserted that this Court in *LWV III*, utilized data from the 2010 Census when we adopted the 2018 congressional district plan (“2018 Plan”), which appropriately divided the Commonwealth into eighteen districts. Petitioners, however, explained that the 2020 Census reflected a population shift that resulted in the Commonwealth losing one of its congressional districts, rendering the 2018 Plan unconstitutionally malapportioned.

Stated broadly, Petitioners claimed that the 2018 Plan violated their state and federal rights to cast undiluted votes. In terms of relief, Petitioners asked the Commonwealth Court to: (1) deem the 2018 Plan unconstitutional; (2) enjoin Respondents and related parties from implementing, enforcing, or giving effect to that plan; and (3) adopt a constitutionally acceptable congressional district plan in time for the impending 2022 election cycle.

On December 20, 2021, the Commonwealth Court consolidated the petitions for review and, in a separate order, established a process, in compliance with this Court’s prior decision in *Mellow, supra*, by, *inter alia*, setting deadlines for: (1) the filing of applications to intervene; (2) submitting proposed seventeen-district congressional reapportionment plans consistent with constitutional principles and the 2020 Census; and (3) conduct-

ing hearings in the event that the court would be required to choose a new map due to political gridlock.

The following day, December 21, 2021, Petitioners filed in this Court Applications for Extraordinary Relief. In those applications, Petitioners asked this Court, *inter alia*, to exercise its extraordinary jurisdiction pursuant to 42 Pa.C.S. § 726 and Pa.R.A.P. 3309 to address expeditiously the merits of the claims that they presented in their petitions for review.⁸ This Court eventually denied those applications without prejudice to reapply for similar relief, as future developments might dictate.

While these applications were pending in this Court, the Commonwealth Court held a hearing on the ten applications to intervene that had been filed in that court. By order dated January 14, 2022, the court set new deadlines regarding the judicial process that would address the petitions for review, and it granted intervenor status to the following applicants: (1) the Speaker and Majority Leader of the Pennsylvania House of Representatives; (2) the President Pro Tempore and Majority Leader of

8. Section 726 of the Pennsylvania Judicial Code provides as follows:

Notwithstanding any other provision of law, the Supreme Court may, on its own motion or upon petition of any party, in any matter pending before any court or magisterial district judge of this Commonwealth involving an issue of immediate public importance, assume plenary jurisdiction of such matter at any stage thereof and enter a final order or otherwise cause right and justice to be done.

42 Pa.C.S. § 726. Pennsylvania Rule of Appellate Procedure 3309 explains the process for applying for relief under 42 Pa.C.S. § 726.

the Pennsylvania Senate; (3) Pennsylvania State Senators Maria Collett, Katie J. Muth, Sharif Street, and Anthony H. Williams; (4) Tom Wolf, Governor of the Commonwealth of Pennsylvania; (5) Senator Jay Costa and members of the Democratic Caucus of the Senate of Pennsylvania; (6) Representative Joanna E. McClinton, Leader of the Democratic Caucus of the Pennsylvania House of Representatives; and (7) Congressman Guy Reschenthaler, Swatara Township Commissioner Jeffrey Varner, Tom Marino, Ryan Costello, and Bud Shuster.

The Commonwealth Court directed that these intervenors would participate in the litigation as parties. The court directed all parties to submit at least one but no more than two proposed congressional redistricting plans, along with a supporting brief and/or an expert report by January 24, 2022. The court also required each party to file a responsive brief and/or expert report by January 26, 2022. In addition, the court directed these parties to submit a joint stipulation of facts, and the court set January 27th and 28th of 2022 as the dates of the evidentiary hearings on this matter. Concerning those hearings, the court explained that each of the parties would be permitted to present one witness and to cross-examine the other parties' witnesses.

In the same order, the Commonwealth Court granted *amicus* status to the following applicants: (1) Voters of the Commonwealth of Pennsylvania; (2) Citizen-Voters; (3) Draw the Lines-PA; and (4) Khalif Ali *et al.* The court limited the *amicus* participants' litigation contribution to the submission of one proposed congressional redistricting plan and a supporting brief and/or expert report.

Subsequently, the parties and *amici* submitted congressional redistricting maps, expert reports, and briefs

in support thereof. The Commonwealth Court held hearings on January 27th and 28th of 2022, at which numerous experts testified.

On January 29, 2022, the Carter Petitioners filed in this Court another Application for Extraordinary Relief, requesting that this Court immediately assume jurisdiction over the redistricting litigation. By order dated February 2, 2022, this Court granted the Carter Petitioners' Application for Extraordinary Relief, obtaining original jurisdiction over the matter.

In conformance with this Court's decision in *Mellow, supra*, we: (1) designated as a Special Master the Honorable Patricia A. McCullough, the Commonwealth Court judge who was presiding over the matter when we assumed plenary jurisdiction; (2) explained that the proceedings that already had occurred in the Commonwealth Court shall be considered part of the Special Master's record; (3) directed the Special Master to file in this Court on or before February 7, 2022, a report containing proposed findings of fact and conclusions of law supporting her recommendation of a redistricting plan; and (4) set a schedule for the parties and *amicus* participants to file exceptions and briefs in this Court.

On February 7, 2022, the Special Master submitted her comprehensive report. While we do not provide a detailed summary of that report, we highlight that the report deemed the 2018 Plan constitutionally deficient because, *inter alia*, it created boundaries for eighteen congressional seats based upon the 2010 Census but the 2020 Census resulted in Pennsylvania being limited to seventeen congressional seats. The report further observed that the General Assembly and Governor were unable to agree upon a congressional redistricting plan

to replace the 2018 Plan, thus, thrusting upon the Pennsylvania judiciary the task of selecting such a plan.

The Special Master ultimately received thirteen congressional redistricting plans to study. Although the Special Master used several metrics to choose the most desirable plan, she eliminated multiple plans from consideration due to the following alleged shortcomings: (1) the splitting of the City of Pittsburgh into separate districts; (2) the yielding of a partisan advantage contrary to Pennsylvania's political geography; and (3) the failure to achieve a maximum population deviation of one person.

Regarding the remaining plans, the Special Master ultimately chose H.B. 2146 to replace the 2018 Plan. As will be discussed in more detail *infra*, the Special Master appears to have given H.B. 2146 preferential treatment because "it is the General Assembly's prerogative, rather its constitutional mandate, to redraw the state's congressional districts under Article I, section 4 of the United States Constitution and its related provisions in the Pennsylvania Constitution and state statutes." Report at 208, ¶62; *id.* at 214, ¶94 ("The Court believes that, in the context of this case, where it must recommend one map of many, as a matter of necessity, the interests of the Commonwealth as a sovereign state and political entity in its own right, would best be served by factoring in and considering that H.B. 2146 is functionally tantamount to the voice and will of the People[.]").

While the Special Master provided her recommendation of a congressional district plan, we are mindful that this Court obtained original jurisdiction over this litigation when we granted the Carter Petitioners' Application for Extraordinary Relief; accordingly, our scope of re-

view of the matter is de novo. *LWV II*, 178 A.3d at 801 n.62. While Judge McCullough's findings of fact are not binding on this Court, they are afforded due consideration, as she presided over the evidentiary hearing. *Id.*

In accordance with this Court's order of February 2, 2022, the following parties and *amicus* participants have filed exceptions in this Court: (1) Carter Petitioners; (2) Gressman Petitioners; (3) Respondents; (4) Congressman Guy Reschenthaler, Swatara Township Commissioner Jeffrey Varner, Tom Marino, Ryan Costello, and Bud Shuster; (5) Senator Jay Costa and members of the Democratic Caucus of the Senate of Pennsylvania; (6) Tom Wolf, Governor of the Commonwealth of Pennsylvania; (7) Representative Joanna E. McClinton, Leader of the Democratic Caucus of the Pennsylvania House of Representatives; (8) Khalif Ali *et al.*; (9) Citizen-Voters; and (10) Draw the Lines-PA.

In relevant part, the exceptions challenge the way that the Special Master eliminated plans and the criteria that she utilized in choosing H.B. 2146. For example, several of the parties and *amici* are of the view that it was error for the Special Master to reject plans because they split the City of Pittsburgh, attempted to accomplish partisan fairness, or failed to achieve a maximum population deviation of one person. Some also insist, *inter alia*, that the Special Master erroneously favored H.B. 2146 simply because it was produced by the Legislature.

The following parties have filed briefs in support of the Special Master's Report: (1) Voters of the Common-

wealth of Pennsylvania;⁹ (2) the Speaker and Majority Leader of the Pennsylvania House of Representatives; and (3) the President Pro Tempore and Majority Leader of the Pennsylvania Senate. Lastly, the following parties filed amicus briefs in the Court: (1) Philadelphia County Board of Elections; (2) Washington County Public Officials; (3) Concerned Citizens for Democracy; and (4) Williamsport/Lycoming Chamber of Commerce and Greater Susquehanna Valley Chamber of Commerce.

On February 18, 2022, this Court heard argument on the parties' exceptions to the Special Master's Report. We would like to extend our gratitude to the parties and their counsel who participated in that hearing. Their submissions and advocacy have greatly aided this Court in completing the task of selecting an appropriate redistricting plan.

III. Case Law

In *Mellow, supra*, we explained that Pennsylvania lost two congressional districts following the 1990 census, and the General Assembly failed to enact a timely remedial reapportionment plan. State senators subsequently filed an action in the Commonwealth Court seeking: (1) a declaration that the existing congressional apportionment law was unconstitutional; (2) an injunction to enjoin the implementation of the congressional election until a valid plan could be adopted; and (3) the adoption of a valid plan in the event the Legislature was unable to do so. *Mellow*, 607 A.2d at 205. Upon the senators' request, this Court assumed plenary jurisdiction over the matter and designated a Commonwealth Court judge

9. The Voters of the Commonwealth of Pennsylvania additionally advocated in favor of the map they submitted.

as special master to conduct hearings, to make findings of fact, and to render conclusions of law. *Id.* at 206.

In *Mellow*, this Court adopted the master’s factual findings, as well as his recommended decision regarding the selection of one of the six congressional redistricting plans submitted. *Id.* Initially, the Court examined the master’s reasons for recommending the plan, *i.e.*, the plan had a low maximum population deviation, contained minimal splits of municipalities, achieved an enlarged number of congressional districts with a majority African American population, and came closest to implementing factors relating to communities of interest. *Id.* at 206. The Court proceeded to resolve numerous exceptions to the master’s report filed by the parties, ultimately concluding that the master’s conclusions of law were sound. Notably, the Court then addressed what it termed as “Additional Criteria,” which included an examination of the political fairness of the plan, finding that the plan “results in a politically fair balance in the Pennsylvania delegation between Democrats and Republicans,” considering that it divided the two-seat congressional loss equally between both parties. *Id.* at 210.

Following *Mellow*, which was decided in 1992, this Court, once again, was faced with having to adopt a congressional redistricting map under the circumstances presented in our seminal 2018 decision in *LWV II*. Unlike the instant case, where the General Assembly and the Governor failed to enact a redistricting map after a change in Pennsylvania’s population resulted in the loss of a congressional district, voters in *LWV II* commenced an action in the Commonwealth Court challenging an existing congressional redistricting plan enacted in 2011 (“2011 Plan”). The petitioners alleged, *inter alia*, that

the 2011 Plan violated the Free and Equal Elections Clause of Article I, Section 5 of the Pennsylvania Constitution by intentionally discriminating against the petitioners and other Democratic voters by using redistricting to maximize Republican congressional seats and entrench Republican power. *LWV II*, 178 A.3d at 766. They contended that the 2011 Plan had the actual discriminatory effect of disadvantaging Democratic voters and burdening severely their representational rights. Petitioners thereafter filed an application for extraordinary relief in this Court.

We granted the application, assumed plenary jurisdiction, and remanded the matter to the Commonwealth Court for the creation of an evidentiary record. Upon review of the findings of fact and conclusions of law submitted by then-Judge, now-Justice, Brobson, this Court, on January 22, 2018, entered a per curiam order: (1) declaring that the 2011 Plan clearly, plainly, and palpably violated the Pennsylvania Constitution; (2) striking the 2011 Plan as unconstitutional; and (3) enjoining its use at the May 2018 primary election. *League of Women Voters of Pennsylvania*, 175 A.3d 282, 289 (Pa. 2018) (“*LWV I*”). Our per curiam order further afforded the General Assembly the opportunity to submit a congressional districting plan that comported with our state charter, if approved by the Governor. Absent such submission, the Court declared that it would proceed expeditiously to adopt a plan based on the evidentiary record developed

in the Commonwealth Court.¹⁰ *Id.* at 290. No such plan was ever adopted by the Legislature.

In our subsequent opinion in support of our *per curiam* order, the Court explained that the “Free and Equal Elections Clause was specifically intended to equalize the power of voters in our Commonwealth’s election process, and it explicitly confers this guarantee[.]” *LWV II*, 178 A.3d at 812. In determining how to assess a claim alleging congressional vote dilution under the Free and Equal Elections Clause of the state charter, the Court turned to the neutral criteria that traditionally governed the formation of the Commonwealth’s state legislative districts, as set forth in Article 2, Section 16 of the Pennsylvania Constitution. *Id.* at 815–16. These criteria require an examination of whether the congressional districts created under the redistricting plan: (1) are composed of compact territory; (2) are comprised of contiguous territory; (3) are as nearly equal in population as practicable; and (4) do not divide any county, city, incorporated town, borough, township, or ward, except where necessary to ensure equality of population (collectively, “traditional core criteria”). *Id.* at 816–17. We explained that these criteria emphasize greatly the creation of representational districts that “maintain the geographical and social cohesion of the communities in which people live and conduct the majority of their day-to-day affairs,” and “accord equal weight to the votes of residents in each of the various districts.” *Id.* at 814.

10. This author filed a concurring and dissenting statement, and then-Chief Justice Saylor and Justice Mundy filed dissenting statements.

Finding these traditional core criteria to be “deeply rooted in the organic law of our Commonwealth,” and the “foundational requirements which state legislative districts must meet under the Pennsylvania Constitution,” the Court adopted them as a measure to assess whether a congressional districting plan dilutes the potency of a voter’s ability to select his or her preferred congressional representative in violation of the Free and Equal Elections Clause. *Id.* at 816. We explained that these traditional core criteria provide a “floor” of protection against the dilution of one’s vote and that the subordination of these criteria to extraneous considerations, such as partisan gerrymandering, is unconstitutional. *Id.* at 817. Additionally, we observed that congressional districting maps must also comply with federal law, specifically, the Voting Rights Act, 52 U.S.C. § 10301. *Id.* at 817 n.72.

The Court in *LWV II* further recognized additional factors that have historically played a role in the creation of legislative districts, such as “the preservation of prior district lines, the protection of incumbents, and the maintenance of the political balance which existed after the prior reapportionment.” *Id.* at 817. Additionally recognized as a subordinate historical factor was the preservation of communities of interest because “[w]hen an individual is grouped with other members of his or her community in a congressional district for purposes of voting, the commonality of the interests shared with the other voters in the community increases the ability of the individual to elect a congressional representative for the district who reflects his or her personal preferences.” *Id.* at 816.

We clarified that these historical factors are wholly subordinate to the traditional core criteria requiring

compact and contiguous districts, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts. *Id.* at 817. We will refer to these factors as “subordinate historical considerations.”

Relevant here, we recognized that “there exists the possibility that advances in map drawing technology and analytical software can potentially allow mapmakers, in the future, to engineer congressional districting maps, which, although minimally comporting with these [traditional core] criteria, nevertheless operate to unfairly dilute the power of a particular group’s votes for a congressional representative.” *Id.* (referencing trial testimony discussing the concept of an efficiency gap metric used to determine partisan fairness based upon the number of “wasted” votes for the minority political party under a particular redistricting plan). Because this Court was resolving *LWV II* based exclusively on the degree to which the traditional core criteria were subordinated to pursue partisan advantage, we did not discuss a means by which to differentiate among myriad redistricting plans that, on their face, satisfy the traditional core criteria. *Id.*

Applying this jurisprudence to the 2011 Plan, the Court in *LWV II* concluded that it clearly violated the traditional core criteria, thereby depriving the petitioners of their state constitutional right to free and equal elections. *Id.* at 818. The Court found that the 2011 Plan revealed “tortuously drawn districts that cause plainly unnecessary political-subdivision splits,” and “oddly shaped, sprawling districts which wander seemingly arbitrarily across Pennsylvania, leaving 28 counties, 68 political subdivisions, and numerous wards, divided among

as many as five congressional districts, in their wakes.” *Id.* at 819. We emphasized that the congressional districts “often rend municipalities from their surrounding metropolitan areas and quizzically divide small municipalities which could easily be incorporated into single districts without detriment to the traditional redistricting criteria.” *Id.* Accordingly, we concluded that the 2011 Plan did not comply with traditional core redistricting criteria and, thus, violated the Free and Equal Elections Clause. *Id.* at 820.

As to the appropriate remedy in *LWV II*, the Court acknowledged that while the primary responsibility for apportioning congressional districts rests with the General Assembly, it becomes the judiciary’s task to determine the appropriate redistricting plan when the Legislature is unable or chooses not to act. *Id.* at 821–22. Accordingly, based upon both state and federal case law, we found sufficient authority for this Court to formulate a valid redistricting plan.¹¹ *Id.* at 824.

The Court thereafter prepared a constitutionally sound plan, *i.e.*, the 2018 Plan, which was implemented for the May 2018 primary election. *LWV III, supra*. The 2018 Plan was based upon the record developed in the Commonwealth Court and relied significantly upon the submissions provided by the parties, intervenors, and *amici*. *LWV III*, 181 A.3d at 1087. In *LWV III*, this Court found that the 2018 Plan satisfied the traditional core criteria as it split only 13 counties, four of which are split into three districts and nine of which are split into

11. This author filed a concurring and dissenting opinion, and then Chief Justice Saylor and Justice Mundy filed dissenting opinions.

two districts. *Id.* The Court opined that the 2018 Plan was “superior or comparable” to all plans submitted in compactness, by whichever calculation methodology was employed. *Id.* Finally, the Court observed that the 2018 Plan achieves the constitutional guarantee of one person, one vote. *Id.*

IV. Special Master Recommendation and Exceptions to Special Master’s Report

Based upon the processes and guidelines set forth in Mellow and the LWV decisions, we turn to our review of the Special Master’s Report and recommendation and the numerous exceptions and responses filed by the parties and amici. For the reasons set forth below, we respectfully declined to adopt the Special Master’s recommendation to select H.B. 2146. Below, we focus upon the following three aspects of the Special Master’s analysis: (1) the Special Master’s conclusion that certain plans improperly yielded a partisan advantage to the Democratic Party contrary to Pennsylvania’s political geography; (2) the Special Master’s finding that certain plans failed to achieve a maximum population deviation of one person; and (3) the Special Master’s preferential treatment of H.B. 2146. As discussed below, we respectfully disagree with the reasons provided for narrowing the plans on these bases. Thus, the exceptions filed by the parties and amici to the Special Master’s Report are sustained in part, consistent with the following analysis.

1. Partisan Advantage

Several of the exceptions challenge the Special Master’s discrediting of six of the thirteen maps for “yield[ing] a partisan advantage to the Democratic Party” based upon either their mean-median scores or their

efficiency gap scores, which, as discussed *infra*, are generally accepted metrics for evaluating the partisan fairness of a redistricting plan.¹² Report at 197, ¶ 41–42. The Report viewed this asserted partisan advantage as contrary to the “natural and undisputed Republican tilt” in the Commonwealth resulting from the clustering of Democratic voters in the urban areas. *Id.* at ¶ 40 The Special Master deemed the drawing of district lines to negate this tilt to be “a subspecies of unfair gerrymandering.” *Id.* She explained, “[A]ny map that prioritizes proportional election outcomes, for example, by negating the natural geographic disadvantage, to achieve proportionality at the expense of traditional redistricting criteria, violates” the Free and Equal Elections Clause. *Id.* at 198, 44. Nevertheless, while discounting these six maps due to the absence of a sufficient “Republican tilt,” the Special Master credited H.B. 2146 for the same attribute, observing that the Republican majority in the General Assembly “developed and proposed a plan, H.B. 2146, that favors Democrats, which ultimately underscores the partisan fairness of the plan.” Report at 211, ¶ 79; 216. ¶ 97.

Respectfully, we reject this contradictory logic, which uses partisan advantage to discredit some but not all plans. Moreover, the record does not support the conclusion that all of the enumerated maps in fact “prioritized

12. Specifically, the Report gave “less weight” to the Gressman Plan, the House Democratic Caucus, the Carter Plan, the Governor’s Plan, the Senate Democratic Caucus 2 Plan, the House Democratic Caucus Plan, and the Draw the Lines Plan because these plans provide a “partisan advantage to the Democratic Party.” Report at 197, ¶ 41–42.

proportional election outcomes” at the expense of the traditional core criteria, given the various maps’ exceptional performances on these criteria. Instead, it appears that the mapmakers were cognizant of this Court’s expressed concern that maps could be engineered in the future to meet the requisite traditional core criteria while operating to dilute votes. *LWV II*, 178 A.3d at 817. Indeed, we conclude that consideration of partisan fairness, when selecting a plan among several that meet the traditional core criteria, is necessary to ensure that a congressional plan is reflective of and responsive to the partisan preferences of the Commonwealth’s voters. Thus, for purposes of our review, we return these six plans to the same status as the other submitted plans.¹³

2. Population Deviation

The Special Master further discounted the two plans that failed to reach a maximum population deviation of one person, despite finding that all the proposed plans satisfied the constitutional requirement that congressional districts be created “as nearly equal in population as practicable.”¹⁴ Report, at 138, CL 1; see PA. CONST. art. II, § 16; U.S. CONST. art. I, § 2. In other words, while the districts in most of the plans deviated by only one person, the two discounted plans deviated from the ideal

13. We additionally credit Dr. Jonathan Rodden’s observation that “it is not the case that the human geography in Pennsylvania somehow requires that we draw unfair districts.” Transcript of Jan. 27, 2022 (“Tr.”) at 192–93.

14. The two plans discounted under this rationale were the Carter Plan and the House Democratic Plan.

district population of 764,865 by plus one person or minus one person.¹⁵

While we acknowledge that the Special Master is justified in flagging these plans due to their slightly greater population deviation, we respectfully disagree that a population deviation of an additional person serves as an indelible mark against these plans. Rather, under the relevant case law discussed *infra*, a failure to achieve the lowest population deviation requires further investigation into the justification for the population deviation. See *Karcher v. Daggett*, 462 U.S. 725, 740 (1983). The Special Master, however, did not engage in any such analysis. Accordingly, we conclude that it was improper to discredit these two plans without considering the reasons for the minor population deviation. Indeed, as set forth in detail *infra*, we ultimately conclude that the Carter Petitioners sufficiently justified the deviation present in their plan of plus or minus one person.

3. Preferential Treatment of H.B. 2146

After rejecting the majority of the plans based, *inter alia*, upon their alleged “Democratic partisan advantage” or the two-person population deviation, the Special Master was left with four plans to consider, Voters of the Commonwealth of Pennsylvania, Reschenthaler 1, Reschenthaler 2, and H.B. 2146. According to the Special Master, Republican Legislative Intervenors requested that some degree of deference be given to H.B. 2146 because it had gone through the legislative process and was

15. The ideal district population is determined by dividing the Commonwealth’s population as determined by the 2020 Census, which is 13,002,700, by the seventeen allotted districts, which results in a population of 764,864.7. Report at 3, n.6.

passed by the Legislature. The Special Master initially indicated that she would not afford H.B. 2146 any special deference and instead would assess the plan the same as the other parties and *amici* and their respective maps.

Nevertheless, the Special Master ultimately recommended the adoption of H.B. 2146, emphasizing that “the decisions and policy choices expressed by the legislative branch are presumptively reasonable and legitimate, absent a showing of an unconstitutional defect or deficiency.” *Report.* at 213, ¶ 90 (citing *Upham v. Seamon*, 456 U.S. 37, 41–42 (1982)). The Special Master reasoned that “H.B. 2146 represents [t]he policies and preference of the state, and constitutes a profound depiction of what the voters in the Commonwealth of Pennsylvania desire, through the representative model of our republic and democratic form of government, when compared to the Governor or any other of the parties or their amici.” *Id.* at 214, ¶ 93 (internal quotation marks and citations omitted).

To the extent that the Special Master’s recommendation was premised upon bestowing H.B. 2146 preferential treatment simply because it had made it partway through the legislative process, we reject her endorsement of this plan on this basis alone. *Upham*, relied upon by the Special Master in affording H.B. 2146 special consideration, is readily distinguishable from the present matter. There, the United States Supreme Court was tasked with reviewing a district court’s decision to reject a congressional reapportionment plan in favor of its own drafted plan. Importantly, the at-issue plan had already been duly enacted and was awaiting preclearance from the United States Attorney General when a suit was filed in the federal district court, challenging the constitution-

ality of the reapportionment plan and its validity under the Voting Rights Act. Thus, *Upham*, unlike this case, involved a fully-enacted plan that was not vetoed by the Governor.¹⁶ Moreover, by relying upon *Upham*, the Special Master ignored a separate line of cases where courts have, in similar circumstances, declined to afford deference to vetoed plans.¹⁷

In our view, declining to afford preferential treatment to a plan passed by the Legislature but vetoed by the Governor is not only logical, see *Carlsen*, 543 F. Supp. at 79 (observing that if it were to accept the argument that

16. A second case cited by the Special Master, *Perry v. Perez*, 565 U.S. 388 (2012), is likewise distinguishable, as that case also involved a challenge to new electoral plans that had already been duly enacted. See *Perry*, 565 U.S. at 391–92 (reviewing the implementation of interim maps that were allegedly inconsistent with the State of Texas’ enacted plans).

17. See, e.g., *Johnson v. Wisconsin Elections Commn.*, 967 N.W.2d 469, 490 n.8 (Wis. 2021) (“The legislature asks us to use the maps it passed during this redistricting cycle as a starting point, characterizing them as an expression of ‘the policies and preferences of the State[.]’ The legislature’s argument fails because the recent legislation did not survive the political process.”) (internal citations omitted); *Carstens v. Lamm*, 543 F.Supp. 68, 79 (D. Colo. 1982) (affording no deference to vetoed redistricting plan and instead, regarding “the plans submitted by both the Legislature and the Governor as ‘proffered current policy’ rather than clear expressions of state policy”) (footnote omitted); and *Hippert v. Ritchie*, 813 N.W.2d 374, 379, n. 6 (Minn. 2012) (acknowledging that in *Perry*, *supra*, the United States Supreme Court held that a federal district court, when creating an interim congressional redistricting plan, should defer to the duly enacted redistricting plan, but finding that in this case, the legislature’s redistricting plan was not entitled to such deference because it “was never enacted into law”).

a vetoed redistricting plan should receive priority during deliberations, “a partisan state legislature could simply pass any bill it wanted, wait for a gubernatorial veto, file suit on the issue and have the Court defer to their proposal”), but also comports with this Commonwealth’s constitutional precepts.¹⁸

Finally, by disregarding the Governor’s veto and affording H.B. 2146 preference because it purportedly represented “the will of the people,” the Special Master improperly elevated the General Assembly’s role in passing legislation over that of the Executive Branch, which is an inappropriate departure from basic constitutional principles of checks and balances, *see, e.g., Carstens*, 543 F. Supp. at 79 (finding that the legislature’s vetoed plan, while certainly entitled to careful consideration, could not “represent current state policy any more than the Governor’s proposal” because “[b]oth the Governor and the General Assembly are integral and indispensable parts of the legislative process”), and offensive to the separation-of-powers doctrine.

V. Standard for Choosing New Redistricting Plan

18. As this Court explained in *Scarnati v. Wolf*, 173 A.3d 1110, 1120 (Pa. 2017), by “conferring upon the Governor the authority to nullify legislation that has passed both legislative houses, [Pa. Const. art. IV,] Section 15 entrusts him with the obligation both to examine the provisions of the legislation within the ten days allotted by Section 15 and to either approve it or return it, disapproved, for legislative reconsideration.”). Consequently, the Governor is “an integral part of the lawmaking power of the state.” *Id.* (internal quotation marks omitted). *See also id.* (observing that “[n]o bill may become law without first being submitted to the Governor for approval or disapproval”).

Having rejected the Special Master’s process of winnowing the maps, we review these maps *de novo* under this Court’s precedent in *Mellow* and *LWV II*. In selecting one of the various congressional districting plans submitted by the parties and *amici*, we find ourselves bound by the same commands that the Legislature must satisfy when performing such task. First and foremost, we begin, with the traditional core criteria of ensuring that the districts are compact, contiguous, are as nearly equal in population as practicable, and do not divide any county, city, incorporated town, borough, township, or ward, except where necessary. *LWV II*, at 178 A.3d at 816–17. As noted, these traditional core criteria provide a “‘floor’ of protection for an individual against the dilution of his or her vote in the creation of [congressional] districts.” *Id.* at 817.

Second, we may also examine the subordinate historical considerations, including, *inter alia*, communities of interests, the preservation of prior district lines, and the protection of incumbents. *Id.* As noted, we must keep in mind that these factors are wholly subordinate to the traditional core criteria. *Id.*

Third, we ensure that the congressional districting plan does not violate Pennsylvania’s Free and Equal Elections Clause by “diluting the potency of an individual’s ability to select the congressional representative of his or her choice.” *LWV II*, 178 A.3d at 816. While the traditional core criteria protect against the creation of obviously gerrymandered districts, such as those present in the 2011 Plan, they do not necessarily prevent all forms of vote dilution. As noted *supra*, this Court observed in *LWV II* that “advances in map drawing technology and analytical software can potentially allow

mapmakers, in the future, to engineer congressional districting maps, which, although minimally comporting with these [traditional core] criteria, nevertheless operate to unfairly dilute the power of a particular group's vote for a congressional representative." *Id.* Partisan fairness metrics provide tools for objective evaluation of proposed congressional districting plans to determine their political fairness and avoid vote dilution based on political affiliation.

Fourth, and finally, in adopting a congressional redistricting plan, we guarantee that the dictates of the Voting Rights Act, 52 U.S.C. § 10301, have been respected.

As mentioned throughout, many of the plans submitted by the parties and the *amici curiae* satisfy these rigorous standards set forth in *LWV II*. Moreover, as demonstrated in our respected colleagues' responsive opinions, reasonable minds may disagree as to which of these plans best balances the designated criteria and considerations. Nevertheless, having been thrust into the position of choosing a redistricting plan due to the political stalemate between the Legislature and the Governor, we applied the aforementioned designated criteria and considerations and selected the Carter Plan as the 2022 Congressional Redistricting Plan. Our reasons for doing so follow.

VI. Adoption of Carter Plan

We initially observe that the parties and their experts generally agree on the metrics to be used in judging a plan's performance on the traditional core criteria, the subordinate historical considerations, and the evaluations of partisan fairness. However, through no fault of the experts, the results of these metrics vary based on differences in their application of the metrics and diver-

gences in the data sets. For example, the seemingly simple task of counting how many counties are split by a plan varies between experts based on their assessment of a naturally noncontiguous piece of Chester County.¹⁹ Additionally, some of the standards used to evaluate partisan fairness vary based upon how many past elections are included in the relevant dataset. Given these variations, we rely upon the analyses performed by Dr. Daryl DeFord, which evaluate all of the submitted plans using the same methods and data sets.²⁰ See, *inter alia*, Exh. 1 of Post-Trial Submission of Gressman Petitioners. We appreciate Dr. DeFord’s efforts in this regard as it allows the Court to engage in an apples-to-apples comparison of the plans on each metric.

A. Description of the Carter Plan

The Carter Plan was created by Dr. Jonathan Rodden,²¹ who submitted an expert report and testified as to his decision-making process at the hearing in this case. Dr. Rodden explained that he used the 2018 Plan “as a guide” with the goal of “preserving the cores and bound-

19. As described by one of the experts, a small portion of Chester County is rendered “technically non-contiguous” if the boundary between Chester County and Delaware County is used as a district boundary. In such case, that six-person portion of Chester County is “marooned in Delaware County due to a bend in the Brandywine Creek at the intersection with the [s]outhern state boundary.” Expert Report of Jonathan Rodden (“Rodden Report”) at 21. While some experts included this in the count of county splits, others did not.

20. Dr. DeFord is an assistant professor of data analytics at Washington State University.

21. Dr. Rodden is a professor of political science at Stanford University and director of the Stanford Spatial Social Science Lab.

aries of districts where feasible given equal population requirements and meeting or surpassing [the 2018 Plan’s] adherence to traditional districting criteria[.]” Rodden Report at 1.

He opined that the 2018 Plan was a “reasonable starting point” because it “performed very well according to traditional redistricting criteria,” observing that it “was a compact plan” that involved “relatively few county splits and other jurisdictional splits.” Rodden Report at 6; Tr. at 88. He additionally recognized that the 2018 Plan “was broadly recognized” as a fair plan by those who study redistricting, following its use in the 2018 and 2020 elections. *Id.* at 89. He observed that it “produce[d] relatively competitive elections” with “outcomes that are roughly in line with overall partisan preferences of Pennsylvania voters.”²² Rodden Report at 6.

Dr. Rodden provided a detailed district-by-district assessment of the adjustments needed to achieve population equality, given the different rates of population growth. Rodden Report at 8–9, 12–20. He additionally explained the rationale behind each decision to alter district boundaries, with due consideration paid to the give and take between traditional core criteria which require maximizing compactness and minimizing county splits. *Id.*

In adjusting the 2018 Plan to the population changes of the 2020 Census, Dr. Rodden observed that Pennsylvania’s urban areas, especially in Southeastern Pennsyl-

22. In those elections, the average Democratic vote share was 52.7 percent, and the Pennsylvania congressional delegation was split evenly between Republicans and Democrats, with several competitive districts. Rodden Report at 4.

vania, “have experienced population growth on par with the United States as a whole” in the years since the 2010 Census. Rodden Report at 1. As a result, only minimal adjustments in the 2018 Plan boundaries were needed for the urban districts in Southeastern and Southwestern Pennsylvania to achieve the population targets under the 2020 Census. However, the “precipitous decline in population” in the rural areas of Central Pennsylvania required more substantial changes in those districts to achieve the necessary equal population, resulting in the absorption of former-District 12 of the 2018 Plan into the surrounding districts, Districts 9, 15, and 13. *Id.* at 1, 20.

Dr. Rodden expressly stated that he “did not consider racial data [when] drawing districts or making adjustments for population changes in the map.” Rodden Report at 23. Likewise, he explained that he “did not consider partisan performance” when drawing the map. *Id.* However, after completing the map, he “was asked to evaluate the districts’ partisan performance,” which he deemed to be “consistent with and responsive to Pennsylvania voters’ partisan preferences.” *Id.* at 1. As incorporated into the discussion below, Dr. Rodden also addressed the plan’s performance on the requisite traditional core criteria as well as the subordinate historical considerations.

B. Special Master’s Rejection of the Carter Plan

The Special Master rejected the Carter Plan, reasoning that in using the 2018 Plan, the Carter Plan erroneously elevated the subordinate historical considerations of preservation of prior district lines above the traditional core criteria, in violation of this Court’s decision in *LWV II*, which held that the historical considerations are “wholly subordinate” to the traditional core criteria. Re-

port at 183, CL 2 (quoting *LWV II*, 178 A.3d at 817); 187, FF10. Specifically, she faulted the Carter Plan for “opting to draw less compact districts instead of disrupting” the district boundaries of the 2018 Plan. *Id.* at 186, FF9. Additionally, while acknowledging that the so-called “least-change” approach may be appropriate when applied to a legislatively enacted plan, the Special Master concluded that “choosing a plan based upon its similarity to a previously court-drawn redistricting plan is not constitutionally sound.” *Id.* at CL 5. She theorized that use of the least-change approach for a court map could allow a court to adopt continuously “features of its prior plan, effectively rendering impossible any future challenge to the plan.” *Id.* at 188, FF 11.

Respectfully, this Court does not view the Carter Plan’s utilization of the 2018 Plan as a starting point to be either a prerequisite or a disqualifying attribute. Instead, we deem it to be one of several reasonable starting points. Such method is particularly useful here, considering that the 2018 Plan was adopted only four years ago and in strict conformity with the traditional core criteria explicated in *LWV II*. *LWV III*, 181 A.3d at 1086-87. Thus, the 2018 Plan provided a reasonable starting point of contiguous and compact districts that minimized divisions of political subdivisions, even if it no longer provided districts of equal population.

Our decision to adopt the Carter Plan, however, is not based upon its starting point but rather its end point. Stated another way, we do not select the Carter Plan because it utilized the least change approach but because the least change approach worked in this case to produce a map that satisfies the requisite traditional core criteria while balancing the subordinate historical considerations

and resulted in a plan that is reflective of and responsive to the partisan preferences of the Commonwealth's voters, as set forth below.

C. Traditional Core Criteria

1. Contiguity

Starting with the simplest and least contentious of the traditional core criteria, the seventeen districts in the Carter Plan, like every map submitted, are all contiguous.

2. Compactness

Turning to compactness, we find that all of the submitted plans are on a higher plane of compactness than the unconstitutional 2011 Plan with its "oddly shaped, sprawling districts which wander seemingly arbitrarily across Pennsylvania." *LWV II*, 178 A.3d at 819. Moreover, utilizing the various accepted metrics, the submitted maps are all within a relatively narrow range comparable to the 2018 Plan, which this Court deemed constitutionally sufficient.²³

23. Several metrics are used to evaluate compactness, each testing a slightly different aspect of that concept. We need not delve into the details of the computations of these accepted metrics, which are not contested, but rather look broadly to the results across the metrics. Specifically, using the Mean Polsby-Popper metric in which larger scores indicate greater compactness, the submitted maps range from 0.27 to 0.38, with the Carter Plan scoring 0.31 and the 2018 Plan scoring 0.32. On the Mean Reock score, under which higher scores again indicate greater compactness, the submitted maps range from 0.38 to 0.44, with the Carter Plan at 0.41 and the 2018 Plan at 0.43. The Carter Plan again is within the midrange of the Mean Convex Hull metric where larger scores indicate more compact districts, with the maps ranging from 0.75 to 0.81, the Carter Plan at 0.78 and the 2018 Plan at 0.79. Finally, addressing the Cut Edges metric, for (continued...)

While well within the range of the submitted plans, we acknowledge that the Carter Plan is slightly less compact than some of the other maps. We discount, however, the Special Master's suggestion that any reduction in compactness resulted from adherence to the 2018 Plan lines. Instead, minor reductions resulted from a trade-off acknowledged by numerous experts between two of the traditional core criteria: compactness and minimization of political subdivision splits. It is easily comprehended that adherence to county and city lines will decrease compactness because many of the boundaries follow geographic features such as rivers, which meander across our Commonwealth. A mapmaker must, therefore, balance more compact districts with respect for the integrity of political subdivisions.

In our view, Dr. Rodden's Report sufficiently justifies the slightly less-compact aspect of the Carter Plan by explaining various decision points where he sacrificed compactness in favor of unifying counties or other political subdivisions. Rodden Report at 8–9, 12–20, 22–23, Tr. at 105–06. Additionally, we recognize that the Carter Plan is less compact in part due to the decision to keep Pittsburgh within a single district. Rather than utilizing a relatively smooth dividing line, the Carter Plan traces Pittsburgh's jagged city line. Given the thorough explanation for the choices made and the realities of existing but irregular county and municipality boundaries, we deem the Carter Plan to be sufficiently compact in comparison to the other submitted plans.

which a lower score demonstrates more compact districts, the Carter Plan at 5896 falls within the range of maps from 5,061 to 6821, where the 2018 Plan is at 5,789.

3. Equal Population

The Carter Plan included four districts with a population of 764,865, four districts with one additional person at 764,866, and nine districts with one less person at 764,864. Rodden Report at 21. As stated *supra*, the Special Master found that each proposed plan satisfied the constitutional requirement that congressional districts be as nearly equal in population as practicable. Report at 138, CL 1. Nevertheless, she gave less weight to the Carter Plan because districts in the plan had a maximum deviation of two persons, whereas some plans achieved a maximum deviation of only one person. As noted above, we respectfully rejected the Special Master’s discounting based upon its maximum population deviation, without considering whether the slight difference between the one-and two-person population deviation was justified.²⁴

Although a challenge under the equal population requirement is not presently before this Court, the case law is nonetheless instructive in reviewing whether the Carter Plan sufficiently met the traditional core criterion of equal population. While the criterion of equal population is exacting and enforced strictly, the United States Supreme Court has conceded that “precise mathematical equality . . . may be impossible to achieve in an imperfect world,” and consequently, the United States Constitution’s equal population standard requires only that districts be apportioned to achieve population equality “as

24. While the Special Master merely gave the Carter Plan less weight, some parties and *amici* argued that the Carter Plan failed to meet the equal population requirement because nine plans achieved a deviation of one person.

nearly as is practicable.” *Karcher v. Daggett*, 462 U.S. 725, 730 (1983).

Under the relevant caselaw, a challenge to population equality requires the parties challenging the proposed plan to show that the population deviation “could have been reduced or eliminated altogether by a good-faith effort to draw districts of equal population.” *Id.* at 730. This burden may be satisfied by the presentation of a plan with a lower population deviation, particularly where the party being challenged presents an alternative plan that achieves a lower population deviation. *See Vieth v. Pennsylvania*, 195 F. Supp. 2d 672, 675–76 (M.D. Pa. 2002) (where defendants themselves presented a plan with a lower population deviation).

We will assume *arguendo* that this step is met as the Carter Petitioners appended to their exceptions filed in this Court a slightly revised plan containing only a one-person deviation. The reduced deviation was achieved at the expense of an additional split in a Vote Tabulation District.²⁵ Notably, however, the ability to achieve a lower maximum population deviation, by itself, does not establish the unconstitutionality of a plan with a larger deviation. *Karcher*, 462 U.S. at 740. Rather, the burden merely shifts to the proponent of the plan to prove “with some

25. Dr. Rodden explained that a “vote tabulation district” is the term for the level at which ballots differ between local races. He attempted to minimize these splits because district divisions at this level create difficulties and potential errors for local election officials as they determine which ballot a voter should complete. Tr. at 95–96. He observed that these errors relating to vote tabulation districts can result in voters being provided incorrect ballots, which can have significant consequences in close elections. Tr. at 97.

specificity” that the deviations in its proposed plan were necessary to achieve a legitimate state objective. *Id.* at 740–41.

The specificity required for demonstrating that the deviation was necessary is flexible and requires a case-by-case consideration of the following factors: the size of the deviation, the importance of the legitimate state interest necessitating the deviation, the consistency with which the plan reflects those interests, and whether alternatives might substantially vindicate those interests yet achieve a smaller deviation. *Id.* at 741. Accordingly, “the greater the deviation, the more compelling the government’s justification must be.” *Vieth*, 195 F. Supp. 2d at 677.

While “there are no *de minimis* population variations,” *Karcher*, 462 U.S. at 734, the size of the deviation between a one-person and two-person deviation is as small a population deviation as is possible and thus results in a low burden of justification. The *Karcher* court provided a non-exhaustive list of legislative policies that might justify a slight population variance, including respecting municipal boundaries and preserving prior districts. *Id.* at 740. Since *Karcher*, federal courts have also recognized a legitimate state interest in avoiding splitting of election precincts and not unduly departing from “the useful familiarity of existing districts.” *Mellow*, 607 A.2d at 206 (Pa. 1992) (collecting cases).

In the brief filed in support of their exceptions in this Court, the Carter Petitioners explained that their attempts to reach zero deviation required not only the manipulation of several census blocks, but also the additional split of a Vote Tabulation District at the intersection of Districts 3 and 5 in South Philadelphia, which the origi-

nal plan was able to keep intact. Carter Exceptions Brief at Exhibit A, 2–3. We addressed a similar justification in *Mellow*, where the proposed plan fell below others regarding population deviation precisely because the cost of maximum mathematical equality “require[d] manipulation of the smallest census unit, the census block.” *Mellow*, 607 A.2d at 218. In *Mellow*, we found that the election administration problems arising from requiring voters in a single precinct to look to two different sets of congressional candidates “is not a minor one.” *Id.* In doing so, we accepted the justification and ultimately adopted a proposed plan with a larger, but still slight, population deviation than other plans submitted.²⁶ *Id.*

In the present case, the Carter Petitioners have satisfied their burden by stating, with specificity, that the two-person deviation was required to prevent the additional split of a Vote Tabulation District. This is a recognized legitimate state interest, and there has been no evidence nor allegations of bad faith on the part of the Carter Petitioners. The Carter Plan represents a good-faith effort to draw districts of equal population, and the two-person deviation was the byproduct of legitimate efforts to limit the number of splits. Accordingly, the Carter Plan satisfies the equal population requirement and is comparable, given the very minimal deviation, to the other submitted plans.

26. In *Mellow*, the Court adopted a plan with a 63-person maximum population deviation, despite the submission of a plan with only a one-person deviation. In the adopted plan, the smallest district included 565,754 persons, while the largest district had 565,817 persons. *Mellow*, 607 A.2d at 226 (Appendix A to Opinion of President Judge Craig).

4. Splits of Political Subdivisions

While the traditional core criterion of contiguity is very straight forward, it is less clear how to assess whether a plan has satisfied the requirement that it “not divide any county, city, incorporated town, borough, township, or ward, except where necessary to ensure equality of population.” *LWV III*, 181 A.3d at 1085. In practical terms, there are only a few political subdivisions which are necessary to split to comply with the maximum population of a district.

Following the 2022 Census, the ideal population for Pennsylvania’s congressional districts is 764,865. Thus, only Philadelphia, Allegheny, and Montgomery Counties exceed this population, and the only city with an excess population is Philadelphia. Beyond these required divisions, mapmakers must divide the Commonwealth by grouping together whole political subdivisions with parts of others to achieve the necessary equal population. Inevitably, there are tradeoffs inherent in this process. A plan that prioritizes minimizing the number of county splits may well incur more municipality and ward splits to achieve the critical equal population of the district as a whole. To complicate matters further, some boroughs span a county line, requiring a mapmaker to choose potentially between splitting the county or the borough. Additionally, reasonable minds can differ as to whether it is preferable to split fewer total political subdivisions but to split some in multiple pieces. For example, Philadelphia’s population requires it to be split in at least three pieces, but some proposed plans split it into four pieces.

Neither our constitution nor our caselaw provides guidance as to whether the unity of one type of political subdivision should be prioritized over that of another.

Instead, we observe that these determinations are best left to the political branches, and thus, we do not rank the order of the importance of the splits. Instead, for the purpose of choosing a plan, we look wholistically across the plans for a minimization of the splits and for a justification for the splits to ensure that the decisions were based on valid redistricting criteria and not for vote dilution purposes.

Turning back to the submitted plans, we emphasize that all of the plans are a far cry from the unconstitutional 2011 Plan which splintered the Commonwealth, including the division of twenty-eight counties. *LWV II*, 178 A.3d at 819. In contrast, the Carter Plan splits half as many counties. Indeed, Dr. Rodden testified that he prioritized maintaining the counties as whole entities and, when counties are split, avoiding splitting them multiple times. While we do not opine as to which division is preferable, we merely observe that the Carter Plan is one of the best in terms of keeping counties whole and falls within all other ranges of the plans submitted.²⁷ Ac-

27. As discussed *supra*, experts disagree as to how to count the separation of a noncontiguous portion of Chester County from the rest of the county when a plan uses the border between Chester and Delaware Counties as a district boundary. Dr. DeFord's comparison of the plans' splits indicates that this split was included in the Carter Plan's total of 14 divided counties, such that an argument could be made that the Carter Plan should actually be attributed with 13 splits, which would tie for the least split counties. In comparison, the other maps range from 13–17 counties, while the 2018 Plan divided 14.

In terms of city splits, the Carter Plan splits Philadelphia into three pieces as is required by its population but does not fragment it into 4 pieces as do some maps. While the Carter Plan retains Pittsburgh in a single district, it nevertheless splits
(continued...)

cordingly, we conclude that the Carter Plan is superior or comparable to all the other submitted plans on this criterion.

D. Subordinate Historical Considerations

Having determined that the Carter Plan meets or exceeds the other submitted plans in terms of its adherence to the traditional core criteria, we next consider the subordinate historical considerations which this Court and other courts have recognized as relevant considerations in designing a congressional districting plan.

1. Communities of Interest

As discussed above, respect for communities of interest increases an individual's ability to elect a congressional representative who reflects his or her personal preferences based upon "the commonality of the interests shared with the other voters in the community." *Id.* at 816. We observe that the Special Master found that Dr. Rodden "did not explicitly examine or appear to have considered the specific considerations that need to be taken into account when establishing that splits maintain the surrounding communities of interest." Report at 156, FF12.

Respectfully, we do not read the record to support that finding, given that Dr. Rodden elucidated several

WilliamSPORT, which is in the range of the other maps which either split one or two cities. While the submitted maps split between 19 and 25 municipalities, the Carter Plan divides 23, and the 2018 Plan separates 29. In terms of wards, the Carter Plan divides 21, which is in the midrange of the submitted maps that divide from 14 to 41; the 2018 Plan split 29. In total, the Carter Plan divides 58 political subdivisions, whereas all the maps range from 49 to 79 total splits. The 2018 Plan had 72 total splits.

choices that he faced relating to communities of interest. For example, in forming District 7, he drew the boundaries to “unify Carbon County with the rest of the Lehigh Valley” and to keep together the Allentown-Bethlehem-Easton area, which the United States Census Department recognizes as “a metropolitan statistical area.” Rodden Report at 14, 17. Similarly, the Carter Plan centers District 10 around Harrisburg, keeping the greater Capital Region intact rather than dividing the area into multiple district as do some of the plans. The Plan addresses complaints raised regarding the 2018 Plan, which separated State College from its surrounding area, by placing the entirety of Centre County in District 15. In addition, unlike several of the plans, the Carter Plan does not split the City of Pittsburgh, which many, including the Special Master, have argued results in the division of a community of interest.²⁸

Given the choices made to protect communities of interest, we conclude that the Carter Plan sufficiently considered this historical redistricting consideration.

2. Preservation of Prior Districts

As has been repeatedly observed by this Court and the United States Supreme Court, the preservation of prior districts is a legitimate redistricting objective, but one that is subordinate to the traditional redistricting criteria. *See Karcher v. Daggett*, 462 U.S. 725, 740 (1983). As discussed *supra*, the Carter Plan used the 2018 Plan

28. While we do not view the splitting of Pittsburgh as a disqualifying feature as did the Special Master, we recognize that it is relevant to a plan’s consideration of communities of interest. Moreover, given the history of the recent congressional districting plans, we deem it preferable to retain it within a single district.

as a starting point with the intent of preserving district cores and boundaries as much as possible, given the population changes. The Carter Petitioners argue that the preservation of districts is beneficial in part because it “create[s] continuity for the overwhelming majority of Pennsylvania residents.” Carter Plan Brief at 6. The data presented at the hearing demonstrates that the Carter Plan “laps the field” by ensuring that 86.6 percent of the population falls in the same district as under the 2018 Plan, while the next highest plan included only 82.4 percent. Tr. at 407-408 (Dr. Moon Duchin); Rodden Response Report at 22.

3. Incumbents

A plan’s treatment of incumbents is a relevant consideration because it can reveal partisan bias where a map protects one party’s incumbents but pairs the other party’s incumbents against each other, absent other justification.

In this case, the Special Master observed that the Carter Plan pairs two incumbent Republican representatives, opining that it does so “without any explicit or apparent justification.” Report at 204. Our review of the record does not support this conclusion. To the contrary, Dr. Rodden stated that he intentionally considered incumbent addresses when drawing the Plan to avoid “inadvertently double-bunking sitting congressional representatives in the same district.” Rodden Report at 23. Moreover, he explained that the two incumbents paired in District 15 of the Carter Plan resulted from the absorption of the former-District 12 into District 15 and surrounding districts, which was necessitated by the significant population loss in Central Pennsylvania since the 2010 Census. We find this pairing to be justified by the

loss of population in this area and not suggestive of partisan bias, and we further conclude that the Carter Plan pays due consideration to incumbents.

E. Partisan Fairness

We reiterate this Court’s concern that advances in mapmaking have the potential to create a plan that will “dilute the power of a particular group’s vote” despite meeting the traditional core criteria. *LWV II*, 178 A.3d at 817. Accordingly, we deem it appropriate to evaluate proposed plans through the use of partisan fairness metrics to ensure that all voters have “an equal opportunity to translate their votes into representation.” *Id.* at 814.

In recent years, numerous metrics have been developed to allow for objective evaluation of proposed districting plans to determine their partisan fairness. For example, some of the metrics attempt to ascertain a map’s responsiveness to voters, evaluating whether a party with a majority of votes is likely to win a majority of seats, or whether it is likely to produce “anti-majoritarian” results, without focus on exact proportionality of representation. Others attempt to measure whether and to what extent a map favors one party. In utilizing these tools, we do not prioritize one metric over another, but rather look holistically to a plan’s performance across the assessments.

Turning to the Carter Plan specifically, we initially observe that Dr. Rodden expressly stated that he “did not consider partisan performance” when drawing the map but instead considered the relevant metrics after it was completed. Rodden Report at 23. In so doing, he provided detailed assessments of several of the districts. In sum, he views the Carter Plan as producing “8 districts where Democrats are expected to win, one of which

(District 8) is potentially competitive; 8 districts where Republicans are quite likely to win, two of which are at least potentially competitive (1 and 10); and one district (District 7) that is a toss-up with a very slight Democratic lean.” *Id.* at 25.²⁹ Moreover, Dr. Rodden viewed the Carter Plan as “similar to that of the [2018 Plan], reflective of Pennsylvania’s statewide partisan preferences, and consistent with changes in population as they relate to partisanship.” *Id.* He additionally opined that based on the competitiveness of several of the districts, the Carter Plan would be responsive to changes in Pennsylvania voters’ partisan preferences. *Id.*

Dr. Rodden’s assessment is supported by the plan’s performance on the various metrics. In contrast to some of the submitted plans, the Carter Plan consistently scores better than average on the measures and equals or surpasses the standards set by the 2018 Plan.³⁰ Thus,

29. Some of the other parties and amici have oversimplified Dr. Rodden’s assessment as describing a split of ten Democratic seats and seven Republican seats; we reject that view based on Dr. Rodden’s description of the plan, which is further supported by the Carter Plan’s performance on the metric’s discussed below.

30. We set forth a few of the partisan fairness metrics. The Carter Plan was one of the best performers on the Majority Responsiveness Metric, where a responsive map is confirmed by a low number of anti-majoritarian elections, which are balanced between the political parties. The Carter Map had only 3 anti-majoritarian elections, with one favoring Democrats and two favoring Republicans. In contrast, H.B. 2146 had one of the highest anti-majoritarian results, with all five favoring Republicans. The Carter Plan had the least biased score (-0.4%) on the average efficiency gap metric, on which negative numbers favor Republicans and positive numbers favor Democrats. The submit-
(continued...)

we conclude the Carter Plan is superior or comparable to the other maps in regard to partisan fairness.

F. Voting Rights Act

While formal Voting Rights Act assessments were not performed in relation to the submitted plans, the Carter Plan, like all the submitted plans but one, retains the two majority-minority districts present in the 2018 Plan according to Dr. DeFord's assessment.³¹ Indeed, unlike some of the plans, the Carter Plan's majority-minority districts hew closely to the same Philadelphia area districts included in the 2018 Plan, which to our knowledge has never been challenged as violative of the VRA. As explained by Dr. Rodden, the boundaries of the Philadelphia area district remained largely unchanged because the population of this area grew at a similar rate to the United States as a whole. Rodden Report at 12. Additionally, Dr. Rodden expressly indicated that he "did not consider racial data [when] drawing districts or making adjustments for population changes in the map." Rodden Report at 23. Moreover, no party or *amici* have

ted plans ranged from -7.8% to +3.3%, including H.B. 2146 which had one of the highest efficiency gaps favoring Republicans at 6.3%. The 2018 Plan had an average efficiency gap of 2.6%. In regard to the mean-median metric, upon which numbers closer to zero demonstrate a more balanced plan, the Carter Plan scored -1.6%, which demonstrated a slight Republican tilt, where other plans ranged from -2.9% to -0.3%, with H.B. 2146 having the most significant skew in favor of Republicans at -2.9%. The 2018 Plan had an average mean-median score of -1.9%.

31. All other plans submitted also included two majority-minority districts, other than the Gressman Plan which was drawn in part to add an additional majority-minority district.

raised any concerns regarding the Carter Plan's compliance with the VRA.

VII. Conclusion

We reiterate that this Court has been forced into an unusual but not unprecedented role of selecting a congressional redistricting plan for the impending May 17, 2022, Primary Election. There is no perfect plan, nor can there be, as many of the criteria work at cross-purposes to each other and require mapmakers to balance opposing criteria. Our task is to discern which plan, in our view, best abides by the traditional core criteria with attention paid to the subordinate historical considerations and awareness of partisan fairness. As noted, several of the maps submitted would be reasonable choices to be made by a legislature. After careful consideration and for the reasons set forth above, we adopt the Carter Plan for the Pennsylvania primary and general elections for seats in the United States House of Representatives commencing in 2022. We grant, in part, the exceptions to the extent they are consistent with this opinion and dismiss as moot the exceptions in all other respects.

Justices Donohue, Dougherty, and Wecht join the opinion.

Justices Donohue, Dougherty, and Wecht file concurring opinions.

Justices Todd, Mundy, and Brobson file dissenting opinions.

CAPACITY AS :
DIRECTOR FOR THE :
PENNSYLVANIA :
BUREAU OF ELECTION :
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LEIGH M. CHAPMAN, IN :
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CONCURRING OPINION

**OPINION FILED: March
9, 2022**

**JUSTICE DONOHUE DECIDED: February 23,
2022**

I agree with the selection of the Carter Plan, and I join in the Majority’s analysis, including its invocation of partisan fairness as a factor in its selection. Because this case requires the Court to select one of thirteen maps, most of which satisfy the four “floor” criteria identified in *League of Women Voters v. Commonwealth*, 178 A.3d 737 (Pa. 2018) (“*LOWV*”), we must use a tiebreaker. In my view, in this circumstance, the logic of *LOWV* compels us to consider the degree of partisan fairness among the plans.

Contrary to Justice Brobson’s suggestion, none of us wish “to serve as the mirror on the wall and choose the fairest map of them all.” Dissenting Op. at 8 (Brobson, J.). And while Justice Brobson seems to be less opposed to our selection of the Carter Map than “the analysis that the majority uses to break a partisan impasse,” the

fact remains that the political branches have unfortunately thrust the selection of a map on us. Justice Brobson fears that we have “invited, not discouraged this Court’s future involvement in the congressional redistricting process,” *id.*, but does not set forth an alternative selection that would avoid his pessimistic prediction. While which map should be chosen is subject to good faith disagreement, we must choose, and “I don’t know” is the one answer we cannot give.

In *LOWV*, we held that to meet constitutional muster under our Free and Equal Election Clause¹ a map must satisfy four neutral “floor” criteria: “compactness, contiguity, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts.” *LOWV*, 178 A.3d at 817. The submitted maps admirably complied with that dictate.²

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1. “Elections shall be free and equal; and no power, civil or military, shall at any time interfere to prevent the free exercise of the right of suffrage.” Pa. Const. art. 1, § 5.
 2. I acknowledge that the Carter Plan does not score the best on the floor criteria. See Majority Opinion at 27–33. I also agree with the Majority that there are trade-offs involved when giving one criterion more importance than others. *See id.* at 28. Moreover, unlike Justices Mundy and Todd, I do not view picking the best plan on these four criteria to be an objective exercise. The fact that both Justices wish to pick the plan that best complies with the floor criteria but end up favoring different plans illustrates the point.

Additionally, the parties have largely acknowledged that the 2018 map implemented by this Court produced fair outcomes, and, further, that the maps now presented are comparable or superior to the 2018 map. Thus, I do not find that the differences on the floor criteria are so great that any map can be
(continued...)

The proponents of each map submitted the performance metrics corresponding to the neutral criteria.³ Pertinently, virtually all submissions contained an analysis of how each of their plans performed in terms of predicted partisan fairness.⁴ Undoubtedly, this was driven by the following passage from *LOWV*:

As we have repeatedly emphasized throughout our discussion of [Article I, Section 5] the overarching objective of this provision of our constitution is to prevent dilution of an individual's vote by mandating that the power of his or her vote in the selection of representatives be equalized to the greatest degree possible with all other Pennsylvania citizens. We recognize, then, that there exists the possibility that advances in map drawing technology and analytical software can potentially allow mapmakers, in the future, to engineer congressional districting maps, which, **although minimally comporting with these neutral "floor" criteria, nevertheless operate to unfairly dilute the power of a particular group's vote for a congressional representative.** See N.T. Trial, 12/13/17, at 839–42 (Dr. Warshaw discussing the concept of an efficiency gap based on the number of "wasted" votes for the minority po-

ruled out on that basis alone. Hence, we must turn to a tie-breaker.

3. See Majority Opinion at 28 n.23 (describing metrics used to evaluate compactness).
4. The Khalif Plan was the only one that did not analyze partisan performance.

litical party under a particular redistricting plan). However, as the case at bar may be resolved solely on the basis of consideration of the degree to which neutral criteria were subordinated to the pursuit of partisan political advantage, as discussed below, we need not address at this juncture the possibility of such future claims.

Id. (emphasis added).

Although the task of the Court in this matter is distinctly different than the constitutional challenge to the enacted redistricting plan at issue in *LOWV*, the parties in this matter obviously recognized that it was not enough to satisfy the neutral factors, because even though compliant with the drawing requirements, it was important that the plan did not “unfairly dilute the power of a particular group’s vote for a congressional representative.” *Id.*

The purpose of our Free and Equal Election Clause is not to ensure that congressional district maps contain clean lines with few divisions and a minimum of irregular borders encompassing an equal number of people. It is not a cartography lesson. The overreaching objective of this constitutional provision is to prevent dilution of a citizen’s vote. Consequently, just as the political branches have an obligation to consider partisan fairness when enacting a redistricting plan, so too must this Court when put in the position of having to select one from the many that were submitted to us. Partisan fairness is not merely a subordinate factor to be considered. When, as here, all of the plans are compliant with the floor criteria, consideration of the degree of partisan fairness must, in my

view, drive the ultimate selection of a plan in the circumstances in which this Court finds itself.⁵

The degree of partisan fairness is measurable. Measurement is imperfect because it cannot account for, among other variables, the quality of candidates. Also, where, as here, the submitted plans have no performance record, the partisan fairness metrics are predictive, not actual. But the tools are available and widely used. The record in this case is replete with expert analyses of the predicted partisan fairness of the plans. Admittedly, the data sets used to calculate the metric and, in some cases, the methodologies within the designated partisan fairness tests differed among the parties' experts.

Nevertheless, I do not find that the lack of one perfect test for measuring partisan fairness precludes us from considering that factor. It simply means that we should look for the most comprehensive review available. Based on the record before us we have one comprehensive, comparative analysis of each of the submitted plans' predicted performance on partisan fairness. The Gressman plaintiff's expert, Dr. Daryl DeFord, performed an "apples to apples" analysis comparing all plans to each other. In other words, he reconciled the data set and methodologies used by the various experts. From my perspective, it forms a reliable basis to rank the predict-

5. I do not suggest that any of the plans submitted for consideration reflect a degree of partisan unfairness that is disqualifying in a constitutional sense, nor do I suggest the level of partisan fairness that a duly enacted congressional district plan must attain. I do, however, believe that when this Court is forced to choose among plans, the plans that perform the best on partisan fairness metrics must rank above the others.

ed partisan fairness of the submissions. Unlike some other experts, who used limited data sets, Dr. DeFord's analysis examined "vote totals for [eighteen] statewide general elections[.]" Expert Report of Dr. DeFord at 5. He elaborated on this point:

For each of my partisan-fairness metrics, I have used election results from [eighteen] statewide general elections that took place in the Commonwealth between 2012 to 2020. This represents the general elections races for U.S. President, U.S. Senate, Governor, Attorney General, Auditor General, and State Treasurer. This dataset includes examples of elections where each of the major political parties' candidates won the overall statewide vote. Many of these races were decided by small margins, particularly those in which a Republican candidate won the overall election. Thus, I also included the 2017 Supreme Court Justice election in my analysis, as that election had a larger margin of victory for the Republican candidate than the other elections had. Looking at this breadth of election results helps us better understand and model the political geography of a state and related realistic vote outcomes.

Id. at 22.

Dr. DeFord explained that using general elections was useful because "the percentages reported reflect the two-party vote share from the two most successful candidates, which in these elections were always the Democratic and Republican candidates." *Id.* at 22–23. Each of the partisan fairness metrics he used "requires one first to determine, for each of the [eighteen] general elections,

which candidate, the Democratic or Republican, carried each of the districts in each redistricting plan at issue.” *Id.* at 23. Then, that information was used “to plot a seats-votes curve, and they also become inputs for the partisan-symmetry computations described below.” *Id.* These results were then used to generate a mean-median score⁶ and an efficiency gap score.⁷ Dr. DeFord then compared all plans to each other on these two metrics, plus four other measures generated by the PlanScore.org website. The following table, which is copied from the Gressman’s Brief in Support of Exceptions at page 59 with slight alterations to the headings, reflects the results of that comparison. (In his report, Dr.

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6. “The mean-median score is a metric related to partisan symmetry. In simple terms, a plan that exhibits partisan symmetry is one that is likely to treat the parties similarly in terms of seat outcomes given equal votes received by all candidates statewide. That is, if Party A is expected to turn a 55%-to-45% statewide vote advantage into a 10-to-7 seats advantage, then a symmetric result would require Party B to turn a similar 55%-to-45% statewide vote advantage into a 10-to-7 seats advantage.” Report of Dr. DeFord at 26 (footnote omitted).
 7. We explained the concept in *LOWV*.

Dr. Warshaw suggested that the degree of partisan bias in a redistricting plan can be measured through the “efficiency gap,” which is a formula that measures the number of “wasted” votes for one party against the number of “wasted” votes for another party. *Id.* at 840–41. For a losing party, all of the party’s votes are deemed wasted votes. For a winning party, all votes over the 50% needed to win the election, plus one, are deemed wasted votes. The practices of cracking and packing can be used to create wasted votes.

LOWV, 178 A.3d at 777.

DeFord indicates that a negative score indicates a Republican lean.)

Partisan Fairness Metric (closer to zero is better)	[Tier one (least bias)]	[Tier two]	[Tier three (most bias)]
Dr. DeFord's Average Mean-Median (using all 18 elections from 2012 to 2020)	Sen. Dems 2 (-0.3%) Gressman (-0.8%) House Dems (-0.9%) Governor (-1.0%) Draw the Lines (-1.2)	Carter (-1.6%) Ali (-1.8%) Sen. Dems 1 (-1.9%) Citizen-Voters (-2.0%)	Resenthaler 2 (-2.6%) Resenthaler 1 (-2.7%) Voters of PA (-2.7%) HB2146 (-2.9%)
Dr. DeFord's Average Efficiency Gap (using the same 18 elections)	Carter (-0.4%) Governor (0.6%) Gressman (0.8%) Sen. Dems 2 (1.0%)	Draw the Lines (-1.6%) Sen. Dems 1 (-2.5%) Citizen-Voters (-2.6%) Ali (-2.7%) House Dems (3.3%)	Voters of PA (-4.8%) HB2146 (-6.3%) Resenthaler 1 (-7.8%) Resenthaler 2 (-7.8%)

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PlanScore Efficiency Gap	House Dems (1.2% D) Gressman (1.4% R) Carter (1.8% R) Governor (1.9% R)	Ali (2.4% R) Sen. Dems 2 (2.4% R) Sen. Dems 1 (2.5% R) Draw the Lines (3.5% R) Citizen-Voters (4.6% R)	Resenthaler 2 (6.3% R) Resenthaler 1 (6.4% R) HB2146 (6.6% R) Voters of PA (6.8% R)
PlanScore Declination	Gressman (0.03 R) House Dems (0.04 D) Carter (0.05 R) Governor (0.05 R)	Ali (0.07 R) Sen. Dems 1 (0.07 R) Sen. Dems 2 (0.07 R) Draw the Lines (0.10 R) Citizen-Voters (0.13 R)	Resenthaler 2 (0.18 R) HB2146 (0.19 R) Resenthaler 1 (0.19 R) Voters of PA (0.20 R)
PlanScore Partisan Bias	Gressman (0.9% R) Governor (1.1% R) Carter (1.3% R) Sen. Dems 2 (1.5% R)	Sen. Dems 1 (1.8% R) Ali (1.9% R) House Dems (1.9% D) Draw the Lines (2.9% R)	Citizen-Voters (4.3% R) Resenthaler 2 (5.9% R) Resenthaler 1 (6.2% R) Voters of PA (6.5% R) HB2146 (6.3% R)

PlanScore	Gressman	Sen. Dems	Citizen-Voters
Mean-	(0.4% R)	1 (0.6% R)	(1.7% R)
Median	Carter	House	Voters of PA
Difference	(0.4% R)	Dems	(2.2% R)
	Governor	(0.7% D)	HB2146
	(0.4% R)	Ali	(2.3% R)
	Sen. Dems	(0.7% R)	Resenthaler
	2 (0.5% R)	Draw the	1 (2.4% R)
		Lines	Resenthaler
		(1.0% R)	2 (2.4% R)

This comparison establishes that four maps submitted for our consideration separate them from the field: the Carter Plan, the Gressman Plan, the Governor's Plan, and the second Senate Democratic Caucus plan. The Gressman Plan performs the best, with the remaining three all scoring slightly lower. Although the Carter Plan is not the best performer, the other plans contain concerning anomalies in their physical configuration. Namely, as further explained, those plans make changes that depart radically from the historical treatment of certain established communities of interest. Because the Carter Plan does not contain these anomalies and its partisan fairness score is nearly identical to those other three maps, I agree that it is the best option.

The three maps which score better on partisan fairness draw districts that depart from historically recognized communities of interest that, in my view, are too drastic for this Court to adopt. The most salient of these are: the decisions to split the City of Pittsburgh (the Governor and Senate Democratic Caucus) and the decision to place Pittsburgh in a district with Washington County along with splitting Bucks County (Gressman

Plan). Communities of interest are in the eyes of the beholder. A determination of what qualifies as a community of interest, and what those interests are, involves a mixture of local knowledge and political considerations uniquely determinable by the political branches within the confines of the floor constitutional criteria. If an adopted districting plan resulted in a map that split the City of Pittsburgh and otherwise met the *LOWV* criteria, then the split could be a valid choice. The same could be said for the Bucks County split that resulted in a Latino minority opportunity district and the combination of the City of Pittsburgh with Washington County based on the rationale that they are part of the same standard metropolitan statistical area. From where I sit, I have no legitimate way to decide whether the tradeoffs for more substantial compliance with the floor criteria involved with these significant changes in the historical treatment of these areas are acceptable.⁸ Therefore, I cannot endorse the selection of these maps when the Carter Map manages not to make those significant changes and still scores very highly on partisan fairness.

8. For example, a bipartisan group of current and former Washington County elected public officials submitted an amicus brief urging this Court to select any plan but the Gressman Plan due to the fact it would create a new congressional district containing all of Washington County and the City of Pittsburgh. These individuals argued that Washington County and parts of Allegheny County, while “hav[ing] much in common,” actually “have little in common[.]” Amicus Brief at 5. Moreover, they predicted that the City of Pittsburgh would dominate Washington County. *Id.* at 6.

Because the outcome achieved in the Carter Plan⁹ satisfies the LOWV floor criteria and is among the best in preventing dilution of an individual's vote, as demonstrated in its partisan fairness metrics, without disrupting long recognized communities of interest, I join in its selection as the 2022 Congressional District Plan.

9. As discussed in other opinions, the Carter Plan was designed using the “least change” approach. I agree with the Majority that our focus should not be on the method used in creating the map—it should be on the outcome. Majority Opinion at 27.

Regarding whether this Court can apply a clear standard in selecting a map, Justice Dougherty favorably cites the “least change” approach used by the Carter Plan mapmaker. See Concurring Op. at 3 (Dougherty, J.). Justice Wecht likewise cites that approach as a favorable criterion, albeit not as a sole tie-breaker. See Concurring Op. at 19–20 (Wecht, J.). Justices Mundy and Todd both desire to select the map which best follows the neutral floor criteria. See Dissenting Op. at 5 (Todd, J.); Dissenting Op. at 9 (Mundy, J.). However, this shared belief in the correct standard did not yield the same answer. I note that courts in analogous circumstances have asked parties to brief the question of whether a clear standard should be adopted. See *Johnson v. Wisconsin Elections Comm’n*, 967 N.W.2d 469, 476 (Wi. 2021) (“[W]e ordered the parties to address four issues. . . . (3) The petitioners ask us to modify existing map using a ‘least change’ approach. Should we do so, and if not, what approach should we use?”). While the adoption of a fixed standard is desirable, without the benefit of advocacy I believe this Court is ill-equipped to clearly answer that question. For instance, Justice Mundy uses the “Borda system,” which was not used by any of the parties, and the weights Justice Mundy gives to the floor criteria were not subject to examination. In the absence of advocacy on the viability of a fixed standard, I believe that it is incumbent upon us to rely on the record.

[J-20-2022] [MO: BAER, C.J.]
IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

CAROL ANN CARTER, : No. 7 MM 2022
MONICA PARRILLA, :
REBECCA POYOUROW, :
WILLIAM TUNG, : ARGUED: February 18,
ROSEANNE MILAZZO, : 2022
BURT SIEGEL, SUSAN :
CASSANELLI, LEE :
CASSANELLI, LYNN :
WACHMAN, MICHAEL :
GUTTMAN, MAYA :
FONKEU, BRADY HILL, :
MARY ELLEN :
BALCHUNIS, TOM :
DEWALL, STEPHANIE :
MCNULTY AND JANET :
TEMIN, :

Petitioners :

v. :

LEIGH M. CHAPMAN, IN :
HER OFFICIAL :
CAPACITY AS THE :
ACTING SECRETARY OF :
THE COMMONWEALTH :
OF PENNSYLVANIA; :
JESSICA MATHIS, IN :
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CONCURRING OPINION

**OPINION FILED: March
9, 2022**

**DECIDED: February 23,
JUSTICE DOUGHERTY 2022**

I join the majority opinion, but distance myself from certain aspects of part VI.B. Most significantly, I agree completely with the Court’s selection of the Carter Plan for the primary and general elections for seats in the United States House of Representatives commencing May 17, 2022. In my view, the Carter Plan is the correct choice because it effects the least change from the 2018 Plan, while also satisfying the various criteria we have established as the constitutional standard.

As the learned majority explains, the Carter Plan— together with several other plans submitted by the parties—meets the traditional core criteria established in *League of Women Voters of Pennsylvania v. Commonwealth*, 178 A.3d 737 (Pa. 2018) (“*LWV I*”), as the “floor” for a constitutionally valid redistricting plan. *See* Majority Opinion at 27–33; *LWV II*, 178 A.3d at 817. And, the

Carter Plan—among others—satisfies additional metrics identified by the majority as “subordinate historical considerations.” See Majority Opinion at 34–36. But a test utilizing these factors alone, acknowledged by the majority as being satisfied by multiple maps presented in this case, does little to advance a predictable judicial standard for circumstances like these, *i.e.*, where the Court is forced into the map-selecting business by a decennial impasse, and where multiple possible plans satisfy the floor criteria. Cf. *Carter v. Chapman*, 7 MM 2022, 2022 WL 304580, at *5 (Pa. Feb. 2, 2022) (Dougherty, J., concurring) (“[T]he people of this Commonwealth, as well as the other branches of government upon which the primary responsibility for drawing federal congressional districts rests, have a right to know what to anticipate should the judiciary be dragged into the process” including, *inter alia*, the “criteria that should guide a court’s analysis.”); see *id.* (imploring the Court to “shine as much light as possible on what many believe is an improperly political and unfairly partisan process”).

Although the majority lands on the right answer, it fails to satisfactorily explain how it reaches that result. The majority appears to employ “a totality-of-the-circumstances analysis, where all conceivable factors, none of which is dispositive, are weighed with an eye to ascertaining” which plan is most “‘fair.’” *Vieth v. Jubelirer*, 541 U.S. 267, 291 (2004) (plurality); see Majority Opinion at 39 (“Our task is to discern which plan, in our view, best abides by the traditional core criteria with attention paid to the subordinate historical considerations and awareness of partisan fairness.”). Respectfully, while I fully support that goal, I also believe a more concrete standard is needed “to meaningfully constrain the dis-

cretion of the courts, and to win public acceptance for the court[’s] intrusion into a process that is the very foundation of democratic decisionmaking.” *Vieth*, 541 U.S. at 291; *see also id.* at 307 (Kennedy, J., concurring) (“With uncertain limits, intervening courts—even when proceeding with best intentions—would risk assuming political, not legal, responsibility for a process that often produces ill will and distrust.”).

In my view, the critical factor that sets the Carter Plan apart—the “tie-breaker,” so to speak—is that the Carter Plan yields the least change from the Court’s 2018 congressional redistricting plan. *See* Majority Opinion at 35 (acknowledging Carter Plan “laps the field” in terms of maintaining district lines). The least changed map is also the best choice where, as here, no one has demonstrated which subordinate historical considerations should outweigh the others, all maps are generally in the same acceptable range, and we lack enough information about partisan fairness metrics to focus on those as the deciding factor.¹

1. I fully agree with the majority’s recognition that partisan fairness should be considered in our analysis. *See, e.g.*, Majority Opinion at 18 (“we conclude that consideration of partisan fairness, when selecting a plan among several that meet the traditional core criteria, is necessary to ensure that a congressional plan is reflective of and responsive to the partisan preferences of the Commonwealth’s voters”); *id.* at 23 (“Partisan fairness metrics provide tools for objective evaluation of proposed congressional districting plans to determine their political fairness and avoid vote dilution based on political affiliation.”); *id.* at 36, *quoting LWV II*, 178 A.3d at 814 (“we deem it appropriate to evaluate proposed plans through the use of partisan fairness metrics to ensure that all voters have ‘an equal opportunity to translate their votes into representation.’”). However, I also (continued...)

The majority correctly observes the Carter Plan ensures 86.6 percent of the Commonwealth’s population falls in the same district as under the 2018 Plan. *See id.* Maintaining continuity for the vast majority of Pennsylvania residents is particularly important where, as here, the Court was forced to participate belatedly in what should have been an exclusively political process.² In this context, a light, transparent judicial touch is particularly advisable. I am also sensitive to the fact that Pennsylvania’s voters have already had their districts changed twice since 2011, with a third realignment now made necessary by the population changes measured in the 2020 census.

Moreover, as noted by the majority, expert testimony established the 2018 Plan was “broadly recognized as a fair plan by those who study redistricting, following its use in the 2018 and 2020 elections,” and the 2018 Plan “produce[d] relatively competitive elections with outcomes that are roughly in line with overall partisan pref-

recognize that the metrics for this criterion *remain* somewhat in flux when compared to the more standardized measures of the traditional core criteria. *See, e.g., Vieth*, 541 U.S. at 307 (Kennedy, J., concurring) (“No substantive definition of fairness in [re]districting seems to command general assent.”). Still, “[t]hat no such [partisan fairness] standard has emerged in this case should not be taken to prove that none will emerge in the future.” *Id.* at 311.

2. Notably, as I observed when we agreed to exercise extraordinary jurisdiction over this matter, “all parties concede the judiciary’s involvement is not only appropriate at this point, but imperative.” *Carter*, 7 MM 2022, 2022 WL 304580, at *2 n.1 (Dougherty, J., concurring) (citations omitted). Any hypothetical claim this Court lacks the authority to select a map has been irretrievably waived.

erences of Pennsylvania voters.” *Id.* at 25 (internal quotation marks omitted). To me, it is eminently reasonable that we select the plan that hews as closely as possible to a prior district map we already know is constitutional and that has been proven through multiple election cycles to produce fair outcomes.³

Finally, I must express my personal frustration with the widely held misperception—promulgated disingenuously in the media as well as far too many courtrooms—

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3. I am not persuaded by arguments that the least change approach is exclusively relegated to situations where the prior map was legislatively enacted. Indeed, courts have recognized the approach is just as valid—if not more so—when the prior plan was court-made. *See, e.g., Stenger v. Kellett*, 2012 WL 601017, at *3 (E.D. Mo. Feb. 23, 2012) (“A frequently used model in reapportioning districts is to begin with the current boundaries and change them as little as possible while making equal the population of the districts. . . . The ‘least change’ method is advantageous because it maintains the continuity in representation for each district and is by far the simplest way to reapportion[.]”); *Hippert v. Ritchie*, 813 N.W.2d 374, 380 (Minn. Special Redistricting Panel 2012) (explaining the panel utilizes a least-change strategy “where feasible” to avoid making political decisions that should be made by the legislature and governor); *Markham v. Fulton Cty. Bd. of Registrations & Elections*, 2002 WL 32587313, at *6 (N.D. Ga. May 29, 2002) (where prior districts were created by court order, court used that map as benchmark in drawing new map using a least-change methodology); *see also Johnson v. Wis. Elections Comm’n*, 967 N.W.2d 469, 496–97 (Wis. 2021) (Dallet, J., dissenting) (although “the least-change approach has no ‘general acceptance among reasonable jurists’ when the court’s starting point is a legislatively drawn map . . . [,] when a court is redrawing maps based on a prior court-drawn plan, it may make sense to make fewer changes since the existing maps should already reflect neutral redistricting principles”).

that this Court somehow relishes the opportunity to play politics here. We decide this case not because we want to but because we have to as a result of the intransigent inability of the two other co-equal branches of government to fulfill their constitutional obligations and reach a compromise agreement. It is an unfortunate reality that when our Commonwealth's legislative and executive branches succeed only in creating a void, we have no choice but to step once again into the breach.

71a

[J-20-2022] [MO: BAER, C.J.]
IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

CAROL ANN CARTER, : No. 7 MM 2022
MONICA PARRILLA, :
REBECCA POYOUROW, :
WILLIAM TUNG, : ARGUED: February 18,
ROSEANNE MILAZZO, : 2022
BURT SIEGEL, SUSAN :
CASSANELLI, LEE :
CASSANELLI, LYNN :
WACHMAN, MICHAEL :
GUTTMAN, MAYA :
FONKEU, BRADY HILL, :
MARY ELLEN :
BALCHUNIS, TOM :
DEWALL, STEPHANIE :
MCNULTY AND JANET :
TEMIN, :

Petitioners

v.

LEIGH M. CHAPMAN, IN :
HER OFFICIAL :
CAPACITY AS THE :
ACTING SECRETARY OF :
THE COMMONWEALTH :
OF PENNSYLVANIA; :
JESSICA MATHIS, IN :
HER OFFICIAL :

CAPACITY AS :
DIRECTOR FOR THE :
PENNSYLVANIA :
BUREAU OF ELECTION :
SERVICES AND :
NOTARIES, :

Respondents :

----- :
PHILIP T. GRESSMAN; :
RON Y. DONAGI; :
KRISTOPHER R. TAPP; :
PAMELA GORKIN; DAVID :
P. MARSH; JAMES L. :
ROSENBERGER; AMY :
MYERS; EUGENE :
BOMAN; GARY GORDON; :
LIZ MCMAHON; :
TIMOTHY G. FEEMAN; :
AND GARTH ISAAK, :

Petitioners :

v. :

LEIGH M. CHAPMAN, IN :
HER OFFICIAL :
CAPACITY AS THE :
ACTING SECRETARY OF :
THE COMMONWEALTH :
OF PENNSYLVANIA; :
JESSICA MATHIS, IN :

HER OFFICIAL :
 CAPACITY AS :
 DIRECTOR FOR THE :
 PENNSYLVANIA :
 BUREAU OF ELECTION :
 SERVICES AND :
 NOTARIES, :
 :
 Respondents :

CONCURRING OPINION

**OPINION FILED: March
9, 2022**

**DECIDED: February 23,
2022**

JUSTICE WECHT

I join the Court’s adoption of the Carter Plan as the Commonwealth’s 2022 Congressional Redistricting Plan, as well as its opinion in support thereof. I write separately to further explain why I found a number of exceptions to the Special Master’s Report and Recommendation to be meritorious, and also to offer a more detailed discussion regarding the “least-change” approach, the “subordinate historical consideration” that tipped the scales in favor of the Carter Plan.

Although “the primary responsibility and authority for drawing” the Commonwealth’s congressional districts “rests squarely” with the General Assembly,¹ the

1. *League of Women Voters v. Commonwealth*, 178 A.3d 737, 821 (Pa. 2018) (“*LWV II*”).

long-standing practice of the state and federal courts counsels judicial intervention when the political branches fail to timely enact a congressional districting plan and “when further delay” threatens to “disrupt the election process.”² As the recent flurry of activity involving requested modifications to the primary election calendar demonstrates, delaying our consideration of this case any longer likely would have impeded the orderly administration of this year’s elections to the detriment of voters and candidates alike. Alas, though our task may be an “unwelcome” one,³ it is not unfamiliar to this Court.⁴

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2. *Branch v. Smith*, 538 U.S. 254, 279 (2003) (plurality); cf. *LWV II*, 178 A.3d at 822 (“When . . . the legislature is unable or chooses not to act, it becomes the judiciary’s role to determine the appropriate redistricting plan.”); *Scott v. Germano*, 381 U.S. 407, 409 (1965) (*per curiam*) (“The power of the judiciary of a State to require valid reapportionment or to formulate a valid redistricting plan has not only been recognized by this Court but appropriate action by the States in such cases has been specifically encouraged.”); *Grove v. Emison*, 507 U.S. 25, 33-34 (1993) (observing that, “[i]n the reapportionment context, the Court has required federal judges to defer consideration of disputes involving redistricting where the State, through its legislative or judicial branch, has begun to address that highly political task itself,” and instructing federal courts to “neither affirmatively obstruct state reapportionment nor permit federal litigation to be used to impede it” “[a]bsent evidence that these state branches will fail timely to perform that duty”) (emphasis in original); *Butcher v. Bloom*, 216 A.2d 457, 459 (Pa. 1966) (noting that the Court selected redistricting plans for the Pennsylvania House and Senate after “[t]he deadline set forth in our earlier opinion passed without [the] enactment of the required legislation”).
 3. *LWV II*, 178 A.3d at 823 (quoting *Connor v. Finch*, 431 U.S. 407, 415 (1977)).

Preliminarily, I concur with the Court’s evaluation of the pertinent systemic exceptions taken by a number of Parties and Amicus Participants to the Special Master’s Report and Recommendation (“Report”). Chief among those exceptions, in my view, is the Special Master’s treatment of House Bill 2146 as “functionally tantamount to the voice and will of the People,”⁵ which fundamentally misapprehends the Governor’s role as “an integral part of the lawmaking power of the state.”⁶

With respect to the redistricting process, it is well-settled that the authority vested in each State’s Legislature to prescribe “[t]he Times, Places and Manner of holding Elections for . . . Representatives”—which remains subject to Congress’ plenary power to “make or alter such Regulations” “at any time by Law”⁷—“involves lawmaking in its essential features and most important aspect.”⁸ As such, the United States Supreme Court has admonished that “the exercise of th[at] authority must be in accordance with the method which the state has prescribed for legislative enactments.”⁹ In oth-

4. See generally *LWV II*, *supra* note 1; *Mellow v. Mitchell*, 607 A.2d 204 (Pa. 1992) (assuming plenary jurisdiction of redistricting impasse litigation arising from the political branches’ failure to cure malapportioned congressional map in the wake of the Commonwealth’s loss of two congressional seats following the 1990 decennial census).

5. Report at 214–15.

6. *Commonwealth ex rel. Attorney General v. Barnett*, 48 A. 976, 976 (Pa. 1901).

7. U.S. CONST. art. I, § 4 (hereinafter, “Elections Clause”).

8. *Smiley v. Holm*, 285 U.S. 355, 366 (1932).

9. *Id.* at 367; see also *Hawke v. Smith*, 253 U.S. 221, 230 (1920) (distinguishing the “power to ratify a proposed amendment to (continued...)”).

er words, the Legislature has no “power to enact laws in any manner other than that in which the Constitution of the state has provided that laws shall be enacted.”¹⁰

Unlike those jurisdictions that have enshrined certain aspects of the congressional redistricting process in their respective state constitutions,¹¹ Pennsylvania’s charter is silent on the subject. As in most States, redistricting in Pennsylvania typically is carried out through the traditional legislative process.¹² That is significant,

the” U.S. Constitution, which a State “derives” from the Fifth Article thereof, from “the power to legislate in the enactment of the laws of a state,” which “is derived from the people of the state”).

10. *Smiley*, 285 U.S. at 367–68.

11. *See, e.g.*, ARIZ. CONST. art. IV, pt. 2, § 1; CAL. CONST. art. XXI; COLO. CONST. art. V, §§ 44–48; HAW. CONST. art. IV, § 2; IDAHO CONST. art. III, § 2; MICH. CONST. art. IV, § 6; MONT. CONST. art. V, § 14; N.J. CONST. art. II, § II; N.Y. CONST. art. III, § 4; OHIO CONST. art. XIX; UTAH CONST. art. IX, § 1; VA. CONST. art. II, §§ 6, 6-A; WASH. CONST. art. II, § 43.

12. The High Court considered the validity of non-traditional exercises of legislative power in the redistricting sphere in *Ohio ex rel. Davis v. Hildebrant*, 241 U.S. 565 (1916), which concerned a challenge to a 1912 amendment to the Constitution of Ohio that expressly reserved to the people of that State the concurrent right to exercise the legislative power “by way of referendum” — *i.e.*, “to approve or disapprove by popular vote any law enacted by the [G]eneral [A]ssembly.” *Id.* at 566. In May 1915, the Ohio General Assembly passed, and the Governor of Ohio signed into law, an act redistricting the State into twenty-two congressional districts. When voters subsequently disapproved of the act in a statewide referendum, challengers unsuccessfully sought a writ of *mandamus* from the Supreme Court of Ohio directing election officials to disregard the vote on the grounds that it violated the Elections Clause and thus was void. *See id.* at 567.

(continued...)

The U.S. Supreme Court affirmed the denial of relief for three interrelated reasons. First, the Court explained that “the referendum constituted a part of the state Constitution and laws,” and therefore “was contained within the legislative power” of the State. *Id.* at 568. Next, it observed that in 1911, Congress had, by statute,

expressly modified the phraseology of the previous acts relating to [redistricting] by inserting a clause [which directed that redistricting should be performed by a State ‘in the manner provided by the laws thereof’] plainly intended to provide that where, by the state Constitution and laws, the referendum was treated as part of the legislative power, the power as thus constituted should be held and treated to be the state legislative power for the purpose of creating congressional districts by law.

Id. Lastly, the Court reasoned that any contention that Congress exceeded its constitutional authority in sanctioning use of the referendum

for the purpose of apportionment . . . must rest upon the assumption that to include the referendum in the scope of the legislative power is to introduce a virus which destroys that power, which in effect annihilates representative government, and causes a state where such condition exists to be not republican in form, in violation of the guaranty of the Constitution . . . [which] presents no justiciable controversy.

Id. at 569 (citing U.S. CONST. art. 4, § 4 (“The United States shall guarantee to every State in this Union a Republican Form of Government”)); *cf. Ariz. State Legislature v. Ariz. Indep. Redistricting Comm’n*, 576 U.S. 787, 795 n.3 (2015) (“The people’s sovereign right to incorporate themselves into a State’s lawmaking apparatus, by reserving for themselves the power to adopt laws and to veto measures passed by elected representatives, is one this Court has ranked a nonjusticiable political matter.”). In short, neither Ohioans’ decision to overrule a duly en-
(continued...)

because the Governor's constitutionally designated role in the legislative process ought not to be treated as an afterthought. More specifically, the Presentment Clause and the gubernatorial veto¹³ have been critical features

acted congressional redistricting plan by statewide vote, nor Congress' recognition of their authority to do so in 1911, were "repugnant" to the Constitution. *Id.* As far as I am aware, Pennsylvania has not utilized referenda for redistricting purposes.

13. *Compare* PA. CONST. art. IV, § 15 ("Every bill which shall have passed both Houses shall be presented to the Governor; if he approves he shall sign it, but if he shall not approve he shall return it with his objections to the House in which it shall have originated . . ."), *with* PA. CONST. (1790) art. I, § 22 ("Every bill which shall have passed both Houses, shall be presented to the Governor; if he approve, he shall sign it; but if he shall not approve it, he shall return it, with his objections, to the House in which it shall have originated . . ."). As this Court has explained,

The veto power is a survival of the lawmaking authority vested in the king as a constituent if not a controlling third body of the parliament, in which he might and not infrequently did sit in person. With the growth of free ideas and institutions, and the aggressive spirit of the popular branch of the parliament in the affairs of government, it lost its vitality as a real power in England. . . . But in the colonies it not only existed, but was an active power, absolute in character, and so constantly exercised that . . . the Declaration of Independence set forth first among the grievances of the colonies, "He has refused his Assent to Laws, the most wholesome and necessary for the public good."

* * *

From the colonies the power passed, with various limitations, into nearly all the American constitutions, state and national. Originally intended mainly as a means of
(continued...)

of our Commonwealth's tripartite system of government for nearly two-and-a-half centuries.¹⁴

Reflecting on the redistricting process early in the twentieth century, in *Smiley*, the Supreme Court observed that "the uniform practice" among the States in such matters "has been to provide for congressional districts by the enactment of statutes with the participation of the Governor wherever the state Constitution provid-

self-protection by the executive against the encroachments of the legislative branch, it has steadily grown in favor with the increasing multitude and complexity of modern laws, as a check upon hasty and inconsiderate as well as unconstitutional legislation.

Barnett, 48 A. at 976–77 (quotation from Declaration of Independence modified).

14. While the classical view of the separation of powers might regard the veto power as an inherent feature of our system of checks and balances, this was not always the case. By the time the United States Constitution was ratified in 1789, "it appears that only two states had provided for a veto upon the passage of legislative bills; Massachusetts, through the Governor, and New York, through a council of revision." *Smiley*, 285 U.S. at 368. In fact, not only did Pennsylvania's "radically democratic" founding era constitution, which governed from 1776 to 1790, fail to provide a mechanism for contemporaneous disapproval of laws passed by the unicameral legislature, it vested the "supreme executive power" in a council of twelve people. *LWV II*, 178 A.3d at 802 (quoting Ken Gormley, *Overview of Pennsylvania Constitutional Law*, as appearing in Ken Gormley, ed., *THE PENNSYLVANIA CONSTITUTION: A TREATISE ON RIGHTS AND LIBERTIES*, 3 (2004)); PA. CONST. (1776) ch. II, § 4 ("The supreme executive power shall be vested in a president and council").

ed for such participation as part of the process of making laws.”¹⁵ To that end, the Court has observed:

[W]hether the Governor of the State, through the veto power, shall have a part in the making of state laws, is a matter of state polity. Article I, Section 4 of the Federal Constitution neither requires nor excludes such participation. And provision for it, as a check in the legislative process, cannot be regarded as repugnant to the grant of legislative authority. . . . That the state Legislature might be subject to such a limitation, either [at the time of the adoption of the Federal Constitution] or thereafter imposed as the several states might think wise, was no more incongruous with the grant of legislative authority to regulate congressional elections than the fact that the Congress in making its regulations under the same provision would be subject to the veto power of the President, as provided in Article I, Section 7. The latter consequence was not expressed, but there is no question that it was necessarily implied, as the Congress was to act by law; and there is no intimation, either in the debates in the Federal Convention or in contemporaneous exposition, of a purpose to exclude a similar restriction imposed by state Constitutions upon

15. *Smiley*, 285 U.S. at 370.

state Legislatures when exercising the law-making power.¹⁶

The Supreme Court reaffirmed the validity of these and other state constitutional constraints on the congressional redistricting process most recently in *Arizona State Legislature v. Arizona Independent Redistricting Commission*. There, the Court relied upon the Elections Clause and 2 U.S.C. § 2a(c), the successor statute to the 1911 Act at issue in *Hildebrant*, in rejecting a challenge to a provision of the Arizona Constitution, adopted in 2000 via citizen initiative, that “remove[d] redistricting

16. *Id.* at 368–69 (cleaned up). Regarding the particular role of the Elections Clause in our federal system, the High Court offered the following:

The practical construction of Article I, Section 4 is impressive. General acquiescence cannot justify departure from the law, but long and continuous interpretation in the course of official action under the law may aid in removing doubts as to its meaning. This is especially true in the case of constitutional provisions governing the exercise of political rights, and hence subject to constant and careful scrutiny. Certainly, the terms of the constitutional provision furnish no such clear and definite support for a contrary construction as to justify disregard of the established practice in the States. That practice is eloquent of the conviction of the people of the States, and of their representatives in state Legislatures and executive office, that in providing for congressional elections and for the districts in which they were to be held, these Legislatures were exercising the law-making power and thus subject, where the state Constitution so provided, to the veto of the Governor as a part of the legislative process.

Id. (citations omitted).

authority from the Arizona Legislature and vest[ed] that authority in an independent commission.”¹⁷ Tracing the history of the federal statutes, the Court explained:

From 1862 through 1901, the decennial congressional apportionment Acts provided that a State would be required to follow federally prescribed procedures for redistricting unless “the legislature” of the State drew district lines. In drafting the 1911 Act, Congress focused on the fact that several States had supplemented the representative legislature mode of lawmaking with a direct lawmaking role for the people, through the process of initiative (positive legislation by the electorate) and referendum (approval or disapproval of legislation by the electorate). To accommodate that development, the 1911 Act eliminated the statutory reference to redistricting by the state “legislature” and instead directed that, if a State’s apportionment of Representatives increased, the State should use the Act’s default procedures for redistricting “until such State shall be redistricted *in the manner provided by the laws thereof*.”¹⁸

17. 576 U.S. at 792.

18. *Id.* at 809 (cleaned up; emphasis in original). “The 1911 Act also required States to comply with certain federally prescribed districting rules — namely that Representatives be elected ‘by districts composed of a contiguous and compact territory, and containing as nearly as practicable an equal number of inhabitants.’” *Id.* at 809 n.19 (quoting Act of Aug. 8, 1911, ch. 5, § 3, 37 Stat. 14); *see also id.* (“The 1911 Act did not address redistrict- (continued...)”)

Because the “lawmaking power in Arizona include[d] the initiative process,” the establishment of an independent commission for purposes of congressional redistricting offended neither the Elections Clause nor Section 2a(c).¹⁹

ing in the event a State’s apportionment of Representatives decreased, likely because no State faced a decrease following the 1910 census.”).

Notably, requirements virtually identical to those enumerated in the 1911 Act had been added to Pennsylvania’s Constitution by statewide referendum in 1874 to govern the redistricting process for state legislative districts, which at that time was handled by the General Assembly directly. *See* PA. CONST. (1874) art. II, §§ 16, 17; *LWV II*, 178 A.3d at 815. In 1968, Pennsylvania’s voters overhauled the legislative redistricting process by amending the Constitution to commit the power to redraw those districts to the newly constituted Legislative Reapportionment Commission. By its terms, our Constitution presently requires the Commission to draw legislative districts “composed of compact and contiguous territory as nearly equal in population as practicable,” and instructs that “no county, city, incorporated town, borough, township or ward shall be divided in forming” such districts “[u]nless absolutely necessary.” *See* PA. CONST. art. II, § 16. In *LVW II*, we effectively incorporated a slightly modified version of those requirements into the Free and Equal Elections Clause, *id.* art. I, § 5, as “neutral criteria” to measure the constitutionality of congressional redistricting plans. *LWV II*, 178 A.3d at 816–17 (holding that “an essential part of such an inquiry is an examination of whether the congressional districts created under a redistricting plan are: ‘composed of compact and contiguous territory; as nearly equal in population as practicable; and which do not divide any county, city, incorporated town, borough, township, or ward, except where necessary to ensure equality of population’”). “These neutral criteria provide a ‘floor’ of protection for an individual against the dilution of his or her vote in the creation of such districts.” *Id.* at 817.

19. *Id.* at 793.

Taken together, the foregoing authority undercuts the Special Master's suggestion that House Bill 2146 should be entitled to some special consideration, let alone "revere[nce],"²⁰ simply by virtue of its adoption by the General Assembly. As I see it, there is no better embodiment of the People's will than the language of the Constitution itself, and that text is clear: without the Governor's signature or a two-thirds vote of the House and Senate to override his veto, it is axiomatic that House Bill 2146 is "just a bill."²¹ While the House Bill undoubtedly encompasses the current Legislature's policy *goals*, it does not have the force of law and therefore does not constitute state policy.²² Were this Court to treat it as anything more than a proposal on an equal footing with the other submitted plans, we would subvert the executive power in favor of the legislative power, elevating one coordinate branch of our government over another without a historical basis. This we cannot do.

Apart from the deference question, I also find the piecemeal treatment of discrete features of any given map as disqualifying to be problematic. For instance, while the Special Master considered the division of Pittsburgh to be suspect, her Report says nothing about House Bill 2146's treatment of Philadelphia. Given its size, Philadelphia is the only county in Pennsylvania that can support two ideally populated congressional districts by itself, with the remainder of its surplus population added to a third district anchored in a neighboring coun-

20. Report at 215.

21. SCHOOLHOUSE ROCK!, I'M JUST A BILL (1975).

22. See *Sixty-Seventh Minn. State Senate v. Beens*, 406 U.S. 187, 197 (1972).

ty. However, House Bill 2146 is the *only* submission among the thirteen before us that divides Philadelphia into *four* districts — again without any justification along the lines of what the Special Master demanded of maps that split Pittsburgh. Likewise, the Special Master deemed maps that “divide[d] Bucks County for the first time since the 1860s” to be “[in]appropriate choice[s].”²³ But similar concerns were absent with respect to Dauphin County, for instance, which historically had been kept whole before recent redistricting cycles. Where the 2018 Remedial Map reunified the county, the House Bill would have distributed its populace among three districts.

Moreover, notwithstanding the Constitution’s command that “no county, city, incorporated town, borough, township or ward shall be divided in forming” districts “[u]nless absolutely necessary,” there are only three counties (one of which is coterminous with a city) in Pennsylvania that “absolutely” must be split to account for current population estimates.²⁴ Beyond that, the Constitution does not create a hierarchy of political subdivisions to consistently guide the evaluation of a plan’s performance on this measure. Nor does it set forth intelligible standards by which courts can conclude that the integrity of some municipal boundaries are sacrosanct, while others are not. Consequently, we must choose among proposed maps without a constitutionally-prescribed basis by which to resolve citizens’ pleas that certain municipalities or “communities of interest”

23. Report at 195.

24. Those counties are Allegheny, Montgomery, and Philadelphia.

should be kept together. Ultimately, those questions are inherently political.

While historical practices might be a helpful starting point for a court to employ when it comes to scrutinizing political subdivisions, by no means do they create what one Amicus Participant cleverly chided as “cartographic *stare decisis*.”²⁵ In that vein, the Special Master erred in asserting that certain plans “propose to split the City of Pittsburgh into two districts, apparently for the first time in [Pennsylvania’s] history.”²⁶ To the contrary, Pittsburgh historically had been split between multiple congressional districts for the better part of the previous century and beyond, including four districts in 1931, five in 1943, four again in 1951, and three between 1962 and 1982, to summarize just a few maps that the Legislative Reapportionment Commission conveniently has made publicly available on its website.²⁷ In fact, Pittsburgh has only comprised a single congressional district since 1982. That said, while the Constitution does not require a justification for each and every split (or any, for that matter), absent compelling reasons not present in this record, whether and how to divide Pennsylvania’s second-largest city for the first time in four decades are questions best left to the political branches, which possess the institutional competencies to survey the Commonwealth, conduct fact-finding, and weigh amorphous and constitutionally-undefined concepts like “communities of interest” in deciding where lines should be drawn.

25. Br. of *Amici* Participants Khalif Ali, *et al.*, 2/14/2022, at 20.

26. Report at 194.

27. See <https://www.redistricting.state.pa.us/Maps/>.

To be clear, I do not believe that any of the maps before us should be disqualified based upon discrete line-drawing decisions. The creation of a districting plan requires balancing a number of factors, some quantitative, others qualitative. Necessarily, maximizing a plan's performance with respect to one factor (compactness, say) will complicate one's ability to minimize the results of another (*e.g.*, raw political subdivision splits). In exercising our "equitable discretion" to choose one plan from an array of options,²⁸ this Court's first responsibility is to ensure that a given plan satisfies the constitutional requirements of equal population, contiguity, compactness, and preservation of political subdivisions. As others have noted, using the 2018 Remedial Plan as a baseline, each of the submitted maps arguably satisfies these neutral criteria.²⁹ This is a good problem to have, as it appears

28. *Connor*, 431 U.S. at 415.

29. Majority Op. at 27–33; Concurring Op. (Dougherty, J.) at 2; see Report at 192 ("On their face, . . . all the maps in the proposed plans contain districts that are comprised within a contiguous territory and comply with the 'contiguity' requirement of the Pennsylvania Constitution."); *id.* ("Each and every proposed plan satisfies the command in the Free and Equal Elections Clause that congressional districts be created 'as nearly equal in population as practicable.'"). Among the submissions, the Khalif Ali *Amici* Participants alone utilized the Legislative Reapportionment Commission's alternative, prisoner-adjusted data set. While this choice is not disqualifying, it makes comparing *Amici*'s plan to the other submissions somewhat more difficult. Absent a claim that such adjustments constitutionally are required, which *Amici* do not advance here, whether to use the prisoner-adjusted data set is a policy decision reserved to the discretion of policymakers.

that the days of “Goofy kicking Donald Duck” are over.³⁰ Given that reality, our inquiry must turn to other considerations.

Some would have us look immediately to a variety of “partisan fairness” metrics, a number of which have been scrutinized at length by the parties and their experts. Respectfully, I see less value in that order of operations. Though I reaffirm the proposition

that there exists the possibility that advances in map drawing technology and analytical software can potentially allow mapmakers, in the future, to engineer congressional districting maps, which, although minimally comporting with these neutral ‘floor’ criteria, nevertheless operate to unfairly dilute the power of a particular group’s vote for a congressional representative,³¹

I also bear in mind that we are in a fundamentally different posture than when we recognized the justiciability of partisan gerrymandering claims in *LWV II*. Because that case began as a challenge to an existing map that had been drawn by the Legislature and signed into law by the Governor, the litigants had the benefit of six years’ worth of election data by which to analyze that plan’s actual performance. While we found those computations to be instructive, we did not need to rely on them in striking down the 2011 Plan because its subordination of the neutral redistricting criteria was manifest, par-

30. See *LWV II*, 178 A.3d at 819 (relating the derisive moniker given to Congressional District 7 in the 2011 Plan).

31. *Id.* at 817.

ticularly with regard to the compactness criteria. Here, by contrast, we do not confront a challenge to an existing map. Consequently, the partisan fairness metrics used to evaluate the thirteen submitted maps are useful heuristics to approximate partisan outcomes under conditions that have never occurred—*i.e.*, elections held under proposed lines. For that reason, I caution against surrendering to the allure of those metrics at the front end of an analysis. The numbers are no doubt helpful to a comprehensive examination, but they must not be dispositive. They serve better as a gut-check at the culmination of the process, rather than as a gatekeeping function at the start.

Aside from partisan fairness, in *LWV II*, “[w]e recognize[d] that other factors have historically played a role in the drawing of legislative districts, such as the preservation of prior district lines, protection of incumbents, or the maintenance of the political balance which existed after the prior reapportionment.”³² We designated these factors as “wholly subordinate to the neutral criteria” identified above, but available for consideration nonethe-

32. *Id.*; cf. *Holt v. 2011 Legislative Reapportionment Comm’n*, 67 A.3d 1211, 1235 (Pa. 2013) (“*Holt I*”) (explaining that, as a constitutional matter, “there is nothing at all to prevent a particular reapportionment commission from considering political factors, including the preservation of existing legislative districts, protection of incumbents, avoiding situations where incumbent legislators would be forced to compete for the same new seat, etc., in drawing new maps to reflect population changes, . . . so long as they do not do violence to the constitutional constraints” expressed in the neutral criteria); *Karcher v. Daggett*, 462 U.S. 725, 740 (1983) (identifying “preserving the cores of prior districts” to be a “legitimate objective”).

less.³³ I find inquiries about incumbent “protection” and maintaining “political balance” to be less appropriate or amenable to objective analysis in the context of a court-drawn or court-selected map. Preserving prior district lines, however, readily can be assessed using straightforward quantitative metrics. Accordingly, I agree with Justice Dougherty’s sentiments that, compared to the other subordinate historical considerations, what courts have referred to in modern parlance as the “least-change” approach offers several virtues for a court engaged in the selection of a plan.³⁴

For one thing, the least-change approach constrains the Court’s exercise of its “equitable discretion,” limiting the amount of judicial tinkering with existing district lines to the degree necessary to bring a malapportioned plan into compliance with constitutional requirements. For another, prioritizing least-change promotes “continuity for the vast majority of Pennsylvania residents,”³⁵ curbing the tumult that might ensue with an indiscriminate overhaul of existing districts. Furthermore, least-change offers a few objective measurements by which to compare competing submissions head-to-head. The “preeminent” metric for a least-change analysis is “core retention,” which can be derived by comparing the existing district boundaries to the proposed district boundaries and then calculating the share of the population that would be retained in the overlapping portions.³⁶ The

33. *Id.*

34. *See* Concurring Op. (Dougherty, J.) at 3.

35. *Id.* at 4.

36. *Johnson v. Wis. Elections Comm’n*, ___ N.W.2d ___, 2022 WL 621082, *4, *7 (Wis. March 1, 2022) (“Core retention represents (continued...)”)

larger the percentage, the better a plan performs on the core retention metric. Alternatively, one can calculate a “displacement score” by identifying the share of the population in each proposed district that was not in the prior district, with smaller numbers indicating superior performance.³⁷

On the core-retention metric, the submitted plans perform as follows:³⁸

the percentage of people on average [who] remain in the same district they were in previously. It is thus a spot-on indicator of least change statewide, aggregating the many district-by-district choices a mapmaker has to make. Core retention . . . is central to a least change review.”).

37. In *Johnson*, the Wisconsin Supreme Court rejected the state legislature’s argument that the Court “should weigh as a measure of least change the total number of counties and municipalities split under each proposal.” *Id.* The Majority “fail[ed] to see why this [wa]s a relevant least-change metric,” in light of the fact that “[i]f a municipality was split under the maps adopted in 2011, reuniting that municipality now—laudable though it may be—would produce more change, not less.” *Id.* Although the Court suggested that “[p]articularized data about how many counties or municipalities remain unified or split may be a useful indicator of least change,” it did not evaluate the proposed plans on that basis because none of the parties “saw fit to provide that data.” *Id.* (emphasis in original). Similar data were not submitted in this case either.
38. See Carter Petitioners’ Response Br. in Support of Proposed Congressional Redistricting Plan, 1/26/2022, Ex. 1 (Expert Report of Jonathan Rodden, 1/26/2022, at 2).

Table 1: Retained Population Share in 14 Submitted PA Congressional Plans

Plan	Retained Population Share
Carter	86.6
CCFD	76.1
Citizen Voters	82.4
HB2146	78.5
Draw the Lines PA	78.8
GMS	72.8
Governor Wolf	81.2
Ali	81.5
PA House Dem. Caucus	73.3
Resenthaler 1	76.5
Resenthaler 2	76.5
Senate Dem. Plan 1	72.5
Senate Dem. Plan 2	72.5
Voters of PA	80.6

With a Retained Population Share of 86.6%, the Carter Plan significantly exceeds most submitted plans on this metric, with only the Citizen-Voters Plan coming within 5%. When asked at argument what significance should be given to these percentages, counsel for the Carter Petitioners explained that the difference between 86% and 76% on this measurement is roughly one million more people who would remain in their current districts. Broken down by district, eleven of the seventeen proposed districts in the Carter Plan have core retention scores exceeding 89%:³⁹

39. Carter Petitioners' Br. in Support of Proposed Congressional Redistricting Plan, 1/24/2022, Ex. 1 (Expert Report of Jonathan Rodden, 1/24/2022, at 3).

Table 3: Share of Population in Each Proposed District that Will be in the Same District as in the 2018 Plan

District	Share of population in previous version of district
1	93.26%
2	95.84%
3	94.17%
4	81.65%
5	89.74%
6	98.44%
7	90.56%
8	92.10%
9	65.54%
10	96.20%
11	96.91%
12(18)	85.50%
13	73.39%
14	75.65%
15	59.61%
16	89.95%
17	93.63%

As the Governor’s expert put it, the Carter Plan “just laps [the] field when it comes to least change.”⁴⁰

In criticizing the Carter Plan, the Special Master erroneously contended that this Court rejected the least-change approach in *Holt I*, and therefore the Carter Plan was “developed in contravention of controlling precedent.”⁴¹ But least-change was not at issue in that case. Read in context, the cited passage concerned this Court’s standard and scope of review of the Legislative Reapportionment Commission’s 2011 Final Plan. The Commission argued that the Court’s “*de novo* review is to be constrained by the specifics of prior reapportionment

40. Notes of Testimony, 1/27/2022, at 409 (testimony of Moon Duchin, Ph.D.).

41. Report at 187 (citing *Holt I*, 38 A.3d at 735).

plans ‘approved’ by the Court.”⁴² That was so because the Commission mistakenly believed that this Court’s prior redistricting decisions essentially pre-approved certain raw numbers of split political subdivisions and population deviation levels.⁴³ In rejecting that approach, the Court clarified that those prior appeals only resolved challenges actually raised by the parties; they did not “insulate” the Commission’s Final Plan “from attack . . . unless a materially indistinguishable challenge was raised and rejected in those decisions.”⁴⁴

Here, the Carter Petitioners do not suggest that the bulk of the 2018 Remedial Plan must be blindly re-adopted because it previously was approved by this Court. Rather, they believe that it is a reasonable starting point for drawing a new plan that also complies with all other traditional criteria. I agree. Moreover, preferring the least-change approach would not inoculate future plans from challenges, as the Special Master evidently feared.⁴⁵ The political branches are not bound by a least-change approach when drawing districts through the typical legislative process. The United States and Pennsylvania Constitutions give the General Assembly

42. *Holt I*, 38 A.3d at 735.

43. *Id.*

44. *Id.* at 736; *see also id.* at 735 (explaining that “prior ‘approvals’ of plans do not establish that those plans survived not only the challenges actually made, but all possible challenges”).

45. *See Report* at 188 (“This Court is deeply troubled by the prospect of any court, let alone a court of this Commonwealth, applying the ‘Least Change’ doctrine, where the existing plan was drafted by that court itself, because that court could theoretically continuously adopt features of its prior plans, effectively rendering impossible any future challenge to the plan.”).

ample latitude to draw new maps from scratch based upon its preferred policy considerations, limited only by constitutional constraints and federal statutes such as the Voting Rights Act. Thus, the Legislature may replace wholesale the Carter Plan with a plan of its own devising in a future redistricting cycle, and any challenges to that plan would have to be evaluated independently on their merits.

To be sure, the least-change approach has its own shortcomings. The utility of such an approach might be diminished significantly if our point of reference—*i.e.*, the thing to be changed the least—is a grossly gerrymandered map, as was the case with the 2011 Plan, whose deficiencies were pervasive. In that instance, it would not have been prudent to require mapmakers to measure their proposals against manifestly unconstitutional lines.⁴⁶

Although I would not declare that least-change should be *the* “tie-breaker” for all court-selected plans, my views on this subject align more closely with Justice Dougherty’s.⁴⁷ In exercising our constitutional and equitable powers, we must recognize that redistricting is more art than science. Every line reflects a value judg-

46. That being said, utilizing a least-change approach where a prior map’s constitutional shortcomings are confined to a few districts is not beyond the realm of possibility. In that case, all other things being equal, least-change might still present the most restrained approach to judicial selection among several proposed maps.

47. *See* Concurring Op. (Dougherty, J.) at 3 (“In my view, the critical factor that sets the Carter Plan apart—the ‘tie-breaker,’ so to speak—is that the Carter Plan yields the least change from the Court’s 2018 congressional redistricting plan.”).

ment to some community or individual. Nonetheless, we should endeavor to resolve redistricting disputes by elevating as many “objective” criteria above “subjective” considerations as possible. To that end, I consider a plan’s least-change score to be a weighty plus-factor that parties to future impasse litigation would be wise to keep in mind when submitting plans for selection by a court. Given that the other plans before us largely satisfy the threshold neutral criteria, the Carter Plan’s superior performance on the least-change metric weighs heavily in its favor. For that reason, I join the Court in adopting it as the Commonwealth’s 2022 Congressional Redistricting Plan.

[J-20-2022] [MO: BAER, C.J.]
IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

CAROL ANN CARTER, : No. 7 MM 2022
MONICA PARRILLA, :
REBECCA POYOUROW, :
WILLIAM TUNG, : ARGUED: February 18,
ROSEANNE MILAZZO, : 2022
BURT SIEGEL, SUSAN :
CASSANELLI, LEE :
CASSANELLI, LYNN :
WACHMAN, MICHAEL :
GUTTMAN, MAYA :
FONKEU, BRADY HILL, :
MARY ELLEN :
BALCHUNIS, TOM :
DEWALL, STEPHANIE :
MCNULTY AND JANET :
TEMIN, :

Petitioners :

v. :

LEIGH M. CHAPMAN, IN :
HER OFFICIAL :
CAPACITY AS THE :
ACTING SECRETARY OF :
THE COMMONWEALTH :
OF PENNSYLVANIA; :
JESSICA MATHIS, IN :
HER OFFICIAL :

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MYERS; EUGENE :
BOMAN; GARY GORDON; :
LIZ MCMAHON; :
TIMOTHY G. FEEMAN; :
AND GARTH ISAAK, :

Petitioners :

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LEIGH M. CHAPMAN, IN :
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 Respondents :

DISSENTING OPINION

**OPINION FILED: March
9, 2022**

**DECIDED: February 23,
2022**

JUSTICE BROBSON

I. One Person, One Vote

Article I, Section 2 of the United States Constitution,¹ 1 as interpreted by the Supreme Court of the United States, commands that congressional districts be apportioned to achieve population equality—“one person, one vote.” See *Evenwel v. Abbott*, 578 U.S. 54 (2016); *Tennant v. Jefferson Cnty. Comm’n*, 567 U.S. 758 (2012) (per curiam); *Karcher v. Daggett*, 462 U.S. 725 (1983); *Wesberry v. Sanders*, 376 U.S. 1 (1964). There is no *de minimis* exception to this constitutional imperative. *Karcher*, 462 U.S. at 730–38; see also *Vieth v. Pennsylvania*, 188 F. Supp. 2d 532, 542 (M.D. Pa. 2002) (“[T]he [United States]

1. “The House of Representatives shall be composed of Members chosen . . . by the People of the several States . . .” U.S. Const. art. I, § 2 (emphasis added).

Supreme Court has squarely rejected any *de minimis* exception to the requirement of absolute equality in population between districts.”). Rather, the equal representation standard of the United States Constitution requires that “as nearly as is practicable one man’s vote in a congressional election is to be worth as much as another’s.” *Wesberry*, 376 U.S. at 7–8.

The United States Supreme Court has established a two-prong test to evaluate the constitutionality of a congressional reapportionment plan under the one-person, one-vote standard. The first question asks whether the population differences could practicably have been avoided through good-faith effort. *Karcher*, 462 U.S. at 730. If so, the second question asks whether the differences were nonetheless necessary to achieve a legitimate state objective. *Tennant*, 567 U.S. at 760 (citing *Karcher*, 462 U.S. at 740–41). Although we are not here being asked to evaluate the constitutionality of a reapportionment plan enacted through the legislative process outlined in our Pennsylvania Constitution, the one-person, one-vote standard and the *Karcher* test apply with equal force to a judicially created plan.

The Carter Plan, as it is called, fails the *Karcher* test. It proposes 17 congressional districts—four with the ideal population of 764,865, four with a population of 764,866 (plus one), and nine with a population of 764,864 (minus one). The Carter Plan, therefore, provides for a two-person population deviation between the largest and smallest congressional districts. While I acknowledge that it is mathematically impossible to create 17 districts of precisely equal population, it is possible, with good faith, to craft a plan with less than a two-person deviation. Indeed, of the 13 proposed reapportionment plans

provided to this Court for its consideration, only two proposed a deviation of more than one person. The Carter Plan is one of those two. Moreover, the Carter Petitioners, in their Brief in Support of Exceptions to the Special Master's Report (Carter Brief), acknowledge that it was possible to create a plan with a one-person deviation. (Carter Br. at 11 n.5.) The Carter Plan, therefore, fails the first part of the *Karcher* test.

The majority, nonetheless, has chosen the Carter Plan over the 11 other plans with only a one-person deviation. Applying the second prong of the *Karcher* test, then, it is the burden of the Carter Petitioners, and the majority by extension, to show that the two-person deviation in the Carter Plan is “necessary to achieve a legitimate state objective.” *Tennant*, 567 U.S. at 760. Again, the presence of other plans before the Court that satisfy all state and federal redistricting criteria with only a one-person deviation proves the contrary. The majority concludes, however, that the Carter Petitioners “have satisfied their burden by stating, with specificity, that the two-person deviation was required to prevent [an] additional split of a Vote Tabulation District [(VTD)],” which it contends is a recognized legitimate state interest. (Maj. Op. at 31.) In support, the majority relies on this Court's decision in *Mellow v. Mitchell*, 607 A.2d 204 (Pa. 1992).

In *Mellow*, this Court adopted the master's recommendation to approve a proposed reapportionment plan with a total maximum population deviation of 0.0111% over a proposed redistricting plan with a total maximum population deviation of 0.0000017%, the latter of which represented a difference of just one person. *Mellow*, 607 A.2d at 208, 215, 218. In making his recommendation,

however, the master acknowledged that the proposed reapportionment plan with the lowest population deviation “[fell] below other[] [proposed reapportionment plans] precisely because the cost of achieving maximum mathematical equality lies in having the congressional district boundaries split 22 election precincts as well as 27 local governments.” *Id.* at 218. The proposed reapportionment plan that was ultimately adopted by this Court, on the other hand, split only three precincts. *Id.*

I have no qualms about accepting a small increase in the population deviation between districts to avoid splitting 19 additional election precincts. However, here, unlike the *Mellow* Court, the majority has made no attempt to evaluate whether the Carter Plan performs superiorly with respect to splits of VTDs when compared to the 11 other plans that achieved only a one-person deviation. Rather, the majority simply claims that avoiding the split of just one additional VTD (not 19 election precincts, as was the case in *Mellow*) constitutes a legitimate state interest that justifies the two-person population deviation of the Carter Plan; satisfies the one-person, one-vote standard; and elevates the Carter Plan above all other plans that achieved population equality closer to zero. *Mellow* simply cannot bear the weight of the majority’s reliance.

Moreover, while the majority appears willing to look past the 11 other proposed plans that achieve closer-to-zero population equality in order to save one VTD in the Carter Plan, it seems unphased by the fact that, while saving this one VTD, the Carter Plan is the only proposed plan that splits the City of Williamsport (Lycoming County). Indeed, Dr. Daryl DeFord, on whom the majority relies to support its selection of the Carter Plan

(Maj. Op. at 24), criticizes the Carter Plan for this particular split: “[O]ne plan (Carter) splits the city of Williamsport, whose population of 27,754 *is nowhere near to necessitating a split.*”² Rebuttal Report of D. DeFord (for Gressman Math/Science Petitioners) at 6 (Jan. 26, 2022) (emphasis added). By selecting the Carter Plan, the majority improperly saves a VTD that purportedly had to be split to ensure as close to equal population as practicable among the districts at the expense of an entirely unnecessary split of the City of Williamsport. No legitimate state interest can be found in this tradeoff.

For the above reasons, I respectfully disagree with the majority’s reading of *Mellow* and its conclusion that the Carter Plan satisfies the one-person, one-vote standard. Article I, Section 2 of the United States Constitution protects the sanctity of one person, one vote, not one VTD. Accordingly, because I believe that the Carter Plan violates Article I, Section 2 of the United States Constitution, I must dissent from the majority’s selection of that plan.

II. Neutral Standards/Methods Over Partisan Metrics

Separately, it has been 60 years since the United States Supreme Court first waded into the “political

2. In *League of Women Voters v. Commonwealth*, 175 A.3d 282 (Pa. 2018) (*LWV I*) (mem.) (per curiam), this Court specifically noted that any congressional reapportionment plan submitted to the Pennsylvania Governor by the Pennsylvania General Assembly for consideration “shall consist of: congressional districts composed of compact and contiguous territory; as nearly equal in population as practicable; and which do not divide any county, city, incorporated town, borough, township, or ward, *except where necessary to ensure equality of population.*” *LWV I*, 175 A.3d at 290 (emphasis added).

thicket” to review and remedy malapportionment challenges. *See Baker v. Carr*, 369 U.S. 186 (1962).³ Since then, the United States Supreme Court has also waded into the thicket, rightly so, to address and remedy race-based or ethnic redistricting decisions that violate the Equal Protection Clause of the United States Constitution⁴ and/or the Voting Rights Act of 1965.⁵ *See, e.g., Abbott v. Perez*, 138 S. Ct. 2305 (2018); *Cooper v. Harris*, 137 S. Ct. 1455 (2017). Yet, the United States Supreme Court has refused to do so to address and remedy claims of excessive partisanship in the redistricting process, finding such claims nonjusticiable in the federal courts. *Rucho v. Common Cause*, 139 S. Ct. 2484 (2019).

Much ink has been spilt in this case about this Court’s decision in *League of Women Voters v. Commonwealth*, 178 A.3d 737 (Pa. 2018) (*LWV II*). In *LWV II*, this Court held that challenges to congressional redistricting plans for excessive partisanship—*i.e.*, partisan gerrymanders—are justiciable under the Free and Equal Elections Clause of the Pennsylvania Constitu-

3. Two decades before *Baker*, Justice Frankfurter, writing for a plurality, affirmed the dismissal of a malapportionment challenge to congressional districts as involving a nonjusticiable political question. *Colegrove v. Green*, 328 U.S. 549 (1946) (plurality opinion), *abrogated by Baker*, 369 U.S. 186. “To sustain this action,” Justice Frankfurter wrote, “would cut very deep into the very being of Congress. Courts ought not to enter this political thicket.” *Colegrove*, 328 U.S. at 556.

4. “No State shall . . . deny to any person within its jurisdiction the equal protection of the laws.” U.S. Const. amend. XIV, § 1.

5. 52 U.S.C. § 10101 *et seq.*

tion.⁶ *LWV II*, 178 A.3d at 801-14. In reaching this conclusion, the Court examined challenges to the Congressional Redistricting Act of 2011 (2011 Plan), Act of December 22, 2011, P.L. 598, 25 PS. §§ 3596.101-.1501,⁷ and determined that the 2011 Plan constituted an excessive partisan gerrymander in violation of the Free and Equal Elections Clause. *Id.* at 818–21.

In *LWV II*, then, this Court waded into the political thicket to review and remedy excessive partisan gerrymanders under the Pennsylvania Constitution. *Id.* at 821–24. In so doing, the Court interpreted the Free and Equal Election Clause as protecting voters from congressional districts that create an “unfair,” or unconstitutional, partisan advantage. *Id.* at 817. The Court concluded that a particular redistricting plan crosses the line from fair to unfair and, thus, is unconstitutional, when such plan subordinates neutral criteria—*i.e.*, “compactness, contiguity, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts”—“to extraneous considerations such as gerrymandering for unfair partisan political advantage.” *Id.* (emphasis added). By extension, any redistricting plan that does not cross that line is both fair and constitutional.

In short, *LWV II* is a partisan gerrymandering case. The current matter before this Court, however, is not a partisan gerrymandering case. Indeed, no one in this litigation has challenged any of the proposed plans as an

6. “Elections shall be free and equal; and no power, civil or military, shall at any time interfere to prevent the free exercise of the right of suffrage.” Pa. Const. art. 1, § 5.

7. The 2011 Plan was held unconstitutional by *LWV I*.

unconstitutional partisan gerrymander under *LWV II*. *LWV II* recognizes that the Free and Equal Elections Clause protects Pennsylvanians from excessive, unconstitutional, and thus unfair partisanship in the drawing of legislative districts. It does not, however, create any right in the people of Pennsylvania to the fairest among fair and lawful maps. The “fairest of the fair” inquiry is not a thicket; it is a quagmire. It is an entirely subjective, partisan, and quintessentially political inquiry that belongs in the political branches of our government, not in the courts.

Respectfully, the majority,⁸ in my view, grossly misreads the very narrow decision in *LWV II*, emboldening this Court to serve as the mirror on the wall and choose

8. Although Justices Dougherty and Wecht join the majority opinion, they also file concurring opinions that, while accepting the use of partisan metrics when analyzing the proposed redistricting plans in this matter, do not embrace the use of those metrics with the fulsome enthusiasm expressed in the majority opinion. Rather, Justice Dougherty recognizes “that the metrics for this criterion remain somewhat in flux when compared to the more standardized measures of the traditional core criteria.” (Concurring Op. at 4 n.1 (Dougherty, J., concurring).) He further recognizes that no partisan fairness standard has emerged in this case. As for Justice Wecht, he recognizes in his concurring opinion that “the partisan fairness metrics used to evaluate the [13] submitted maps are useful heuristics to approximate partisan outcomes under conditions that have never occurred,” but he “caution[s] against surrendering to the allure of those metrics at the front end of an analysis.” (Concurring Op. at 14 (Wecht, J., concurring).) He observes that while the numbers may be “helpful to a comprehensive examination, . . . they must not be dispositive.” (*Id.*) Instead, he would relegate them to “a gut-check at the culmination of the process, rather than as a gatekeeping function at the start.” (*Id.*)

the fairest map of them all. (Maj. Op. at 18 (“[W]e conclude that consideration of partisan fairness, when selecting a plan among several that meet the traditional core criteria, is necessary to ensure that a congressional plan is reflective of and responsive to the partisan preferences of the Commonwealth’s voters.”), 27 (noting Carter Plan “is reflective of and responsive to the partisan preferences of the Commonwealth’s voters”), 36–37 (addressing partisan fairness and partisan metrics in its support of Carter Plan).) The majority has essentially emerged from the political thicket and jumped into the partisan quagmire. The long-term harm to the congressional redistricting process is not the majority’s adoption of the Carter Plan, but the analysis that the majority uses to break a partisan impasse and choose among the 13 proposed reapportionment plans, all but a few of which satisfy the neutral redistricting criteria.

By considering numerical partisan metrics and ultimately adopting a reapportionment plan because it provides for “proportionality,” avoids “anti-majoritarian” results, and attempts to offset a “structural tilt” in the political geography of Pennsylvania that favors Republican candidates,⁹ the majority has invited, not discouraged, this Court’s future involvement in the congressional redistricting process, whether in impasse litigation, such as this one; a partisan gerrymander challenge, such

9. *See, e.g.*, Report of M. Duchin (for Governor Wolf) at 2, 6 (Jan. 24, 2022); Report of J. Rodden (for Carter Petitioners) at 25 (Jan. 24, 2022) (noting that Carter Plan is “reflective of Pennsylvania’s statewide partisan preferences”); Report of J. Rodden (for Carter Petitioners) at 11 (Jan. 26, 2022) (criticizing plans that “would likely lead to counter-majoritarian outcomes”).

as the *LWV* litigation; or a “fairness” challenge to a legislatively enacted reapportionment plan signed into law by the governor. While the “least-change” approach—a neutral tool that in its purest form only makes minor revisions to existing legislative districts to account for population changes—purportedly used to create the Carter Plan may be imperfect,¹⁰ it would have been preferable,

10. In a recent decision, the Wisconsin Supreme Court adopted the least-change approach as a neutral method to remedy the failure of Wisconsin’s legislative and executive branches to enact a congressional redistricting plan. See *Johnson v. Wis. Elections Comm’n*, 967 N.W.2d 469, 488–92 (Wis. 2021). In so doing, the court recognized that “[t]he existing maps were adopted by the legislature, signed by the governor, and survived judicial review by the federal courts” and that “[t]reading further than necessary to remedy their current legal deficiencies . . . would intrude upon the constitutional prerogatives of the political branches and unsettle the constitutional allocation of power.” *Id.* at 488. Thus, the court believed that the application of the least-change approach was a method by which it could remedy the malapportionment of Wisconsin’s districts, following the 2020 Census, without “endors[ing] the policy choices of the political branches” of Wisconsin’s government. *Id.* at 492. The circumstances presented in this matter, however, are different. Here, the Carter Plan applies the least-change approach to an 18-district congressional plan created by this Court (2018 Plan), not a plan enacted through the legislative process set forth in the Pennsylvania Constitution. Moreover, as a result of the 2020 Census, a congressional district must be eliminated. Thus, in order to apply the least-change approach to the 2018 Plan to arrive at the Carter Plan, the Carter Petitioners’ expert, Dr. Jonathan Rodden, did more than simply redraw certain district boundaries to achieve population equality; he eliminated completely, and necessarily, one congressional district. As a result, for many Pennsylvanians, particularly those along the Route 15 and Interstate 80 corridors, the least-change approach yields a big change in terms of who will represent them in Washington, D.C.

in my view, for the majority to have full-throatedly adopted it instead of using unquestionably partisan constructs to justify its selection of the Carter Plan. In my judgment, where the judiciary is forced to adopt a legislative reapportionment plan, the court should hew closely to nonpartisan standards (*e.g.*, compactness, contiguity, minimizing splits, etc.) or nonpartisan methods (*e.g.*, the “least-change” approach), eschewing partisan considerations or partisan approaches.

[J-20-2022] [MO: BAER, C.J.]
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112a

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DISSENTING OPINION

**OPINION FILED: March
9, 2022**

**DECIDED: February 23,
2022**

JUSTICE MUNDY

When the political branches approve a redistricting plan, the map will ordinarily have gone through a public-comment stage, been sent to committee for amendment, garnered majority support from both Houses of the General Assembly, and been approved by the Governor. It will subsume a myriad of political choices and tradeoffs which have been weighed, debated, and voted on by the public's elected representatives. These considerations may include how closely the districts should match those of the previous plan, which non-retiring incumbents should be paired against each other in the upcoming election cycle, which counties and other political subdivisions should or should not be divided, which adjacent counties and townships should be grouped together, and which communities of interest should be kept intact within a single district.

Items such as these are generally viewed as valid districting factors so long as they do not subordinate the traditional, neutral criteria appearing in the state and federal charters. See *League of Women Voters v. Commonwealth*, 178 A.3d 737, 817 (Pa. 2018) (“LWV-II”) (citing *Holt v. 2011 Legis. Reapportionment Comm’n*, 67 A.3d 1211, 1235 (Pa. 2012)). As long as the plan that results from the political process does not “clearly, plainly, and palpably” violate the constitution, *League of Women Voters v. Commonwealth*, 175 A.3d 282, 289 (Pa. 2018) (per curiam) (“LWV-I”), it will survive a court challenge.

The present controversy is different. This is an impasse case in which the political branches have failed to agree on a plan, and we have little choice but to wade into the “political thicket” of redistricting. *Evenwell v. Abbott*, 578 U.S. 54, 58 (2016) (internal quotation marks and citation omitted). Not only that, we are placed in an unfamiliar role: we must make a selection rather than issue an adjudication. Stated differently, we are not merely required to judge the legality of a plan, we are put to the task of choosing the best among a number of competing plans that have been submitted for our consideration by a variety of parties and amici. To the extent an adjudication is reached in this matter, it is minimal and undisputed: the current map cannot be used because of population shifts in the last ten years and, most notably, because Pennsylvania now has only 17 representatives in Congress.

In undertaking our selection task, it is vital that this Court act in a politically neutral manner—and maintain the appearance of neutrality—to the greatest extent possible in order that the public may have confidence our decision is reached via compliance with neutral legal

principles alone. In this respect, the Supreme Court has characterized the need for objectively demonstrable standards in judging redistricting plans as being

necessary to enable the state legislatures to discern the limits of their districting discretion, to meaningfully constrain the discretion of the courts, and to win public acceptance for the courts' intrusion into a process that is the very foundation of democratic decisionmaking.

Rucho v. Common Cause, ___ U.S. ___, ___, 139 S. Ct. 2484, 2499–2500 (2019) (quoting *Vieth v. Jubelirer*, 541 U.S. 267, 291 (2004) (plurality)). It is my position, then, that our mission should be carried out solely in reference to the politically neutral criteria appearing in the text of the state charter, namely: contiguity, compactness, population equality, and respect for political boundaries. See PA. CONST. art. II, §16 (requiring districts which are “composed of compact and contiguous territory as nearly equal in population as practicable,” and specifying further that, “[u]nless absolutely necessary no county, city, incorporated town, borough, township or ward shall be divided in forming” such districts).¹

Limiting our consideration to these express constitutional criteria has multiple benefits. In addition to maintaining the appearance of neutrality, it helps avoid any subtle, unconscious influence that political considerations

1. Article II, Section 16 only facially applies to state legislative districts. In the *LWV-II*, however, a majority of this Court held that it applies, as well, to Pennsylvania's congressional districts through Article I, Section 5, the Free and Equal Elections Clause. See *LWV-II*, 178 A.3d at 816.

might otherwise bring to bear upon our decision-making. Relatedly, the map we select will be known by all involved to be that which is most compliant with the Constitution's commands as judged by an objective, neutral standard open to public view.² Such an approach also appears likely to reduce any incentive the political branches might otherwise have to view an impasse as desirable in its own right—in the sense that they would rather “take their chances” with this Court than seek political compromise—and thereby, to reduce the incentive for those branches to act strategically. And while I do not discount the theoretical possibility that gerrymandering might occur within the confines of an effort to comply scrupulously with the state charter's neutral directives, it seems evident that the closer a map adheres to those directives, the less likely it will be that district bounda-

2. In this regard, I agree with many of the sentiments expressed by Justice Brobson to the effect that it is the Article II, Section 16 criteria, and not some concept of partisan fairness, that should control any redistricting exercise; whereas, the experts' fairness metrics may be used in proving that a challenged map embodies illegal gerrymandering. *See* Dissenting Op. at 8–9 (Brobson, J.). In my view, the neutral criteria appearing in the Constitution's text are insufficiently ambiguous to support the consideration of policy goals that are claimed to have motivated their adoption. As Judge McCullough suggested, moreover, the use of such policy goals as quality metrics in a map-selection endeavor can lead to reverse gerrymandering aimed at altering the partisan performance which arises naturally from the political geography of this state, which in turn stems from the decisions of many individual voters concerning where they wish to live. *See* Special Master Report at 197. Most importantly, the partisan-fairness metrics are not well suited to an objective scoring methodology because political judgments must be made about how to rank the maps in relation to such metrics.

ries have been manipulated to give any political or partisan group an artificial advantage. As this Court recently explained in *LWV-II*:

Because the character of these [constitutional] factors is fundamentally impartial in nature, their utilization reduces the likelihood of the creation of congressional districts which confer on any voter an unequal advantage by giving his or her vote greater weight in the selection of a congressional representative as prohibited by Article I, Section 5. Thus, use of these objective factors substantially reduces the risk that a voter in a particular congressional district will unfairly suffer the dilution of the power of his or her vote.

LWV-II, 178 A.3d at 816; *see also id.* (noting these standards also comport with the United States Constitution's requirements for congressional districts).

All of this leads to the question of how to determine which of the proffered maps best complies with the Constitution's neutral factors after eliminating any maps that fail to meet the constitutional floor. *See generally LWV-II*, 178 A.3d at 817 ("These neutral criteria provide a 'floor' of protection for an individual against the dilution of his or her vote in the creation of such districts.")³

3. A map might fail to meet the floor by, for example, containing districts which are not contiguous, or by having an unjustified population variance between districts. Such maps should be eliminated from consideration.

A given map must also comply with federal statutory law such as the Voting Rights Act or it, too, will not be considered.
(continued...)

To answer this question, two observations may be made. First, the maps can be analogized to candidates in an election where each criterion by which they are judged is the equivalent of an individual voter taking part in a ranked-choice voting exercise:

When a court or agency purports to select one of many possible outcomes by ranking the outcomes under a set of criteria, the situation parallels the democratic process. In place of the preferences of individual citizens, rankings under criteria determine judicial or administrative choices.

Matthew L. Spitzer, *Multicriteria Choice Processes: An Application of Public Choice Theory to Bakke, the FCC, and the Courts*, 88 YALE L.J. 717, 717–18 (1979). This type of decisional process—having multiple voters rank the contenders in an effort to select the best one—has been applied in such diverse contexts as selecting the most valuable player in sports, *see* Saul Levmore, *More than Mere Majorities*, 2000 UTAH L. REV. 759, 763, choosing an Academy Award winning film, *see* National Conference of State Legislatures, *Ranked-Choice Voting*, Vol. 25, No. 24 (2017), *available at* <https://www.ncsl.org/research/elections-and-campaigns/ranked-choice-voting.aspx> (last viewed Feb. 23, 2022), nominating political candidates, *see* *Maine Senate v. Sec’y of State*, 183 A.3d 749, 751–52 (Me. 2018), and electing political leaders, *see id.*

Here, however, there has been no suggestion that any of the proposed maps violates federal statutory law.

The second observation is that ranked-choice voting can be accomplished through pairwise comparisons of the candidates, in this case, the candidate maps. As long as this Court has adequate data concerning how well the maps score for a given quality metric at the most granular level (for example, the Polsby-Popper compactness metric), any two maps can be compared to see which one is better, or if they are tied. These pairwise comparisons can then be used to rank and score the maps for each quality metric using the “Borda count” system.⁴ Under this system, for each quality metric, each map receives one point for every other map it is superior to, plus one-half point for every other map it ties with.⁵ In this way,

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4. The Borda count method is named after Jean-Charles de Borda, an eighteenth-century French mathematician. *See* Edward B. Foley, *Tournament Elections with Round-Robin Primaries: A Sports Analogy for Electoral Reform*, 2021 WIS. L. REV. 1187, 1200 n.39 (indicating Borda count is viewed as the best method to rank three or more candidates).
 5. *See* Bernard Grofman, *Public Choice, Civil Republicanism, and American Politics: Perspectives of a “Reasonable Choice” Modeler*, 71 TEX. L. REV. 1541, 1565 n.110 (1993); Jean-Pierre Benoit & Lewis A. Kornhauser, *Assembly-Based Preferences, Candidate-Based Procedures, and the Voting Rights Act*, 68 S. CAL. L. REV. 1503, 1522 & n.44 (1995).

With human voters, Borda count can be subject to distortion based on insincere (strategic) voting, *see* Cheryl D. Block, *Truth and Probability—Ironies in the Evolution of Social Choice Theory*, 76 WASH. U.L.Q. 975, 987–88 (1998) (providing an example of insincere ranked-choice voting and its underlying motivation), and it has been shown to sometimes miss a majority winner, *see* Saul Levmore, *Voting Paradoxes and Interest Groups*, 28 J. LEGAL STUD. 259, 266 n.9 (1999). These problems are absent here, as objective pairwise comparisons cannot be in-
(continued...)

the pairwise comparisons yield a “raw” Borda count score for each map, for each quality metric at the most detailed level.

The method is simple and transparent. It is also flexible enough to accommodate virtually any type of quality metric, including continuous metrics such as a map’s score on a particular measure of compactness; integer-based metrics such as the number of county splits or county pieces reflected in a given map; binary metrics such as whether a map splits Pittsburgh (if this were indeed to be considered a valid quality metric); or criteria with a few discrete points, such as how many non-retiring incumbents are paired and whether they are from the same or opposite parties.⁶ These examples are given by way of illustration, but, as explained, I will only be using the neutral constitutional criteria for the present discussion—albeit in the Appendix, I also fold in the maps’ handling of Pittsburgh which, for reasons delineated below, is *sui generis*.

sincere, and our goal is not to pick the map that comes in first in most of the quality metrics, but to pick the best map overall.

6. For example, the maps before the Court reflect the following non-retiring incumbent pairings: one (R-D), one (R-R), two (R-D and R-D), two (R-R and R-D), two (D-D and RD), and none.

These can be ranked in order from best to worst as follows. Best: none; second-best: one (R-D); third-best: two (R-D and R-D); fourth-best: one (R-R); worst: two (R-R and R-D) or two (D-D and R-D).

Returning to the handling of Pittsburgh: the method can accommodate a three-point quality measure where keeping Pittsburgh whole is best, keeping it whole via a “claw” shape which grabs it, as in the House Democratic Caucus’s proposed map, is second-best, and splitting it is worst. The attached Appendix illustrates this scenario.

I use the term “raw scores” because the Borda count methodology must be modified slightly to be of use here. A map’s overall raw score is not ultimately what matters, but its overall weighted score, as explained *infra*.⁷ As for terminology, I will refer to high-level measures such as compactness and respect for political subdivision boundaries as the neutral constitutional *criteria*, and the different ways of measuring those criteria as *individual quality metrics*. This distinction is needed because there are multiple ways to measure compliance with each criterion. For example, there are several individual quality metrics associated with compactness, each capturing a different aspect of mathematical compactness, and some accounting for such features as jagged state borders or peninsulas which necessarily make districts less compact. *See* N.T., Jan. 27, 2022, at 214 (reflecting expert testimony stressing the importance of considering multiple compactness metrics); *Holt*, 67 A.3d at 1242 (recognizing “an apparent variety” of compactness models). Likewise, there are various different quality metrics relating to

7. The weighting of criteria has been used in a variety of multi-criteria decision making (“MCDM”) tasks involving selection. *See Thiel v. W. Mifflin Borough*, 2007 WL 1087773, at *3 (W.D. Pa. Apr. 9, 2007) (hiring and promotion); *Transactive Corp. v. N.Y. State Dep’t of Soc. Servs.*, 665 N.Y.S.2d 701, 704 (N.Y. App. Div. 1997) (public procurement); *Pickus v. U.S. Bd. of Parole*, 507 F.2d 1107 (D.C. Cir. 1974) (parole selection); *Doe v. Alternative Med. Md., LLC*, 168 A.3d 21 (Md. 2017) (licensure selection); *Lohn v. Morgan Stanley DW, Inc.*, 652 F. Supp. 2d 812 (S. D. Tex. 2009) (assignment of client accounts to financial advisors); *Universal Grading Svc. v. eBay, Inc.*, 2009 WL 2029796 (E.D.N.Y. June 10, 2009) (assessment of rare-coin grading services).

subdivision splits, such as county splits, ward splits, county pieces, and so on.

Thus, for example, if compactness and respect for political boundaries are considered equally important and each is given a total weight of 10, there may be X ways to measure the former and Y ways to measure the latter. It follows that each compactness-related individual quality metric should have a weight of $10/X$, and each boundary-related individual quality metric should have a weight of $10/Y$. A map's score for a given individual quality metric, then, is its Borda count raw score multiplied by the weight of that quality metric.⁸

Consistent with my remarks at the beginning of this opinion, I would hold that this Court should rank and score all proposed maps according to each of the individual quality metrics and select the map with the highest to-

8. This type of weighting might also be useful in situations where secondary factors such as preserving communities of interest are included in the analysis. This is because not all such metrics are equally important, nor are they as important as the constitutional criteria. *See* Majority Op. at 15 (noting such factors are “wholly subordinate to the traditional core criteria”). Assigning different weights can reflect those realities. Similarly, weighting can be useful if this Court ultimately reads the “unless absolutely necessary” language in Article II, Section 16 as signifying that the Constitution places a higher value on avoiding subdivision splits than on compactness. *See generally Holt*, 67 A.3d at 1242 (indicating that achieving population equality and avoiding subdivision splits may “necessitate[] a certain degree of unavoidable non-compactness in any reapportionment scheme.” (internal quotation marks and citation omitted)). For example, a total weight of 10 could be assigned to compactness, 7 or 8 to avoiding subdivision splits, and 3, 4, or 5 to the subordinate historical considerations.

tal weighted score. The process entails five steps: (1) eliminate any map which fails to meet the constitutional “floor” or which violates federal law; then as to each of the remaining maps: (2) compute raw scores for each map for each individual quality metric using pairwise comparisons and Borda count; (3) compute weighted scores for each map for each individual quality metric by multiplying the raw scores by the weight for that individual quality metric; (4) compute the total weighted score for each map by summing all weighted scores for that map; and (5) select the map with the highest overall weighted score.

The maps presented to us, and the data contained in the expert reports concerning those maps, reveal that all meet the contiguity and population-equality criteria, which are essentially binary in nature.⁹ As noted, moreover, none

9. Pursuant to the 2020 census, Pennsylvania’s population was 13,002,700, resulting in 17 districts with an average population of 764,864.7 per district. *See* Special Master Report at 3 n.6. Because the population is not a multiple of 17, there must be a population deviation, that is, the population of the most-populous district minus the population of the least-populous district must be at least one person.

I am aware that some of the maps have a population deviation of two persons. However, I do not consider the difference between a one-person and a two-person deviation to be legally significant, particularly as the census numbers are only approximate due to imperfections in data gathering combined with subsequent births, deaths, and relocations. Put differently, discounting two-person-deviation maps as compared to one-person-deviation maps would, in my view, be an exercise in false precision. Whether or not the Constitution allows for a *de minimis* population deviation, I would find a deviation of two persons to be *sub-de minimis*. For purposes of this case, then, I consider all maps with a one- or two-person deviation as satisfying the constitutional equal-population criterion.

are alleged to violate federal law. *See supra* note 3. This leaves only the compactness and adherence-to-political-boundaries criteria on which to form a judgment concerning which is the best of the maps under review.

Twelve maps have been submitted for this Court's consideration: the Carter Petitioners' map ("CARTER"), the Gressman Petitioners' map ("GRESSMAN"), Governor Wolf's map ("GOV"), the map approved by the General Assembly ("HB-2146"), the first map by the Senate Democratic Caucus ("SEN-DEM-1"), the second map by the Senate Democratic Caucus ("SEN-DEM-2"), the House Democratic Caucus's map ("HOUSEDEM"), the first map by the Reschenthaler group ("RESCH-1"), the second map by the Reschenthaler group ("RESCH-2"), the map submitted by the "Voters of the Commonwealth of Pennsylvania" group ("VOTERS-PA"), the map submitted by the "Draw the Lines" citizens' group ("DRAW-LINES"), and the map submitted by the "Citizen Voters" group ("CITIZEN-VOTERS").¹⁰

These twelve maps have been given a compactness score for each of six different mathematical compactness measurements: Polsby-Popper, Schwartzberg, Reock,

10. A thirteenth map was submitted by the Khalif Ali amici. It has been excluded because, unlike all of the other maps, its boundaries were drawn based on data which attempted to assign prisoners to their last known home address without first establishing a legal basis for doing so. When assessed according to the data used by all the other maps, its population deviation was too high to meet the constitutional requirement of equi-populous districts. In any event, the record suggests it would not be the highest-scoring map in terms of compactness and subdivision splits even if accepted on its own terms.

Convex Hull, Population-Polygon, and Cut Edges.¹¹ Each map, in fact, has 17 scores for these metrics because each has 17 districts for which a compactness measure can be calculated. Helpfully, for each map the record contains average scores for each of these quality metrics—that is, an average score which comprises the mean value for the 17 districts contained on a particular map. It is these averages that are used in the pairwise comparisons between maps. Per the above discussion, each of the compactness metrics is assigned a weight of 1.67 (10 divided by 6, rounded to the nearest hundredth).

The averages for the twelve maps on four of the six compactness metrics were given by Dr. Daryl DeFord, *see* Majority Op. at 24, the expert who testified on behalf of the Gressman Petitioners. The only two compactness metrics missing from Dr. DeFord’s data are the Schwartzberg and Population-Polygon measures. Fortunately, however, those are reflected in a table supplied by Dr. Moon Duchin, Governor Wolf’s expert, which was endorsed by the Special Master. *See* Special Master Report at 141-43.¹² All six of these compactness measures are shown below in the row containing the map name.

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11. As explained, each such metric captures a different aspect of geometrical compactness, and each has its strengths and weaknesses. Further elucidation of this topic from a mathematical point of view is beyond the scope of this dissenting opinion. I only note at this juncture that, for each metric except “Cut Edges,” a number closer to 1.0 is better. With the Cut Edges metric, a lower number is better.
 12. In Dr. Duchin’s report and table of map statistics, *see* Special Master Report at 141, the DRAW-LINES map is referred to as the “CitizensPlan.” *See* N.T., Jan. 27, 2022. This should not be confused with the CITIZEN-VOTERS map.

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From these averages, raw Borda count scores are obtained using pairwise comparisons; as previously noted, a map's raw score includes one point for each pairwise win, plus a half-point for each pairwise tie, and so a higher raw score indicates better performance on that metric. The raw scores are then multiplied by the weight for that metric to arrive at the weighted score for each map for each metric:

MAP	Polsby- Popper	Schwartzberg	Reock	Convex Hull	Population Polygon	Cut Edges
<i>Weight</i>	1.67	1.67	1.67	1.67	1.67	1.67
CARTER	.31	1.8103	.41	.78	.7416	5896
Borda raw score	2.5	3	6.5	2.5	1	2
Weighted score	4.175	5.01	10.855	4.175	1.67	3.34
GRESSMAN	.33	1.7351	.40	.80	.7582	5546
Borda raw score	5	5	4.5	8.5	5	4
Weighted score	8.35	8.35	7.515	14.195	8.35	6.68
GOV	.37	1.6534	.40	.81	.7834	5154
Borda raw score	9.5	10	4.5	10.5	11	8
Weighted score	15.865	16.7	7.515	17.535	18.37	13.36
HB-2146	.31	1.8197	.38	.78	.7524	5882
Borda raw score	2.5	1	1.5	2.5	3	3
Weighted score	4.175	1.67	2.505	4.175	5.01	5.01
SEN-DEM-1	.30	1.8144	.37	.77	.7519	6016
Borda raw score	1	2	0	1	2	1
Weighted score	1.67	3.34	0	1.67	3.34	1.67
SEN-DEM-2	.32	1.7478	.38	.79	.7601	5476
Borda raw score	4	4	1.5	5.5	6	5
Weighted score	6.68	6.68	2.505	9.185	10.02	8.35
HOUSE-DEM	.27	1.9693	.39	.75	.7205	6821
Borda raw score	0	0	3	0	0	0
Weighted score	0	0	5.01	0	0	0
RESCH-1	.35	1.6859	.43	.81	.7737	5061

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Borda raw score	8	8	9	10.5	10	11
Weighted score	13.36	13.36	15.03	17.535	16.7	18.37
RESCH-2	.34	1.7127	.41	.80	.7658	5208
Borda raw score	6.5	7	6.5	8.5	7	6
Weighted score	10.855	11.69	10.855	14.195	11.69	10.02
VOTERS-PA	.38	1.6069	.44	.79	.7681	5120
Borda raw score	11	11	10.5	5.5	8	10
Weighted score	18.37	18.37	17.535	9.185	13.36	16.7
DRAW-LINES	.37	1.6625	.44	.79	.7725	5202
Borda raw score	9.5	9	10.5	5.5	9	7
Weighted score	15.865	15.03	17.535	9.185	15.03	11.69
CITIZEN-VOTERS	.34	1.7133	.42	.79	.7575	5144
Borda raw score	6.5	6	8	5.5	4	9
Weighted score	10.855	10.02	13.36	9.185	6.68	15.03

In addition to the compactness metrics, there are five quality metrics relating to how well a map keeps political subdivisions intact: counties split, county pieces, municipalities split, municipality pieces, and wards split. Including a score for “ward pieces” would amount to double-counting, as Dr. DeFord’s data reflect that no ward is split more than once. The combined weight of these individual metrics will be set to approximately 10, in accordance with the decision mentioned above to give equal weight to compactness and respect for subdivision boundaries. Still, it is something of a judgment call whether to consider these five quality metrics equally important and assign each a weight of 2.0. In my view, doing so would diminish the importance of ward splits without constitutional warrant, as all types of subdivisions are listed in Article II, Section 16 on equal terms. *See* PA. CONST. art. II, § 16 (“Unless absolutely necessary no county, city, incorporated town, borough, township or ward shall be divided[.]”).

Separately, giving county splits and county pieces each a weight of 2.0 would involve double-counting as the number of county pieces will depend, to a large extent, on the number of split counties (and similarly for split

municipalities and municipality pieces). To ameliorate these concerns, I am assigning a weight of 2.00 for county splits, 1.34 for county pieces, 2.00 for municipality splits, 1.34 for municipality pieces, and 3.34 for ward splits.¹³ The total weight is 10.02, the same as the total weight for the compactness measures (6 x 1.67).¹⁴ The scores are set forth below in a manner similar to that for compactness:

13. The county and municipal pieces metrics include all pieces, not merely “extra” pieces. I note this because the data supplied by Dr. DeFord only includes the number for extra pieces. For example, if a map splits, say, 20 municipalities into two pieces each, Dr. DeFord’s data shows 20 split counties and 20 split pieces rather than 20 split counties and 40 split pieces. The Borda counts will not change, however, as the ranking of maps according to the “pieces” metrics is the same regardless of whether all pieces, or only “extra” pieces, are counted.

As a separate matter, for consistency with the majority opinion, per Dr. DeFord’s data the splits and pieces shown in the table include boroughs split by county lines. *See* Majority Op. at 32.

14. A reasonable argument could be made that these items should be weighted differently. One possibility would be to consider each type of municipality—cities, incorporated towns, boroughs, and townships—on equal terms. But this could be distortive as there are different numbers of the different types of municipalities. For example, Pennsylvania has only one incorporated town (Bloomsburg). In the end, since counties are the basic subunits of governance, and because splitting wards can be especially problematic, I am assigning a weight of 3.34 to counties, 3.34 to wards, and 3.34 to all other municipalities combined.

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MAP	Counties split	County pieces	Municipali- ties split	Municipality pieces	Wards split
<i>Weight</i>	2.00	1.34	2.00	1.34	3.34
CARTER	14	31	23	44	21
Borda raw score	8	7	2.5	1	5
Weighted score	16	9.38	5	1.34	16.7
GRESSMAN	15	32	19	36	15
Borda raw score	5	5	10.5	10.5	10
Weighted score	10	6.7	21	14.07	33.4
GOV	16	35	22	41	25
Borda raw score	2	1	4.5	4	1.5
Weighted score	4	1.34	9	5.36	5.01
HB-2146	15	33	21	39	18
Borda raw score	5	4	6.5	5.5	7
Weighted score	10	5.36	13	7.37	23.28
SEN-DEM-1	17	36	25	45	17
Borda raw score	0	0	0	0	8
Weighted score	0	0	0	0	26.72
SEN-DEM-2	16	34	21	38	14
Borda raw score	2	2.5	6.5	7	11
Weighted score	4	3.35	13	9.38	36.74
HOUSE-DEM	16	34	24	43	21
Borda raw score	2	2.5	1	2	5
Weighted score	4	3.35	2	2.68	16.7
RESCH-1	13	29	20	37	25
Borda raw score	10.5	10.5	8.5	8.5	1.5
Weighted score	21	11.39	17	11.39	5.01
RESCH-2	13	29	20	37	24
Borda raw score	10.5	10.5	8.5	8.5	3
Weighted score	21	11.39	17	11.39	10.02
VOTERS-PA	15	31	23	42	41
Borda raw score	5	7	2.5	3	0
Weighted score	10	9.38	5	4.02	0
DRAW-LINES	14	30	22	39	16
Borda raw score	8	9	4.5	5.5	9
Weighted score	16	10.72	9	7.37	30.06
CITIZEN-VOTERS	14	31	19	36	21
Borda raw score	8	7	10.5	10.5	5
Weighted score	16	9.38	21	14.07	16.7

The final two steps are to compute the total weighted score for each map and select the one with the highest total. Doing so yields the following scores, from highest

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to lowest.¹⁵ As can be seen, RESCH-1 is the top-scoring map, followed by DRAW-LINES:

MAP	Place	Total weighted score
RESCH-1	1	162.83
DRAW-LINES	2	158.83
RESCH-2	3	142.79
CITIZEN-VOTERS	4	142.28
GRESSMAN	5	138.61
VOTERS-PA	6	121.92
GOV	7	114.06
SEN-DEM-2	8	109.89
HB-2146	9	81.66
CARTER	10	77.65
SEN-DEM-1	11	38.41
HOUSE-DEM	12	33.74

I note that I used Dr. DeFord’s data to align my scoring with the data used by the majority (supplemented where necessary). To guard against possible distortion from the use of only one data set, I also scored the maps based on Dr. Duchin’s table on page 141 of the Special Master’s Report. While there were slight variations in placement as among all twelve maps, the top two scoring maps remained the same:

15. For the scoring in this opinion and the Appendix attached hereto, I have used a spreadsheet to facilitate the calculations. The weights, raw data, and raw Borda scores were entered manually. All other computations were performed by the spreadsheet program. All total weighted scores are rounded to two decimal places.

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MAP	Place	Total weighted score
DRAW-LINES	1	166.51
RESCH-1	2	155.98
RESCH-2	3	138.45
CITIZEN-VOTERS	4	134.60
VOTERS-PA	5	131.27
GRESSMAN	6	129.26
SEN-DEM-2	7	116.57
GOV	8	113.89
HB-2146	9	83.15
CARTER	10	68.80
HOUSE-DEM	11	42.42
SEN-DEM-1	12	41.75

Thus, with Dr. Duchin’s data the DRAW-LINES map was the top scorer, with RESCH-1 as the runner-up. As between those two maps, however, only RESCH-1 keeps Pittsburgh whole, whereas DRAW-LINES splits it in two.¹⁶ If this factor were to be given weight as recom-

16. With a population of approximately 302,000, Pittsburgh is the second-largest city in Pennsylvania, and it is the largest city that does not need to be split to maintain population equality among congressional districts. The third-largest city, Allentown, has a far-lower population — around 125,000 as of the 2020 census. *See* <https://www.census.gov/quickfacts/allentowncitypennsylvania> (last viewed Mar. 4, 2022). Therefore, and because of the distinctly local emphasis of Pittsburgh’s political culture as described by the Special Master, there appears to be particular importance attached to the precept that Pittsburgh should not be split. The Appendix to this opinion reflects the weighted quality scores of the maps if the handling of Pittsburgh were to be subsumed as a quality metric. In that scoring, the RESCH-1 map scores highest.

mended by the Special Master, *see* Special Master Report at 150–51 (discussing evidence suggesting Pittsburgh should be kept within a single district); *see also id.* at 149 (finding that splitting Pittsburgh allows a map to achieve a higher compactness score), I would conclude that the RESCH-1 map should be chosen regardless of which data set is used.

In all events, the CARTER map does not come close to rising to the top of the pack. It seems notable, moreover, that, when compared with the other maps, the majority does not purport to find that the CARTER map scores particularly well on the neutral constitutional criteria on which the maps primarily compete, namely, compactness and respect for county and municipal boundaries. *See* Majority Op. at 28 n.23 (reflecting that the CARTER map is only a mid-level scorer in terms the compactness quality metrics listed); *id.* at 33 n.26 (same with regard to the split-municipalities quality metrics).

Whichever data set was used, the CARTER map placed tenth out of twelve—thus, in the bottom quartile. As the majority chooses that map for Pennsylvania, I respectfully dissent.

APPENDIX

As suggested in the attached dissenting opinion, the Borda-count scoring system is versatile enough to subsume virtually any quality metric. All that is needed is the ability to perform pairwise comparisons in reference to that metric. The handling of Pittsburgh can be used to illustrate this concept. Per the Special Master's report, it can be deemed best to keep Pittsburgh within a single district. At the same time, keeping that city whole via a normal-looking district can be viewed as superior to keeping it whole by grabbing it with what the Special Master termed a "Freddy Krueger-like claw," which gives the appearance of gerrymandering. Special Master Report at 152, 203. Thus, one can construct three quality levels in the following descending order of desirability: "whole," "claw," and "split." In that event, the seven maps that keep Pittsburgh whole would receive a raw score of 8 because each is superior to five other maps and tied with six ($5 + (0.5 \times 6) = 8$); the "claw" map would receive a raw score of 4 by being superior to the four maps that split Pittsburgh; and those last four maps (the ones that split Pittsburgh) would receive a raw score of 1.5 because each is tied with three other maps. Giving the handling of Pittsburgh quality metric a weight of 4 (less than half as weighty as either of the neutral constitutional criteria which each received a weight of 10.02), the maps' handling of Pittsburgh can be folded into the scoring system with the following raw and weighted scores:

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MAP	Handling of Pittsburgh
<i>Weight</i>	4.00
CARTER	Whole
Borda raw score	8
Weighted score	32
GRESSMAN	Whole
Borda raw score	8
Weighted score	32
GOV	Split
Borda raw score	1.5
Weighted score	6
HB-2146	Whole
Borda raw score	8
Weighted score	32
SEN-DEM-1	Split
Borda raw score	1.5
Weighted score	6
SEN-DEM-2	Split
Borda raw score	1.5
Weighted score	6
HOUSE-DEM	Claw
Borda raw score	4
Weighted score	16
RESCH-1	Whole
Borda raw score	8
Weighted score	32
RESCH-2	Whole
Borda raw score	8
Weighted score	32
VOTERS-PA	Whole
Borda raw score	8
Weighted score	32
DRAW-LINES	Split
Borda raw score	1.5
Weighted score	6
CITIZEN-VOTERS	Whole
Borda raw score	8
Weighted score	32

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When these weighted scores are added to the previous totals, the following ranking emerges:

MAP	Place	Total weighted score
RESCH-1	1	194.83
RESCH-2	2	174.79
CITIZEN-VOTERS	3	174.28
GRESSMAN	4	170.61
DRAW-LINES	5	164.83
VOTERS-PA	6	153.92
GOV	7	120.06
SEN-DEM-2	8	115.89
HB-2146	9	113.66
CARTER	10	109.65
HOUSE-DEM	11	49.74
SEN-DEM-1	12	44.41

A similar ranking is generated when only the Dr. Duchin data are used:

MAP	Place	Total weighted score
RESCH-1	1	187.98
DRAW-LINES	2	172.51
RESCH-2	3	170.45
CITIZEN-VOTERS	4	166.60
VOTERS-PA	5	163.27
GRESSMAN	6	161.26
SEN-DEM-2	7	122.57
GOV	8	119.89
HB-2146	9	115.15
CARTER	10	100.80
HOUSE-DEM	11	58.42
SEN-DEM-1	12	47.75

The above tables show that, when the handling of Pittsburgh is taken into account, the RESCH-1 map scores highest, followed by either the RESCH-2 map (using the Dr. DeFord data supplemented by the Dr.

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Duchin data) or the DRAW-LINES map (using only the Dr. Duchin data). Moreover, the CARTER map is consistently in the bottom three even though it keeps Pittsburgh whole.

[J-20-2022] [MO: BAER, C.J.]
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REBECCA POYOUROW, :
WILLIAM TUNG, : ARGUED: February 18,
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WACHMAN, MICHAEL :
GUTTMAN, MAYA :
FONKEU, BRADY HILL, :
MARY ELLEN :
BALCHUNIS, TOM :
DEWALL, STEPHANIE :
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P. MARSH; JAMES L. :
ROSENBERGER; AMY :
MYERS; EUGENE :
BOMAN; GARY GORDON; :
LIZ MCMAHON; :
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 :
 Respondents :

DISSENTING OPINION

**OPINION FILED: March
9, 2022**

**DECIDED: February 23,
2022**

JUSTICE TODD

I dissent to the majority’s selection of the Carter Plan as the congressional redistricting plan.

Initially, I observe that our Court was compelled to act in this matter because the General Assembly and the Governor failed to agree on a congressional redistricting plan in the aftermath of the 2020 Census, and a swift and final resolution of the legal and factual disputes surrounding the plan adopted by the Special Master was necessitated by the election timetable for the looming May 17, 2022 Primary Election. As emphasized by the majority, this is not a task our Court sought, and, as a general matter, is one which our Court views as “unwelcome.” See Majority Opinion at 2 (quoting *League of Women Voters v. Commonwealth*, 178 A.3d 737, 823 (Pa. 2018) (“*LWV II*”). Nevertheless, whenever the legislative and executive branches are at an impasse and unable

to enact a redistricting plan into law, it falls to the judiciary as a coequal branch of our tripartite system of constitutional governance to determine an appropriate redistricting plan, and, when called upon, we will faithfully fulfill that solemn duty. *LWV II*, 178 A.3d at 822.

In exercising that duty, I respectfully reject the majority's selection of the Carter Plan. Rather, based on my analysis of the neutral constitutional criteria we set forth in *LWV II*, I would select the plan developed by the "Gressman Math/Science" Petitioners the "Gressman Plan"—as I consider it to most closely adhere to those neutral standards.¹

I begin with some notable areas in which my views align with the majority. Like the majority, I disapprove of the rationale the Special Master used to justify adopting her chosen plan—H.B. 2146—and I recognize that an examination of how well a congressional redistricting plan comports with the four neutral criteria our Court articulated in *LWV II*² is of paramount importance in any assessment of whether that plan provides each voter what is guaranteed them by the Free and Equal Clause of the Pennsylvania Constitution³—namely, that their

-
1. As the majority recognizes, and as I discuss below, any plan we pick must also satisfy the requirements of the federal Voting Rights Act, 52 U.S.C. § 10301. *LWV II*, 178 A.3d at 817 n.72.
 2. Congressional districts created under a redistricting plan must: (1) be compact; (2) be contiguous; (3) be as nearly equal in population as practicable; and (4) not divide any county, city, incorporated town, borough, township, or ward, except where necessary to ensure equality of population. *LWV II*, 178 A.3d at 816–17.
 3. Pa. Const. art. I, § 5 (guaranteeing that all “[e]lections shall be free and equal.”).

vote is given full effect and not impermissibly diluted. *LWV II*, 178 A.3d at 816.

I likewise agree that the Special Master improperly accorded H.B. 2146 undue deference as “presumptively reasonable and legitimate” because, even though it was only a bill that never acquired the force of law (as it was vetoed by the Governor), in her view, it best represented the will of the voters among the competing plans. Report of the Special Master, 2/7/22, at 213-215. Respectfully, I find the Special Master’s assertion unfounded, given that, under our Commonwealth’s Constitution, and the duly enacted statutory framework governing the redistricting process promulgated thereto, the responsibility for approving a congressional redistricting plan is shared equally by the Governor and the General Assembly. *See LWV II*, 178 A.3d at 742 (“Pennsylvania’s congressional districts are drawn by the state legislature as a regular statute, subject to veto by the Governor.”). Because the Governor is elected by the voters of the entire Commonwealth, there is, therefore, no basis to regard his veto of the proposed plan in this matter as somehow less representative of the will of the people than the legislature’s own enactment of that plan. H.B. 2146 therefore stands on equal footing with all other plans submitted to this Court—including the Governor’s alternative proposed plan namely, that it is a plan worthy of thoughtful consideration. It is not entitled to special weight merely because it was passed by the General Assembly, but never became law. *See Sixty-Seventh Minnesota State Senate v. Beems*, 406 U.S. 187, 197 (1972) (recognizing that, when a reapportionment plan is offered by the legislature but vetoed by the Governor, and the Governor offers his own plan which is not adopted by the legislature, both

plans stand on an equal footing and are equally worthy of “thoughtful consideration.”).

Further, the majority properly rejected the Special Master’s automatic disqualification of plans which do not meet the mathematical minimum of a one-person deviation from the ideal district population. As the majority notes, a slightly greater deviation from the ideal population of plus or minus one person, resulting in a total deviation of two persons, is not, in and of itself, disqualifying. A marginally greater population deviation can be justified on the basis of “consistently applied legislative policies” that are nondiscriminatory, such as compactness, respect for municipal boundaries, preserving cores of prior districts, and avoiding contests between incumbent members of Congress. *Karcher v. Daggett*, 462 U.S. 725, 740 (1983).

However, my agreement with the majority largely ends there. Most critically, in selecting the optimal redistricting plan from those before us, I disagree that, in this instance, we need to look beyond the constitutionally-specified neutral criteria, and examine subordinate considerations. As the majority properly acknowledges, we recognized in *LWV II* that the four neutral criteria—contiguity, compactness, equal population, and splitting of political subdivisions—are the irreducible minimum requirements of Article I, Section 5 every redistricting plan must meet. *See LWV II*, 178 A.3d at 816. Indeed, as the majority aptly terms them, they are “core” requirements, and the other considerations our Court enumerated in *LWV II* such as preservation of communities of interest, preservation of prior districts, protection of incumbents, and partisan fairness are “*subordinate* historical considerations.” Majority Opinion at 34 (emphasis

added); *see also LWV II*, 178 A.3d at 817 (“We recognize that other factors have historically played a role in the drawing of legislative districts, such as the preservation of prior district lines, protection of incumbents, or the maintenance of the political balance which existed after the prior reapportionment. However, we view these factors to be wholly subordinate to the neutral criteria of compactness, contiguity, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts.” (citation omitted)). In my view, assessment of subordinate or secondary considerations such as partisan fairness, or whether a plan represents the least change from a prior congressional districting plan, is necessary *only* when a court must choose among various plans that are equal with respect to their compliance with the core criteria. Where, however, one plan is superior to all others, as measured by the closeness of its adherence to these criteria, I find it unnecessary for a court to consider the subordinate considerations. While I recognize that none of the submitted plans are perfect in this regard, I consider the Gressman Plan to best conform to the core criteria of all the plans submitted.

The Gressman Plan was crafted by a group of 12 professors of mathematics, statistics, computer science, geography, and data science who teach at Pennsylvania’s institutions of higher learning, and who also live and vote in the Commonwealth. *See* Petition for Review *filed in Gressman v. Chapman*, 465 M.D. 2021 (Pa. Cmwlth.). As the Gressman Petitioners have described in their brief to our Court, they utilized a process known as computational redistricting, which, as a general matter, relies on raw population data and mathematical and statistical al-

gorithms to generate maps based solely on neutral redistricting criteria. *See* Gressman Brief in Support of Exceptions to Special Master’s Report at 8 (citing, *inter alia*, Bruce E. Cain *et al.*, *A Reasonable Bias Approach to Gerrymandering: Using Automated Plan Generation to Evaluate Redistricting Proposals*, 59 Wm. & Mary L. Rev. 1521, 1536 (2018) (opining that constructing computational algorithms that create maps based on the neutral principles of “preservation of extant communities, compactness, contiguity, and adherence to one-person, one-vote guidelines” minimizes the influence of human bias in the map drawing process)). In my view, the Gressman Plan, which was the product of this process, more closely adheres to *all* of the core criteria, collectively, than any of the plans currently before our Court, as measured by objective metrics.⁴

First, the Gressman Plan, like all the plans submitted to our Court, satisfies the requirement that its designated districts be contiguous.

Second, the Gressman plan has the least minimum population deviation in congressional districts as is mathematically possible—one person—achieving ideal population equality of each district at 764,864 or 764,865 persons per district.

Third, with respect to compactness, which is a measure of the geographic or geometric regularity of the congressional districts created, the Gressman Plan is as good as or better than the other plans, and in particular

4. In making this assessment, as does the majority, I rely on the comprehensive comparison of Dr. Daryl DeFord of all of the plans which have been submitted to our Court. *See* Majority Opinion at 24 (discussing DeFord analysis).

the Carter Plan, according to four widely accepted statistical measures: Polsby–Popper, Reock, Convex Hull, and Cut Edges. *See generally* Report of the Special Master, 2/7/22, at 25, 69, 77 (discussing measures); Stephen Ansolabehere *et al.*, *A Two Hundred-Year Statistical History of the Gerrymander*, 77 Ohio St. L.J. 741, 746 (2016) (discussing Polsby–Popper, Reock, and Convex Hull measures); Expert Report of Moon Duchin, 1/24/22, at 6 (Exhibit A to Exceptions of Governor Wolf) (discussing Cut Edges measure). While I observe that some of the other submitted plans yield slightly more compact valuations on individual measures, there is, as the majority notes, tension between assuring compactness and minimizing political subdivisions splits. *See* Majority Opinion at 28 (“It is easily comprehended that adherence to county and city lines will decrease compactness because many of the boundaries follow geographic features such as rivers, which meander across our Commonwealth.”).

In that regard, and finally, the splitting of political subdivisions, as a general proposition, has a particularly pernicious effect in diluting the vote of the residents of those subdivisions, and is to be scrupulously avoided unless absolutely necessary to maintain equality of population.⁵ *LWV II*, 178 A.3d at 815. The Gressman Plan is superlative in that regard. Dr. DeFord’s analysis shows

5. In this regard, I agree with the majority that our Constitution does not set forth a hierarchical preference of the various types of enumerated political subdivisions which should be protected against splitting. *See* Majority Opinion at 33. As the majority notes, plans must be scrutinized to ensure that, as a whole, the number of political subdivision splits are minimized in accordance with consideration of all relevant objective criteria. *Id.*

that, overall, the Gressman plan divides only 49 political subdivisions, which is 2 fewer than the next best plan in this category, the Senate Democratic Caucus Plan (which, unlike the Gressman Plan, splits the City of Pittsburgh). As compared to H.B. 2146, the Gressman Plan divides 5 fewer political subdivisions, and it divides 9 fewer political subdivisions than the Carter Plan, which also divides one more city — Harrisburg — than does the Gressman Plan.

Consequently, the Gressman Plan, uniquely, has the twin salutary benefits of maintaining perfect population equality among congressional districts, while preserving the most number of intact political subdivisions within those districts. This establishes, in my view, the plan's superiority over all the others which our Court has considered.⁶

For these reasons, I would have selected the Gressman Plan. Accordingly, I respectfully dissent.

6. There is no suggestion by any of the parties that the Gressman Plan, which yields at least two majority-minority districts, is violative of the Voting Rights Act, *see supra* note 1, and I discern no such violation on the basis of this record.

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[J-20-2022]

**IN THE SUPREME COURT OF PENNSYLVANIA
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CAROL ANN CARTER, : No. 7 MM 2022
MONICA PARRILLA, :
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BURT SIEGEL, SUSAN :
CASSANELLI, LEE :
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FONKEU, BRADY HILL, :
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BALCHUNIS, TOM :
DEWALL, STEPHANIE :
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Petitioners

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 :
 Respondents :

ORDER

PER CURIAM

AND NOW, this 23rd day of February, 2022, this Court, following full deliberation and consideration, hereby orders as follows:

First, the Pennsylvania primary and general elections for seats in the United States House of Representatives commencing in the year 2022 shall be conducted in accordance with the “Carter Plan” submitted in the record before the Special Master and as described by 2020 Census block equivalency (denominated the “Carter Plan—Block Assignments”) and ESRI shape files (denominated “Carter Plan—Shape Files”) uploaded to this Court’s website at <https://www.pacourts.us/2022-redistricting-opinions>.¹ The Carter Plan, in its constituent parts, is hereby made part of this Order, and is hereby **ADOPTED** as the division of this Commonwealth into seventeen congressional districts, unless and until the

1. As noted, we adopt the “Carter Plan” submitted in the record before the Special Master as opposed to the additional plan submitted by Petitioner Carter in Exhibit A to the brief in support of exceptions to the Special Master’s Report.

same shall be lawfully changed. For reference, images of the Carter Plan, submitted to the Court, are attached at Appendix A, and are available at the above website.

Second, Executive Respondents together with the General Assembly's Legislative Data Processing Center (LDPC),² shall prepare textual language that describes the Carter Plan and submit the same to the Secretary of the Commonwealth without delay. The Secretary of the Commonwealth shall thereafter file with this Court's Prothonotary a certification of compliance of the preparation of the textual description of the Carter Plan, along with a copy of the textual description.

Third, Respondent Secretary of the Commonwealth shall, without delay, following the preparation of the textual description of the Carter Plan, publish notice of the Congressional Districts in the Pennsylvania Bulletin.

Fourth, this Court's February 9, 2022 order, that temporarily suspended the General Primary Election calendar, is **VACATED**. To provide for an orderly election process, the schedule for the primary election to be held May 17, 2022, for the election of Representatives to the United States Congress and statewide elections is **MODIFIED** only in the following respects:

First day to circulate and file nomination petitions	February 25, 2022
Last day to circulate and file nomination petitions	March 15, 2022

2. The LDPC was established by the Act of Dec. 10, 1968, P.L. 1158, No. 365, and routinely provides technical services relating to congressional and legislative redistricting.

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First day to circulate and file nomination papers	March 16, 2022
Deadline to file objections to nomination petitions	March 22, 2022
Last day that may be fixed by the Commonwealth Court for hearing on objections that have been filed to nomination petitions	March 25, 2022
Last day for the Commonwealth Court to render decisions in cases involving objections to nomination petitions	March 29, 2022
Last day for the County Boards of Elections to send remote military-overseas absentee ballots. <i>See</i> 25 Pa.C.S. §3508; 52 U.S.C. §20302(a)(8)(A)	April 2, 2022

In all other respects, the dates under the 2022 General Election Primary calendar for Congressional and statewide offices are not modified by this Order. Along these lines, it is **NOTED** that, with respect to Congressional and statewide offices, the appeal period set forth in Rule of Appellate Procedure 903(c)(1)(ii) (relating to appeals arising under the Election Code) remains in effect. This schedule shall be implemented by the Secretary of the Commonwealth and all election officers within the Commonwealth in accordance with this Court's Order. By separate Order, this Court has temporarily suspended the General Primary Election calendar rela-

tive to seats in the Pennsylvania General Assembly. *See In re Petitions for Review Challenging the Final 2021 Legislative Reapportionment Plan*, 569 Judicial Administration docket (order dated February 23, 2022).

Fifth, should there be any congressional vacancies existing now or occurring after the entry of this Order, but prior to the commencement of the terms of the members to be elected in the General Election of 2022, the districts prescribed in the Remedial Plan adopted by this Court by Order dated February 19, 2018, shall control.

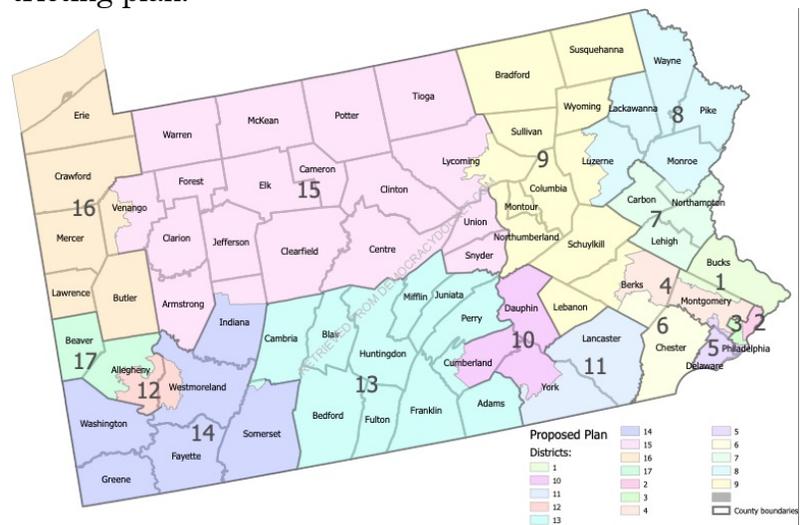
Sixth, the Secretary of the Commonwealth is directed to notify this Court by 4:00 p.m. on February 25, 2022, should it foresee any technical issues concerning the implementation of the Carter Plan.

So Ordered.

Jurisdiction retained.

Opinions to follow.

Justices Todd, Mundy, and Brobson dissent as to the selection of the Carter Plan as the congressional redistricting plan.



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JESSICA MATHIS, IN :
HER OFFICIAL :

154a

CAPACITY AS :
DIRECTOR FOR THE :
PENNSYLVANIA :
BUREAU OF ELECTION :
SERVICES AND :
NOTARIES, :
: :
: :
Respondents :

ORDER

PER CURIAM

AND NOW, this 9th day of February, 2022, given that oral argument in this matter is currently scheduled for February 18, 2022, the General Primary Election calendar, *see, e.g.*, 25 P.S. §§2868 and 2873 (relating to the time of circulating and filing nomination petitions), is **TEMPORARILY SUSPENDED**, pending further Order of this Court.

David P. Marsh; James L.	:	
Rosenberger; Amy Myers;	:	
Eugene Boman; Gary	:	
Gordon; Liz McMahon;	:	
Timothy G. Feeman; And	:	
Garth Isaak,	:	
Petitioners	:	
	:	
v.	:	No. 465 M.D. 2021
	:	
Leigh M. Chapman, in her	:	
official capacity as the	:	
Acting Secretary of the	:	
Commonwealth of	:	
Pennsylvania; Jessica	:	
Mathis, in her official	:	
capacity as Director for the	:	
Pennsylvania Bureau of	:	
Election Services and	:	
Notaries,	:	
Respondents	:	

**REPORT CONTAINING PROPOSED FINDINGS OF
FACT AND CONCLUSIONS OF LAW SUPPORTING
RECOMMENDATION OF CONGRESSIONAL
REDISTRICTING PLAN AND PROPOSED
REVISION TO THE 2022 ELECTION
CALENDAR/SCHEDULE**

By Judge Patricia A. McCullough Commonwealth
Court of Pennsylvania

Filed: February 7, 2022

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- C. Other Considerations
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 - 2. Deference to Legislature

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10. Khalif Ali et al.'s Map
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 1. Johnathan Rodden, Ph.D. (Carter Ps)
 2. Professor Daryl DeFord (Gressman Petitioners)
 3. Dr. Moon Duchin (Gov. Wolf)
 4. Michael Barber, Ph.D. (Cutler & Benninghoff)
 5. Dr. Keith Naughton (Congressional Intervenors)
 6. Dr. Devin Caughey & Michael Lamb (Senate Dem. Caucus Intervenors)
 7. John M. Memmi, Ph.D. (Corman & Ward)
 8. Thomas L. Brunell (Congressional Intervenors)
 9. Sarah Andre (Khalif Ali et al.)
 10. Sean Trende (Voters of the Commonwealth)
 11. Justin Villere (Draw the Lines PA)
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 2. Gressman Petitioners
 3. Governor Wolf
 4. Republican Legislative Intervenors (Senate and House Leaders)
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- b. House Republican Intervenors (Cutler & Benninghoff)
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- 6. House Democratic Caucus Intervenor (McClinton)
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- 8. Khalif Ali et al.
- 9. Voters of the Commonwealth
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 - h. Resenthaler 1 Plan
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 - ix. Resenthaler 2 Plan
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PREFATORY STATEMENT

By definition, the act of “judging” entails a comparative evaluation of opposing viewpoints and a determination, based upon the particular role of the court, as to which view prevails in the legal sense. Under Pennsylvania law, there are, in general, unique responsibilities and roles that are bestowed upon a court given the manner in which the court entertains and rules upon a case. For example, there are varying legal duties for a “trial court” who disposes of pre-trial motions and other matters and is the recipient of evidence at a trial, an intermediate appellate court that reviews the trial court’s decision under the applicable standard of review, or a court exercising both roles simultaneously, as in the situations where statutes have vested the power in certain secretaries of administrative agencies or our Supreme Court in exercising its King’s Bench power.

That stated, this case involves some “feats of modern computer technology,” *Mellow v. Mitchell*, 607 A.2d 204, 211 (Pa. 1992), by which parties have attempted to constitutionally reapportion Pennsylvania’s 2020 population in their proposed plans. The Court is astounded by the parties’ fortitude, collegiality, vigorous advocacy, and the overall metrics and characteristics of the maps they provided in pursuing these cases, and it has no doubt that everyone involved is in genuine pursuit of the overarching goals and ideals that promote and uphold the sustainability and functionality of our glorious Constitutional Republic, “a government of the people, by the people, and for the people.”¹ At the end of the day, however, the

1. Abraham Lincoln, The Gettysburg Address (November 19, 1863)

Court, is faced with the challenging task of recommending one map to indicate the boundary lines for the Congressional seats that represent the great and colonial Commonwealth of Pennsylvania in the United States House of Representatives. Pursuant to Pennsylvania law, the Court must articulate the reasons and rationale for making its credibility and weight determinations and explain how those determinations result in its penultimate conclusion and respectful recommendation to our Supreme Court as to which map is the most suitable and appropriate because it is most aligned with the text and spirit of the Pennsylvania Constitution and the precedent of the High Court of Pennsylvania.

In the report and recommendation that follows, the Court, after detailing the factual and procedure nature of the cases, provides those reasons, rationales, and explanations.

I. INTRODUCTION²

This case involves the redistricting³ of the Commonwealth of Pennsylvania's (Commonwealth) seats in the

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2. This Court has attempted to convert what was a 188-page trial court opinion, which it intended to file on February 3, 2022, into a Special Master's Report with findings of fact and conclusions of law to the extent that it was able given the time constraints. Throughout the Report, "FF" denotes a finding of fact and "CL" denotes a conclusion of law. "FFs" and "CLs" are numbered consecutively under each heading, where appropriate. The Stipulations of the Parties, which are part of this Court's record, are adopted as recommended findings of fact.
 3. "Redistricting" is the process of drawing a new map following a reapportionment where a state gains or loses a seat in Congress. Hon. P. Kevin Brobson, *Of Free and Equal Elections and Fair Districts-How the Pennsylvania Supreme Court Slayed* (continued...)

United States (U.S.) House of Representatives based on the 2020 Decennial Census (2020 Census). Article I, Section 2 of the U.S. Constitution⁴ dictates that congressional districts be redrawn every 10 years to ensure equal populations between districts. In 2020, the U.S. Census Bureau conducted, for the 24th time in this country's history, the decennial census for the purpose of, *inter alia*, apportioning⁵ by population the 435 voting members of the U.S. House of Representatives among the several States. On August 12, 2021, the U.S. Secretary of Commerce delivered census-block results of the 2020 Census to the Governor and legislative leaders.⁶ Although the Commonwealth's population increased from the last decennial census, the 2020 Census shows that the Commonwealth will lose a seat in the U.S. House of Representatives. Thus, starting with the upcoming 2022 Primary Election the Commonwealth will have 17 representatives in the U.S. House of Representatives, 1 fewer

(or *Hobbled?*) *the Partisan Gerrymander*, 30 *Widener Commonwealth L. Rev.* 53, n.11 (2020).

4. U.S. Const. art. I, §2 ("Representatives and direct Taxes shall be apportioned among the several States . . . according to their respective Numbers . . ."). The provision of Article I, Section 2 relating to the method of apportionment was amended by the Fourteenth Amendment to the U.S. Constitution. See U.S. Const. amend. XIV, §2.
5. Every 10 years, upon completion of the U.S. census, reapportionment occurs. "Apportionment" or "reapportionment" refers to the process by which seats in the United States House of Representatives are allocated among the several states.
6. According to the 2020 U.S. Census, Pennsylvania has a total population of 13,002,700. Thus, the ideal district population for each of the Commonwealth's 17 reapportioned congressional districts is approximately 764,864 or 764,865 persons.

than the current 18 representatives it was apportioned following the 2010 Census.⁷ The Commonwealth is therefore required to reapportion its current congressional district plan, i.e., the 2018 Remedial Plan,⁸ which is now malapportioned and effectively obsolete, to account for the loss of a seat in the U.S. House of Representatives. Ordinarily, this task should be completed before the 2022 General Primary Election, which is scheduled to be held on May 17, 2022. Under the current Election Calendar, the first day for candidates to circulate nomination petitions and collect signatures to secure their placement on the ballot is February 15, 2022, and the final day to circulate and file nomination petitions is March 8, 2022.⁹ Further, those candidates seeking the nomination of political bodies may begin circulating nomination papers on March 9, 2022, and must file their papers by August 1, 2022. Campaigns must collect these signatures from voters in the districts in which they seek elected office, a task that is made impossible without established congressional district lines.

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7. Pennsylvania has steadily lost congressional seats through the decades. See Brobson, *supra* n.1, at 54–55.
 8. The current 2018 Remedial Plan’s configuration of Pennsylvania’s congressional districts was drawn by our Supreme Court in 2018 in *League of Women Voters v. Commonwealth*, 181 A.3d 1083 (Pa. 2018) (*LWV III*), using data from the 2010 U.S. Census, after the General Assembly and Governor Wolf failed to reach an agreement for a revised reapportionment plan. Since its adoption, the 2018 Remedial Plan has been used in two previous congressional elections.
 9. Candidates therefore have until March 9, 2022, to collect signatures and file and circulate nomination petitions.

Petitions for Review

Given the Commonwealth's lack of a congressional districting plan due to the 2018 Remedial Plan's malapportionment and in anticipation that the General Assembly and Governor would fail to agree to a new congressional districting plan in time for the 2022 General Primary Election, on December 17, 2021, Petitioners Carol Ann Carter, Monica Parrilla, Rebecca Poyourow, William Tung, Roseanne Milazzo, Burt Siegel, Susan Cassanelli, Lee Cassanelli, Lynn Wachman, Michael Guttman, Maya Fonkeu, Brady Hill, Mary Ellen Balchunis, Tom DeWall, Stephanie McNulty and Janet Temin (collectively, Carter Petitioners)¹⁰ commenced this action (No. 464 M.D. 2021) by filing a Petition for Review addressed to this Court's original jurisdiction, challenging the Commonwealth's 2018 Remedial Plan as unconstitutional based on the 2020 Census. The Carter Petitioners filed their Petition

10. Prior to filing this action, on April 26, 2021, the Carter Petitioners filed an action against the Respondents in this Court's original jurisdiction challenging the 2018 Remedial Plan based on the 2020 U.S. Census results. *See Carter v. DeGraffenreid* (Pa. Cmwlth., No. 132 M.D. 2021). By opinion and order dated September 2, 2021, a single judge of this Court permitted various high-ranking legislators of the Pennsylvania General Assembly to intervene in the matter and denied the applications to intervene filed by the Republican Party and Voters of the Commonwealth of Pennsylvania. *See Carter v. DeGraffenreid* (Pa. Cmwlth., No. 132 M.D. 2021, filed Sept. 2, 2021). Thereafter, by opinion and order dated October 8, 2021, a three-judge special election panel of this Court sustained preliminary objections challenging the Carter Petitioners' standing and the ripeness of their claims and dismissed their petition for review without prejudice. *See Carter v. DeGraffenreid* (Pa. Cmwlth., No. 132 M.D. 2021, filed Oct. 8, 2021).

against the Veronica Degraffenreid, in her official capacity as the Acting Secretary of the Commonwealth,¹¹ and Jessica Mathis, in her official capacity as Director for the Pennsylvania Bureau of Election Services and Notaries (collectively, Respondents).

The Carter Petitioners identify themselves as 16 U.S. citizens who are registered to vote in the Commonwealth in 11 different federal congressional districts.¹² (Carter Pet'rs' PFR ¶9.) They believe that the congressional districts in which they live are overpopulated relative to other districts in the Commonwealth and that, consequently, "they are deprived of the right to cast an equal vote, as guaranteed to them by the U.S. Constitution and the Pennsylvania Constitution." (Carter Pet'rs' PFR ¶10.)

In Count I of their Petition, the Carter Petitioners allege that the 2018 Remedial Plan violates the Free and Equal Elections Clause under article I, section 5 of the Pennsylvania Constitution, Pa. Const. art. I, §5.¹³ Relying largely on the above facts pertaining to the 2020 U.S. Census and Pennsylvania's reduced congressional delegation, the Carter Petitioners allege that "Pennsylvania's

11. On January 20, 2022, Acting Secretary of the Commonwealth Leigh M. Chapman was substituted as a party for Acting Secretary Veronica Degraffenreid.

12. Specifically, the Carter Petitioners reside in Bucks, Philadelphia, Montgomery, Delaware, Chester, Northampton, Dauphin, Cumberland, and Lancaster Counties and in congressional districts 1 through 7, 10, and 11. (Carter Pet'rs' PFR ¶9.)

13. The Free and Equal Elections Clause provides: "Elections shall be free and equal; and no power, civil or military, shall at any time interfere to prevent the free exercise of the right of suffrage." Pa. Const. art. I, §5.

current congressional district plan places voters into districts with significantly disparate populations, causing voters in underpopulated districts to have more ‘potent’ votes compared to voters, like Petitioners, who live in districts with comparatively larger populations.”¹⁴ (Carter Pet’rs’ PFR ¶53.) They further claim that “[a]ny future use of Pennsylvania’s current congressional district plan would violate Petitioners’ right to an undiluted vote under the Free and Equal Elections Clause.” (Carter Pet’rs’ PFR ¶54.) In Count II of their Petition, the Carter Petitioners allege that the Commonwealth’s current congressional district plan violates Article I, Section 2 of the U.S. Constitution, U.S. Const. art. I, §2.¹⁵ More specifically, they allege that our Supreme Court adopted the 2018 Remedial Plan, which was crafted so that “the population deviation among districts was no more than *one person*”; however, “[n]ow, the population deviation among Pennsylvania’s congressional districts is far higher, on the order of tens of thousands of people.” (Carter Pet’rs’ PFR ¶57.) The Carter Petitioners further contend that given “the significant population shifts that have occurred since the 2010 Census” and the recent 2020 U.S. Census results, the Commonwealth’s congressional districts, which were drawn based on the 2010 Census results, are “now unconstitutionally malappor-

14. They claim that districts 8, 9, 12 through 16, and 18 are significantly underpopulated, while districts 1 through 7, 10, 11, and 17 are significantly overpopulated. (Carter Pet’rs’ PFR ¶28.)

15. Article I, Section 2, Clauses 1 and 3 of the U.S. Constitution provides that the U.S. “House of Representatives shall be . . . chosen . . . by the People of the several States” and “apportioned among the several States . . . according to their respective Numbers.” U.S. Const. art. I, §2, cls. 1 and 3.

tioned” because they are based on outdated population data. (Carter Pet’rs’ PFR ¶58.) They also claim that any future use of the current congressional district plan would violate their constitutional right to cast an equal, undiluted vote under Article I, Section 2 of the U.S. Constitution. (Carter Pet’rs’ PFR ¶59.) Finally, in Count III of their Petition, the Carter Petitioners allege that the Commonwealth’s current congressional district plan containing 18 districts, when the state is now allotted only 17 seats, contravenes section 2c of Title 2 of the U.S. Code, 2 U.S.C. §2c.¹⁶ (Carter Pet’rs’ PFR ¶62.)

As relief, the Carter Petitioners seek, *inter alia*, a judicial declaration that “the current configuration of Pennsylvania’s congressional districts violates article I, section 5 of the Pennsylvania Constitution; [and] Article I, Section 2 of the U.S. Constitution”; “[e]njoin Respondents . . . from implementing, enforcing, or giving any effect to Pennsylvania’s current congressional district plan”; and “[a]dopt a new congressional district plan that complies with article I, section 5 of the Pennsylvania

16. Title 2, section 2c of the U.S. Code provides:

In each State entitled in the Ninety-first Congress or in any subsequent Congress thereafter to more than one Representative under an apportionment made pursuant to the provisions of section 2a(a) of this title, there shall be established by law a number of districts equal to the number of Representatives to which such State is so entitled, and Representatives shall be elected only from districts so established, no district to elect more than one Representative (except that a State which is entitled to more than one Representative and which has in all previous elections elected its Representatives at Large may elect its Representatives at Large to the Ninety-first Congress).

2 U.S.C. §2c.

Constitution; Article I, Section 2 of the U.S. Constitution; and 2 U.S.C. §2.” (Carter Pet’rs’ PFR at 18-19, Prayer for Relief.)

Also on December 17, 2021, Petitioners Philip T. Gressman, Ron Y. Donagi, Kristopher R. Tapp, Pamela Gorkin, David P. Marsh, James L. Rosenberger, Amy Myers, Eugene Boman, Gary Gordon, Liz McMahon, Timothy G. Feeman, and Garth Isaak (collectively, Gressman Petitioners) separately commenced an action (No. 465 M.D. 2021) by filing a Petition for Review addressed to this Court’s original jurisdiction, similarly claiming that the Commonwealth’s 2018 Remedial Plan is unconstitutionally malapportioned based on the 2020 Census results. Like the Carter Petitioners, the Gressman Petitioners filed their Petition against Respondents. The Gressman Petitioners identify themselves as 12 U.S. citizens and registered voters in the Commonwealth, who are also “leading professors of mathematics and science who reside in congressional districts that were most recently redrawn in 2018, using population data from the 2010 Census.”¹⁷ (Gressman Pet’rs’ PFR ¶10.)

For the most part, the Gressman Petitioners advance averments that duplicate, or at least mimic, those made by the Carter Petitioners. Notably, the Gressman Petitioners add that, “[a]ccording to the 2020 U.S. Census, Pennsylvania has 13,002,700 residents”; “the ideal district population is about 764,864 or 764,865 persons for each of Pennsylvania’s 17 congressional districts”; and

17. The Gressman Petitioners reside in Delaware, Montgomery, Union, Centre, Philadelphia, Dauphin, Northampton, and in congressional districts 3, 5, 7, 10, and 12. (Gressman Pet’rs’ PFR ¶¶11-22.)

“[b]ased on the 2020 Census Data, Pennsylvania’s congressional districts vary in population by as much as 95,000 residents, and none of the current districts has either 764,864 or 764,865 residents.” (Gressman Pet’rs’ PFR ¶127.)

Asserting that they all “reside and intend to vote in a congressional district that the 2020 U.S. Census Data identifies as significantly malapportioned[,]” *id.* ¶128, the Gressman Petitioners argue, in Count I of their Petition, that their “districts, and all other districts in the current plan, vary by as much as tens of thousands of persons relative to one another and to the ideal district population” as a result of “the political branches’ failure to act,” which violates the Free and Equal Elections Clause of the Pennsylvania Constitution. (Gressman Pet’rs’ PFR ¶¶38-39.) In Count II of their Petition, the Gressman Petitioners contend that “[b]ecause the Commonwealth lacks a lawfully apportioned congressional plan, neither potential candidates for office in the 2022 primary and general elections, nor [the Gressman] Petitioners as voters in those elections, know where the boundaries of constitutional congressional districts lie[,]” and that “[p]otential candidates . . . do not know where they will be able to run and cannot identify their constituents.” (Gressman Pet’rs’ PFR ¶¶44-45.) The Gressman Petitioners thus allege that, in turn, they do “not know who will be running in their districts and cannot identify their fellow district residents[,]” thereby depriving the Gressman Petitioners of their “ability to associate with other voters who live in their lawful congressional districts, or to associate with those candidates who will run for office in their districts—again, for no reason other than the political branches’ failure to act[,]” in violation

of article I, section 20 of the Pennsylvania Constitution, Pa. Const. art. I, § 20.¹⁸ *Id.* ¶¶45-46. Moreover, they contend that there is no legitimate or compelling state interest that would support burdening their constitutional right to associate. *Id.* ¶47. Finally, in Count III of their Petition, the Gressman Petitioners assert that the variances in population in their districts and other districts result in “the weight of a given Commonwealth citizen’s vote . . . var[ying] significantly based on where that citizen lives.” *Id.* ¶51. Therefore, they contend that current plan’s effective dilution of citizens’ votes based on where they live violates the equal protection guarantees afforded them under article I, sections 1 and 26 of the Pennsylvania Constitution, Pa. Const. art. I, §§ 1, 26.¹⁹

II. PROCEDURAL HISTORY

By order dated December 20, 2021, this Court consolidated these matters and designated the case at docket number 464 M.D. 2021 as the lead case. By separate order of the same date, this Court directed, in accordance with the process established in *Mellow*, that any applica-

18. Pa. Const. art. I, §20 (“The citizens have a right in a peaceable manner to assemble together for their common good, and to apply to those invested with the powers of government for redress of grievances or other proper purposes, by petition, address or remonstrance.”).

19. Pa. Const. art. I, §1 (“All men are born equally free and independent, and have certain inherent and indefeasible rights, among which are those of enjoying and defending life and liberty, of acquiring, possessing and protecting property and reputation, and of pursuing their own happiness.”); §26 (“Neither the Commonwealth nor any political subdivision thereof shall deny to any person the enjoyment of any civil right, nor discriminate against any person in the exercise of any civil right.”).

tions to intervene shall be filed by December 31, 2021, and that any party to these proceedings could submit to the Court for consideration a proposed 17-district congressional reapportionment plan consistent with the results of the 2020 Census by a certain date. This Court's order also provided notice that the Court would select a plan from those plans timely filed by the parties if the General Assembly and the Governor failed to enact a congressional reapportionment plan by January 30, 2022, with court proceedings to follow should the General Assembly and the Governor fail to act.

Ten applications to intervene were filed by: (i) the Speaker and Majority Leader of the Pennsylvania House of Representatives and the President Pro Tempore and Majority Leader of the Pennsylvania State Senate, (ii) Pennsylvania State Senators Maria Collett, Katie J. Muth, Sharif Street, and Anthony H. Williams; (iii) Tom Wolf, Governor of the Commonwealth of Pennsylvania; (iv) Senator Jay Costa and members of the Democratic Caucus of the Senate of Pennsylvania; (v) Representative Joanna E. McClinton, Leader of the Democratic Caucus of the Pennsylvania House of Representatives; and (vi) Congressman Guy Reschenthaler, Swatara Township Commissioner Jeffrey Varner, and former Congressmen Tom Marino, Ryan Costello, and Bud Shuster; (vii) Voters of the Commonwealth of Pennsylvania; (viii) Citizen-Voters; (ix) Draw the Lines PA; and (x) Khalif Ali et al.

On December 21, 2021, both sets of Petitioners filed applications for extraordinary relief, requesting that the Pennsylvania Supreme Court exercise its extraordinary jurisdiction and/or King's Bench power over these matters under Section 726 of the Judicial Code, 42 Pa.C.S. §726, and Pa.R.A.P. 3309. *See Carter v. Degraffenreid*

(Pa., No. 141 MM 2021); *Gressman v. Degraffenreid* (Pa., No. 142 MM 2021).

While those applications were pending in the Supreme Court, on January 6, 2022, this Court held a hearing on the intervention applications, giving every applicant the opportunity to present argument and evidence as to whether they met the standards for intervention under Pennsylvania Rules of Civil Procedure 2327 and 2329, Pa.R.Civ.P. 2327, 2329, and to explain why intervention would not unduly delay and complicate this time-sensitive matter.

By separate orders issued on January 10, 2022, the Supreme Court denied the applications for extraordinary relief and declined to invoke its extraordinary jurisdiction and/or exercise its King's Bench power over these matters, without prejudice to Petitioners to either reapply for similar relief in that Court should future developments so warrant or to apply to this Court and request that the matter be accelerated.²⁰ *See Carter v. Degraffenreid* (Pa., No. 141 MM 2021, order filed Jan. 10, 2022); *Gressman v. Degraffenreid* (Pa., No. 142 MM 2021, order filed Jan. 10, 2022).

On January 14, 2022, this Court entered an order suspending the deadlines set by its original December 20, 2021 order, and granting the applications to intervene filed by: (i) the Speaker and Majority Leader of the Pennsylvania House of Representatives (House Republi-

20. Justice Wecht filed a dissenting statement, in which he expressed his disagreement with the Court's decision not to assume plenary jurisdiction over the matter under the power of extraordinary jurisdiction granted to the Court under 42 Pa.C.S. §726. Justice Donohue also noted her dissent.

can Intervenors) and the President Pro Tempore and Majority Leader of the Pennsylvania State Senate (Senate Republican Intervenors) (collectively, Republican Legislative Intervenors), (ii) Pennsylvania State Senators Maria Collett, Katie J. Muth, Sharif Street, and Anthony H. Williams (Democratic Senator Intervenors, *see infra* note 20); (iii) Tom Wolf, Governor of the Commonwealth of Pennsylvania (Governor Wolf); (iv) Senator Jay Costa and members of the Democratic Caucus of the Senate of Pennsylvania (Senate Democratic Caucus Intervenors);²¹ (v) Representative Joanna E. McClinton, Leader of the Democratic Caucus of the Pennsylvania House of Representatives (House Democratic Caucus Intervenors); and (vi) Congressman Guy Reschenthaler, Swatara Township Commissioner Jeffrey Varner, and former Congressmen Tom Marino, Ryan Costello, and Bud Shuster (Congressional Intervenors).²² These Intervenors were allowed to participate as Parties in these consolidated matters, and were ordered to submit for the Court’s consideration at least one but no more than two

21. Pursuant to the Notice of Amendment and Joinder from Senate Democratic Caucus Intervenors and Democratic Senator Intervenors, the Applications for Leave to Intervene of: (i) Pennsylvania State Senators Maria Collett, Katie J. Muth, Sharif Street, and Anthony H. Williams; and (ii) Senator Jay Costa and members of the Democratic Caucus of the Senate of Pennsylvania were joined as a single party. They are thus collectively referred to throughout this Report as Senate Democratic Caucus Intervenors.

22. Consistent with this Court’s January 14 and January 24, 2022 orders, the term “Parties,” when used in this Report, refers to Petitioners, Respondents, and Intervenors, except when a particular Party is referenced individually.

proposed 17-district congressional redistricting plans and a supporting brief and/or a supporting expert report by 5:00 p.m., on January 24, 2022. All Parties were further directed to file a responsive brief and/or a responsive expert report (from the same expert who prepared the January 24 report or any other expert), addressing the other Parties' January 24 submissions, by 5:00 p.m., on January 26, 2022.

The applications to intervene as parties filed by: (i) Voters of the Commonwealth of Pennsylvania (Voters of the Commonwealth); (ii) CitizenVoters; (iii) Draw the Lines PA; and (iv) Khalif Ali et al., were denied. However, Voters of the Commonwealth,²³ Citizen-Voters,²⁴ Draw the Lines PA, and Khalif Ali et al.²⁵ were permitted to

23. On January 24, 2022, Voters of the Commonwealth (Haroon Bashir et al.) filed a Notice of Appeal to the Supreme Court from this Court's January 14, 2022 order denying their intervention application. By order dated January 28, 2022, the Supreme affirmed this Court's order on the basis that Voters of Commonwealth waited 10 days to file a notice of appeal from this Court's January 14, 2022 order and at least one of the case deadlines established by that order had already passed. *See Carter/Gressman v. Chapman (Appeal of: Haroon Bashir et al.)* (Pa., Nos. 9 & 10 MAP 2022, orders filed Jan. 28, 2022).

24. On January 26, 2022, Citizen Voters (Leslie Osche et al.) filed a Notice of Appeal to the Supreme Court from this Court's January 14, 2022 order denying their intervention application. By order dated February 2, 2022, the Supreme Court affirmed this Court's order on the basis that Citizen Voters waited 12 days to file a notice of appeal from this Court's January 14, 2022 order and the deadlines established by that order had already passed. *See Carter/Gressman v. Chapman (Appeal of: Leslie Osche et al.)* (Pa., Nos. 11 & 12 MAP 2022, orders filed Feb. 2, 2022).

25. On January 20, 2022, Khalif Ali et al. filed a Notice of Appeal to the Supreme Court from this Court's January 14, 2022 order (continued...)

participate in these matters as *amicus* participants (*Amicus* Participants), with their participation limited to submissions to the Court in writing. All *Amicus* Participants were permitted to submit for the Court's consideration one proposed 17-district congressional redistricting map/plan and a supporting brief and/or a supporting expert report, by 5:00 p.m., on January 24, 2022.

In this same order, the Court directed the Parties to file a joint stipulation of facts and moved the evidentiary hearing up to January 27, 2022, and January 28, 2022, participation in which was limited to the Parties. Each Party was limited to presenting one witness at the hearing, who would be subject to cross-examination by the other Parties. This Court's order also provided notice that the Court would proceed to issue an opinion based on the hearing and evidence presented by the Parties if the General Assembly failed to produce a new congressional redistricting plan by January 30, 2022. As of January 30, 2022, the General Assembly and Governor had not adopted a new reapportionment plan.

On January 29, 2022, the Carter Petitioners filed a renewed Emergency Application for Extraordinary Relief under 42 Pa. C.S. § 726 and Pa.R.A.P. 3309 in the Supreme Court, asking that Court to immediately assume extraordinary jurisdiction over this redistricting litigation. On February 1, 2022, this Court filed a statement, "advising the Supreme Court that the undersigned jurist's decision and opinion in the above-captioned mat-

denying their intervention application. By order dated January 26, 2022, the Supreme affirmed this Court's order. See *Carter/Gressman v. Chapman (Appeal of: Khalif Ali et al.)* (Pa., Nos. 5 & 6 MAP 2022, orders filed Jan. 26, 2022).

ters would be ready to be filed in the Commonwealth Court by Thursday, February 3, 2022, and [in no] event later than Friday, February 4, 2022.” (Statement of the Court, dated Feb. 1, 2022.) On February 2, 2022, the Supreme Court issued an order granting the Carter Petitioners’ Application, designating the undersigned as Special Master, and directing that all proceedings in this Court prior to the issuance of the Supreme Court’s order, as well as the filings submitted to this Court at its direction, “shall be considered part of the Special Master’s record.” See *Carter v. Chapman* (Pa., No. 7 MM 2022, order filed Feb. 2, 2022), at 1-2 & ¶¶2-3. The Supreme Court further directed the Court to file with the Supreme Court a report containing proposed findings of fact and conclusions of law supporting its recommendation of a redistricting plan from those submitted to the Court, along with a proposed revision to the 2022 election schedule, by February 7, 2022. *Id.* ¶3.²⁶

26. The Court notes that during the pendency of these matters, this Court was proceeding under the assumption that it had acquired the traditional role of a trial court, the “fact finder” in legalese and, therefore, that its primary responsibility after conducting the bench trial was to render credibility and weight determinations with respect to, and resolve conflicts within, the evidence, being specifically tasked with the obligation of choosing which piece or pieces of that evidence should be accepted, discredited, or otherwise provided with great, little, or no evidentiary value or significance. When this Court assumes such a role, typically and in general, its credibility and weight determinations would have been virtually unassailable on appeal to the Supreme Court, and its rulings and other determinations would have been subjected to an abuse of discretion and/or an error of law standard. See, e.g., *In re R.J.T.*, 9 A.3d 1179, 1190 (Pa. 2010); *Commonwealth v. DeJesus*, 860 A.2d 102, 107 (Pa. 2004). How-
(continued...)

III. THE CONTROLLING CONSTITUTIONAL AND LEGAL PRINCIPLES

It is well established that the primary duty of drawing federal congressional legislative district lines rests with state legislatures, which are vested with the power to determine, *inter alia*, “[t]he Times, Places and Manner of holding Elections for . . . Representatives,” subject to any rules that Congress may establish altering such power. Article I, Section 4 of the U.S. Constitution, U.S. Const. art. I, §4, cl. 1 (Elections Clause).²⁷ Thus, “[w]hile th[e] process is dictated by federal law, it is delegated to the states.” *League of Women Voters v. Commonwealth*, 178 A.3d 737, 742-43 (Pa. 2018) (*LWV II*). In Pennsylvania, congressional redistricting is handled as regular legislation, in that any congressional districting plan must pass both chambers of the General Assembly and be

ever, considering that our Supreme Court has ably decided to exercise extraordinary jurisdiction pursuant to its King’s Bench power, and has officially appointed the undersigned to serve as a Special Master, this Court now proceeds on the assumption that its credibility and weight determinations and other rulings are not entitled to any form of deference by the Supreme Court, which may substitute its judgment for that of this Court at will. Accordingly, the Court would like to emphasize that its evidentiary and legal determinations are made simply as proposed recommendations to the Supreme Court and that the Court submits them respectfully.

27. The Elections Clause provides: “The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations, except as to the Places of ch[oo]sing Senators.” U.S. Const. art. I, §4, cl. 1.

presented to the Governor for his approval or veto.²⁸ *LWV II*, 178 A.3d at 742; Pa. Const. art. IV, §15.²⁹ The “initial and preferred path [regarding the drawing of congressional district maps is, undoubtedly, through] legislative and executive action.” *LWV II*, 178 A.3d at 821. However, where our state legislature is unable or chooses not to timely enact a congressional redistricting scheme, it falls upon the state judiciary to assume “the ‘unwelcome obligation’” and fashion, or in this case choose, an appropriate congressional redistricting plan. *See id.* at 822-23 (stating that “[w]hen . . . the legislature is unable to or chooses not to act, it becomes the judiciary’s role to determine the appropriate redistricting plan”); *see also Mellow*, 607 A.2d at 214 (recognizing that “[c]ongressional redistricting becomes a judicial responsibility only when . . . the state legislature has not acted

28. “By contrast, the state legislative lines are drawn by a five-member commission pursuant to the Pennsylvania Constitution. *See* Pa. Const. art. II, § 17.” *LWV II*, 178 A.3d at 742, n.11.

29. Article IV, section 15 of the Pennsylvania Constitution provides, in pertinent part, as follows:

Every bill which shall have passed both Houses shall be presented to the Governor; if he approves he shall sign it, but if he shall not approve he shall return it with his objections to the House in which it shall have originated, which House shall enter the objections at large upon their journal, and proceed to re-consider it. If after such re-consideration, two-thirds of all the members elected to that House shall agree to pass the bill, it shall be sent with the objections to the other House by which likewise it shall be re-considered, and if approved by two-thirds of all the members elected to that House it shall be a law

Pa. Const. art. IV, §15.

after having had an adequate opportunity to do so”). Where the Pennsylvania judiciary is unwillingly called upon to assume the decidedly complex task of congressional redistricting due to the General Assembly’s inaction, as in this case, both federal and state constitutional principles are implicated.

A. Brief History

Since the earliest days of the republic, redrawing the boundaries of legislative and congressional districts after each decennial census has been primarily the responsibility of state legislatures. In general, following World War I, and the dramatic shifts in population from rural to urban areas that occurred thereafter, state legislatures failed to fulfill their constitutional responsibility to create redistricting plans. For decades, the U.S. Supreme Court declined repeated invitations to enter the “political thicket” of redistricting and refused to order the legislatures to carry out their duty. *Colegrove v. Green*, 328 U.S. 549, 556 (1946). See *Rucho v. Common Cause*, 139 S. Ct. 2484, 2493-96 (2019).

However, beginning in the 1960s, the U.S. Supreme Court changed course and issued a series of opinions concluding that cases based on malapportionment or a violation of the “one person, one vote” principle³⁰ were justiciable, particularly under the Equal Protection

30. The “one person, one vote” principle is embodied in Article I, Section 2, Clauses 1 and 3 of the U.S. Constitution, which provides that United States “House of Representatives shall be . . . chosen . . . by the People of the several States” and “apportioned among the several States . . . according to their respective Numbers.” U.S. Const. art. I, §2, cls. 1 and 3.

Clause of the Fourteenth Amendment.³¹ See, e.g., *Baker v. Carr*, 369 U.S. 186 (1962); *Wesberry v. Sanders*, 376 U.S. 1 (1964); *Reynolds v. Sims*, 377 U.S. 533 (1964); *Gaffney v. Cummings*, 412 U.S. 735 (1973); *Karcher v. Daggett*, 462 U.S. 725 (1983); *Evenwel v. Abbott*, 136 S. Ct. 1120 (2016). In the modern jurisprudence, the “one person, one vote” rule may be summarized as follows: “[W]hen drawing state and local legislative districts, jurisdictions are permitted to deviate somewhat from perfect population equality to accommodate traditional districting objectives, among them, preserving the integrity of political subdivisions, maintaining communities of interest, and creating geographic compactness,” but “[w]here the maximum population deviation between the largest and smallest district is less than 10%, [] a state or local legislative map presumptively complies with the one-person, one-vote rule”; otherwise, “[m]aximum deviations above 10% are presumptively impermissible.” *Abbott*, 136 S. Ct. at 1124; see Brobson, *supra* n.1, at 56-61.

In the 1960s, the U.S. Supreme Court also began addressing as justiciable challenges to redistricting plans that were configured on the basis of race. Broadly speaking, “[r]acial, race-based, or ethnic gerrymandering occurs where legislative district boundaries are deliberately and arbitrarily distorted for racial purposes. Racial gerrymander challenges, either based on vote dilution (cracking) or vote concentration (packing), are justiciable, with the challenged legislation subject to strict scrutiny under the Equal Protection Clause and/or review for

31. It provides that: “[n]o State shall . . . deny to any person within its jurisdiction the equal protection of the laws.” U.S. Const. amend. XIV, §1.

compliance with Section 2 of the Voting Rights Act of 1965 (VRA).^[32]” Brobson, *supra* n.1, at 63-64 (footnotes omitted). *See, e.g., Gomillion v. Lightfoot*, 364 U.S. 339 (1960); *Wright v. Rockefeller*, 376 U.S. 52 (1964); *Thornburg v. Gingles*, 478 U.S. 30 (1986); *Shaw v. Reno*, 509 U.S. 630 (1993); *Miller v. Johnson*, 515 U.S. 900 (1995); *Bush v. Vera*, 517 U.S. 952 (1996); *Alabama Legislative Black Caucus v. Alabama*, 575 U.S. 254, 270 (2015).

A third subset of claims in the districting/redistricting litigation arena concerns illegal partisan or political gerrymandering in the drawing of boundary lines. In terms of its accepted definition, “[p]artisan gerrymandering . . . is the process of manipulating the drawing of district boundaries to enhance the electoral chances of one political party above and beyond what would be expected based on statewide (or nationwide) partisan distribution of support.” Brobson, *supra* n.1, at 63-65. First addressing the issue in the 1970s, the United States Supreme Court, overall, and through time, has “struggled . . . to find a majority approach to dealing with challenges to legislative districts as ‘extreme’ partisan gerrymanders.” *Id.* at 67. *See Gaffney v. Cummings*, 412 U.S. 735 (1973); *Davis v. Bandemer*, 478 U.S. 109 (1986); *Vieth v. Jubelirer*, 541 U.S. 267 (2004); *see also Rucho*, 139 S. Ct. at 2497-99. In 2019, a majority of the U.S. Supreme Court in *Rucho* ultimately concluded that, under the U.S. Constitution, federal courts lack the competency to adjudicate partisan gerrymandering claims because such claims present nonjusticiable political questions. Nonetheless, the *Rucho* Court was careful to state that its “conclusion [did] not condone excessive par-

32. 52 U.S.C. §§10101-10702.

tisan gerrymandering. Nor [did its] conclusion condemn complaints about districting to echo into a void.” *Rucho*, 139 S. Ct. at 2507. The Supreme Court noted that the States “[were] actively addressing the issue on a number of fronts,” and, as one of a few examples, cited a case from the Supreme Court of the State of Florida, which “struck down that State’s congressional districting plan as a violation of the Fair Districts Amendment to the Florida Constitution.” *Id.*

B. State Constitutional Principles

1. LWV (Free and Equal Elections Clause)

The Pennsylvania Supreme Court recently interpreted and applied the Free and Equal Elections Clause of article I, section 5 of the Pennsylvania Constitution, Pa. Const. art. I, §5, which provides that “[e]lections shall be free and equal; and no power, civil or military, shall at any time interfere to prevent the free exercise of the right of suffrage,” in *LWV II*, 178 A.3d 737, a case involving a partisan gerrymandering claim. By way of background, following the 2010 U.S. Census, Pennsylvania’s share of U.S. House members was reduced from 19 to 18 members, thus requiring the Commonwealth to reapportion its congressional district map. Legislation made its way through the legislative process, and the Republican-controlled General Assembly ultimately passed a proposed redistricting plan, which then-Governor Corbett, also a Republican, signed into law as Act 131 of 2011 (2011 Plan). After having dodged any federal or state challenges for a total of three congressional election cycles, in June 2017, the petitioners, League of Women Voters, and 18 registered Democratic voters (1 from each of our congressional districts at the time), filed suit in this Court’s original jurisdiction against, *inter alia*, cur-

rent Governor Wolf and the General Assembly, alleging that the 2011 Plan violated numerous provisions of the Pennsylvania Constitution, including the Free and Equal Elections Clause, among others.³³ Specifically, the petitioners claimed that the 2011 Plan constituted an extreme case of partisan gerrymandering that diluted their votes and deprived them of an “equal” election in violation of the Free and Equal Elections Clause.

Subsequently, the petitioners requested that the Supreme Court exercise its extraordinary jurisdiction over the matter. The Supreme Court granted the request and assumed plenary jurisdiction over the matter, but ultimately remanded the case to this Court, directed that the case be assigned to a commissioned judge of this Court, and further directed the Court to conduct, on an expedited basis, discovery, and pretrial/trial proceedings necessary to create an evidentiary record on which the petitioners’ claims could be decided. The Honorable P. Kevin Brobson of this Court³⁴ expeditiously conducted a nonjury trial in December 2017 and issued recommended findings of fact and conclusions of law two days prior to the Supreme Court’s established deadline.

Following expedited briefing and oral argument and based on Judge Brobson’s findings and conclusions, on January 22, 2018, by *per curiam* order, a majority of the

33. The petitioners also alleged that the 2011 Plan violated their right to free expression and association under article I, sections 7 and 20 of the Pennsylvania Constitution, and their right to equal protection of the law under article I, sections 1 and 26 of the Pennsylvania Constitution. Pa. Const. art. I, §§1, 7, 20, 26.

34. On January 3, 2022, the Honorable P. Kevin Brobson, former President Judge of this Court, was sworn in as Justice of the Pennsylvania Supreme Court.

Supreme Court declared as a matter of law that the 2011 Plan “clearly, plainly and palpably” violated the Pennsylvania Constitution, struck the Plan as unconstitutional, and enjoined its further use beginning with the Primary Election scheduled for May 15, 2018. *See League of Women Voters v. Commonwealth*, 175 A.3d 282, 289 (Pa. 2018) (*LWV I*); *see also LWV II*, 178 A.3d at 767-87 (lengthy discussion of the Commonwealth Court proceedings, the Court’s findings of fact based on the evidence presented, and the Court’s conclusions of law). The Court, however, gave the General Assembly additional time to formulate a remedial plan and submit it to Governor Wolf, and advised that the failure to enact a plan would result in the Supreme Court adopting a remedial plan based on the record and proposed plans submitted by the parties. *LWV I*, 175 A.3d at 290.

The Supreme Court thereafter issued an opinion in support of its order on February 7, 2018, in which it relied solely on the Free and Equal Elections Clause, which the Court noted “has no federal counterpart,” in disposing of the petitioners’ claims. *LWV II*, 178 A.3d 737, 803. After exhaustively summarizing the parties’, respondents’, intervenors’, and *amici*’s arguments, *see id.* at 787-801, the Court extensively examined the history of our Constitution, the plain language used in the various iterations of article I, section 5 throughout the years since its adoption, and our state’s jurisprudence interpreting the Free and Equal Elections Clause. *See id.* at 802-13. In doing so and recognizing that the term “free and equal” has historically been interpreted to have “a broad and wide sweep,” the Court interpreted the Free and Equal Elections Clause as prohibiting “any legislative scheme which has the effect of impermissibly

diluting the potency of an individual's vote for candidates for elective office relative to that of other voters will violate the guarantee of 'free and equal' elections afforded by [a]rticle I, [s]ection 5." *LWV II*, 178 A.3d at 809 (citing *City of Bethlehem v. Marcincin*, 515 A.2d 1320, 1323-24 (Pa. 1986)). Furthermore, as to the consequences of such an interpretation, the Court relevantly noted that "partisan gerrymandering dilutes the votes of those who in prior elections voted for the party not in power to give the party in power a lasting electoral advantage" and that "placing voters preferring one party's candidate in districts where their votes are wasted on candidates likely to lose (cracking), or [] placing such voters in districts where their votes are cast for candidates destined to win (packing)," results in dilution of the non-favored, or minority, party's votes. *LWV II*, 178 A.3d at 813-14. In light of the above, the Court determined that the Free and Equal Elections Clause deserves "the broadest interpretation, one which governs all aspects of the electoral process, and which provides the people of this Commonwealth an equally effective power to select the representative of his or her choice and bars the dilution of the people's power to do so." *Id.* at 814. Accordingly, article I, section 5 of the Pennsylvania Constitution prohibits "the creation of congressional districts which confer on any voter an unequal advantage by giving his or her vote greater weight in the selection of a congressional representative" than other voters. *Id.* at 816.

In terms of how to measure a redistricting plan's compliance with article I, section 5, the Supreme Court

pointed to article II, section 16,³⁵ which provides certain “neutral benchmarks” that state legislative district maps must meet to prevent the dilution of individuals’ votes, and, noting the absence of any Pennsylvania constitutional provision governing the creation of congressional districts, adopted such “measures as appropriate in determining whether a congressional redistricting plan violates the Free and Equal Elections Clause of the Pennsylvania Constitution.” *LWV II*, 178 A.3d at 816. Accordingly, to pass constitutional muster under article I, section 5, congressional districts must be

composed of compact and contiguous territory;
as nearly equal in population as practicable;
and which do not divide any county, city, incorporated town, borough, township, or ward, except where necessary to ensure equality of population.

Id. at 816-17. The Court recognized that other considerations “have historically played a role in the drawing of legislative districts, including “the preservation of prior district lines, protection of incumbents, or the maintenance of the political balance which existed after the prior reapportionment[,]” and that such factors are

35. Article II, section 16 provides: “The Commonwealth shall be divided into fifty senatorial and two hundred three representative districts, which shall be composed of compact and contiguous territory as nearly equal in population as practicable. Each senatorial district shall elect one Senator, and each representative district one Representative. Unless absolutely necessary no county, city, incorporated town, borough, township or ward shall be divided in forming either a senatorial or representative district.” Pa. Const. art. II, §16.

not necessarily impermissible. *Id.* at 817. According to the Court, however, such factors are “wholly subordinate to the neutral criteria of compactness, contiguity, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts[,]” which criteria “provide a ‘floor’ of protection for an individual against the dilution of his or her vote in the creation of such districts.” *Id.* Moreover, when it is demonstrated that “these neutral criteria have been subordinated, in whole or in part, to extraneous considerations such as gerrymandering for unfair partisan political advantage, a congressional redistricting plan violates [a]rticle I, [s]ection 5 of the Pennsylvania Constitution.” *Id.*³⁶

36. By way of contrast, in *Rucho*, voters in two states challenged their states’ congressional districting maps as unconstitutional partisan gerrymandering. The U.S. Supreme Court held that, for purposes of the U.S. Constitution, these claims presented nonjusticiable political questions because “judges have no license to reallocate political power between the two major political parties,” with no constitutional grant of authority to do so and “no legal standards to limit and direct their decisions.” *Id.* at 2506-07. The Court explained that the “central problem” is determining when political gerrymandering “has gone too far,” a measurement too difficult to undertake in an adjudicative context. *Id.* at 2497 (citation omitted). However, U.S. Supreme Court stated that “[p]rovisions in state statutes and **state constitutions** can provide standards and guidance for state courts to apply.” *Id.* at 2507 (emphasis added). In Pennsylvania, that is exactly what our Supreme Court did in *LWV II* when it concluded that partisan gerrymandering claims were cognizable under the Free and Equal Elections Clause and the equal protection guarantee of the Pennsylvania Constitution. *See also supra* pp. 16-17.

Population Equality, Compactness, Contiguousness³⁷
& Political Subdivision Integrity

In applying the above factors to the 2011 Plan, the Court first considered compactness, which can be measured by a number of different mathematical compactness measurements/models. The Court in *LWV II* relied principally on the Reock Compactness Score³⁸ and the Polsby-Popper Compactness³⁹ Score, which seek to quantify compactness by assigning a score of 0 (least compact) to 1 (most compact). The Court noted that the 2011 Plan had Reock and Polsby-Popper Compactness Scores of 0.278 and 0.164, respectively. However, the Court explained that a computer simulation that applied only the

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37. The *LWV II* Court did not extensively analyze the concept of “contiguity” in its decision; however, in the context of article II, section 16’s requirements that legislative districts be comprised of “contiguous territory,” the Supreme Court has previously defined “a contiguous district [a]s ‘one in which a person can go from any point within the district to any other point (within the district) without leaving the district, or one in which no part of the district is wholly physically separate from any other part.’” *Holt v. 2011 Legislative Reapportionment Commission (Holt I)*, 67 A.3d 1211, 1242 (Pa. 2013).
38. One of the *LWV II* petitioners’ experts, Dr. Chen, defined a Reock Compactness Score as “a ratio of a particular district’s area to the area of the smallest bounding circle that can be drawn to completely contain the district—the higher the score, the more compact the district.” *LWV II*, 178 A.3d at 771.
39. The same expert explained that a “Popper-Polsby Compactness Score is calculated by first measuring each district’s perimeter and comparing it to the area of a hypothetical circle with that same perimeter. The ratio of the particular district’s area to the area of the hypothetical circle is its Popper-Polsby Compactness Score—the higher the score, the greater the geographic compactness.” *LWV II*, 178 A.3d at 771.

traditional redistricting criteria, which had achieved population equality and contiguity, “had a range of Reock Compactness Scores from approximately .31 to .46, which was significantly more compact than the 2011 Plan’s score of .278; and had a range of Popper-Polsby Compactness Scores from approximately .29 to .35, which was significantly more compact than the 2011 Plan’s score of .164.” *LWV II*, 178 A.3d at 818. Additionally, the expert’s simulated plans “generally split between 12-14 counties and 40-58 municipalities, in sharp contrast to the 2011 Plan’s far greater 28 county splits and 68 municipality splits.” *Id.* at 818. Observing “that the 2011 Plan subordinated the goals of compactness and political[]subdivision integrity to other considerations[,]” the Court determined that the Plan “did not primarily consider, much less endeavor to satisfy, the traditional redistricting criteria.” *Id.* at 818-19. In so determining, the Court also relied on its “lay examination of the Plan,” which revealed “tortuously drawn districts that caused unnecessary political-subdivision splits, . . . oddly shaped, sprawling districts which wander seemingly arbitrarily across Pennsylvania,” and counties, political subdivisions, and wards unnecessarily divided amongst multiple congressional districts. *Id.* at 819.

Partisan Breakdown & Partisan Bias
(the mean-median gap and efficiency gap)

Although it was clear that the 2011 Plan failed to meet the traditional redistricting criteria as a statistical matter, which was “sufficient to establish that it violate[d] the Free and Equal Elections Clause[,]” the Supreme Court nevertheless considered other factors, such as partisan bias, stating that the evidence of record es-

tablished that the Plan’s “deviation from these traditional requirements was in service of, and effectively work[ed] to, the unfair partisan advantage of Republican candidates in future congressional elections and, conversely, dilute[d the petitioners’] power to vote for congressional representatives who represent their views.” *LWV II*, 178 A.3d at 820. In so stating, the Court relied on expert testimony regarding the partisan breakdown of the 2011 Plan, which was calculated using election data for the 2008 and 2010 statewide elections, as well as the Plan’s partisan bias calculations based on mean-median gap⁴⁰ measurements. *Id.* at 772-73, 820. The Court observed that simulated plans using the traditional redistricting criteria “created a range of up to 10 safe Republican districts with a mean-median vote gap of 0 to 4%,” whereas “the 2011 Plan create[d] 13 safe Republican districts with a mean-median vote gap of 5.9%.” *Id.* at 820. The Court found the petitioners’ expert’s testimony credible “that the 2011 Plan’s outlier status in this regard was [not] attributable to an attempt to account for Pennsylvania’s political geography, to protect incumbent congresspersons, or to establish the 2011 Plan’s majority African-American district[,]” but rather was a means of obtaining unfair partisan gain. *Id.* at 820. The Court also relied on testimony concerning the efficiency

40. According to the petitioners’ expert, the mean-median gap is a “common scientific measurement”; “To calculate the mean, one looks at the average voter share per party in a particular district. To calculate the median, one ‘line[s] up’ the districts from the lowest to the highest vote share; the ‘middle best district’ is the median. . . . The median district is the district that either party has to win in order to win the election.” *LWV II*, 178 A.3d at 774.

gap⁴¹ data in relation to the Plan, which established “a modest natural advantage, or vote efficiency gap, in favor of Republican congressional candidates relative the Republicans’ statewide vote share[.]” *Id.* at 820. Considering the above, along with other “geographic idiosyncrasies,” the Court concluded “that the 2011 Plan subordinate[d] the traditional redistricting criteria in service of achieving unfair partisan advantage, and, thus, violate[d] the Free and Equal Elections Clause of the Pennsylvania Constitution.” *Id.* at 821. The Court added that “[s]uch a plan, aimed at achieving unfair partisan gain, undermines voters’ ability to exercise their right to vote in free and ‘equal’ elections if the term is to be interpreted in any credible way.” *Id.*

In sum, the *LWV II* decision provides that any congressional redistricting plan must meet the above traditional redistricting criteria to establish compliance with the Free and Equal Elections Clause of the Pennsylvania Constitution. Our Supreme Court again reiterated this principle in its per curiam opinion and order in *League of Women Voters v. Commonwealth*, 181 A.3d 1083, 1085, 1087 (Pa. 2018) (*LWV III*), in which it adopted the 2018 Remedial Plan that it prepared based on the submissions of the parties, intervenors, and *amici*, and which it determined met all of the traditional redistricting criteria. All the Parties in the instant matter, as well as all *Ami-*

41. The efficiency gap was defined as “a formula that measures the number of ‘wasted votes’ for one party against the number of ‘wasted votes’ for another party.” *LWV II*, 178 A.3d at 777. To find the gap, one “calculates the ratio of a party’s wasted votes over the total number of votes cast in the election, and subtracts one party’s ratio from the other party. The larger the number, the greater the partisan bias.” *Id.*

cus Participants, generally agree that this Court’s consideration of the dozen or more maps submitted is governed, at least initially, by the traditional redistricting criteria espoused in *LWV II* and *III*.

This Court notes, however, that while the *LWV II* case dealt with a challenge under the Free and Equal Elections Clause of article I, section 5 of the Pennsylvania Constitution, Pa. Const. art. I, §5, with which any congressional districting plan must now comply, the challenge in that case was made in the context of an already-enacted congressional redistricting plan (the 2011 Plan) that had been passed by the state legislature and signed into law by the governor and was predicated on claims that the plan was violative of article I, section 5 **because of partisan political gerrymandering** and the resultant deliberate dilution of individuals’ votes. Such is not the case here. The Court again recognizes the Supreme Court’s pronouncement in *LWV II* that an essential part of an inquiry into whether a congressional redistricting plan violates the Free and Equal Elections Clause requires an examination of whether the congressional districts created under a redistricting plan meet the “neutral benchmarks” of compactness, contiguity, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts, and that other factors have historically been considered but are, generally, “wholly subordinate to the neutral criteria[.]” *LWV II*, 178 A.3d at 816-17. However, the *LWV II* Court had no occasion to consider other historical factors at length, such as communities of interest, as the constitutionality of the already-enacted map at issue in that case was “resolved solely on the basis of consideration of the degree to which neutral criteria

were subordinated to **the pursuit of partisan political advantage[,]**” which was essentially apparent on the face of the 2011 Plan and supported by the evidence in that case, but which is not specifically at issue in the instant case. *Id.* at 817-18 (emphasis added). We also point out the *LWV II* Court’s observation that advancements in map drawing technology and analytical software was possible and that such advancements could “potentially allow mapmakers, in the future, to engineer congressional districting maps, which although minimally comporting with these neutral ‘floor’ criteria, nevertheless operate to unfairly dilute the power of a particular group’s vote for a congressional representative[,]” and that the Court declined to address “the possibility of such future claims.” *Id.* at 817. Thus, although not explicitly stated, it appears the Court left the door open for consideration of other historically subordinate factors where the “neutral criteria” have in fact likely been met in the first instance with the help of map drawing technology and other analytical software, a situation that has now come to fruition in this case of apparent first impression.

In the instant matter, the General Assembly passed House Bill 2146, Printer’s Number 2541 (HB 2146) containing a reapportionment plan based on the 2020 Census results, which was approved by both the House and the Senate in due course. However, because Governor Wolf vetoed HB 2146, as will be discussed *infra*, HB 2146 was not adopted as an act with statewide support. See Pa. Const. art. IV, §15 (providing that “[e]very bill which shall have passed both Houses shall be presented to the Governor; if he approves he shall sign it, but if he shall not approve he shall return it with his objections to the

House in which it shall have originated . . .”). Moreover, all Parties and *Amicus* Participants in this case agree that the existing 2018 Remedial Plan, drawn by the Supreme Court in 2018, no longer complies with the constitutional requirement of an equal number of citizens in each congressional district, due to the decrease in the number of Pennsylvania’s congressional districts from 18 to 17. Therefore, the Supreme Court is tasked not with considering an already-enacted congressional redistricting plan that is alleged to be the result of partisan political gerrymandering as in *LWV II*, but rather, with (1) declaring unconstitutional the existing and now, based on the 2020 U.S. Census, undisputedly malapportioned 2018 Remedial Plan drawn by our Supreme Court; (2) comparing and evaluating the dozen or more different plans timely submitted by the Parties and *Amicus* Participants; and, in accordance with the Supreme Court’s instruction, (3) recommending a valid reapportionment plan that this Court believes comports with the federal and state constitutional requirements outlined above. This case is, therefore, more comparable to *Mellow*, 607 A.2d 204, which the Supreme Court mentioned only in passing in its *LWV II* decision. *See LWV II*, 178 A.3d at 822.

2. Mellow (one person, one vote; VRA; other considerations)

In *Mellow*, this Court was confronted with a similar scenario in which the results of 1990 U.S. Census reduced Pennsylvania’s share of U.S. House members from 23 to 21 members, a net loss of two seats/districts, thus requiring the Commonwealth to reapportion its congressional district plan. Like in the instant matter, the Gen-

eral Assembly failed to enact a 21-district congressional reapportionment plan, which prompted eight Democratic State Senators to file suit against state election officials in this Court's original jurisdiction, requesting that the Court declare the existing congressional reapportionment law unconstitutional under Article I, Section 2 of the U.S. Constitution; enjoin implementation of the congressional election schedule until a valid plan could be adopted; and adopt a valid reapportionment plan if the General Assembly failed to enact one. This Court held a prompt hearing, after which a judge of this Court preliminarily enjoined implementation of the then-current election schedule on the basis that the existing 23-district apportionment plan was unconstitutional, directed all parties and intervenors to submit their proposed apportionment plans to this Court by a certain date, and advised that the Court would select a plan if one was not enacted.

The General Assembly failed to enact a plan. This Court therefore directed that final hearings be held for the purpose of receiving evidence and considering all timely submitted proposed plans. The Supreme Court assumed plenary jurisdiction over the matter upon at the request of the plaintiffs, and designated President Judge Craig of this Court as Master to conduct hearings and create an evidentiary record and submit a recommended decision to the Supreme Court. Following three days of hearings before this Court, Judge Craig submitted his findings recommended decision approving one of the plans (Plaintiffs' No. 2) submitted by the eight Democratic State Senator plaintiffs. Ultimately, following the filing of exceptions to the recommended decision and argument thereon, the Supreme Court adopted Judge

Craig’s findings and recommended decision, along with his revised election calendar, and dismissed all exceptions.

For purposes of identifying a manageable standard by which this Court may judge the dozen or more maps timely submitted by the Parties and *Amicus* Participants in this matter and make a recommendation, Judge Craig’s recommended decision, attached to the Supreme Court’s decision as Appendix A, will first be discussed and then the Supreme Court’s decision adopting Judge Craig’s recommendation.

In his recommended decision, Judge Craig compared and evaluated the following six timely submitted reapportionment plans in his recommended decision:

- Plaintiffs’ No. 1 and 2;
- O’Donnell A and O’Donnell B (submitted by the Speaker of the Pennsylvania House of Representatives and seven other Democratic House members);
- Murtha-McDade Plan (a bipartisan plan submitted by a United States Congressman and nine other incumbent members of Pennsylvania’s congressional delegation); and
- Loeper 1 (submitted by the Pennsylvania State Senate Majority Leader and five other Republican State Senators).

Mellow, 607 A.2d at 206.

Prior to considering the proposed plans, Judge Craig laid out the controlling constitutional principles governing his analysis. Specifically, he discussed the federal constitutional “one person, one vote” principle embodied in Article I, Section 2, of the U.S. Constitution, which provides that U.S. “House of Representatives shall be

... chosen ... by the People of the several States” and “apportioned among the several States ... according to their respective Numbers.” U.S. Const. art. I, §2, cls. 1 and 3. Judge Craig observed that, in applying Article I, Section 2, the U.S. Supreme Court has held “that the goal is to make ‘as nearly as practicable one man’s vote in a congressional election ... worth as much as another’s[,]” and that such “requirement is the ‘preeminent if not the sole, criterion’ for appraising the validity of re-districting plans.” *Mellow*, 607 A.2d at 214 (citing *Wesberry v. Sanders*, 376 U.S. 1 (1964), and *Chapman v. Meier*, 420 U.S. 1 (1964)). Judge Craig further recognized that “[t]he United States Supreme Court has declined to adopt any particular deviation figure as the maximum deviation per se allowable[,]” and that “[p]opulation variances among districts must be justified.” *Mellow*, 607 A.2d at 214 (citing *Kirkpatrick v. Preisler*, 394 U.S. 526 (1969)). As Judge Craig noted, “**a plan is not per se unconstitutional just because a smaller deviation could be achieved.**” *Mellow*, 607 A.2d at 214 (emphasis added) (citing *Karcher v. Daggett*, 462 U.S. 725 (1983)).

Judge Craig defined “maximum total deviation” as “the sum of the percentage by which ... [the] most populous district ... exceeds the ideal district population ... and the percentage by which ... the least populous ... [is] below this ideal[,]” and he noted various maximum deviations that had previously been accepted (0.149%, 0.2354%, 0.399%) or rejected (5.97% and 0.284%) in then-recent years. *Mellow*, 607 A.2d at 214-15 (quoting *Board of Estimate v. Morris*, 489 U.S. 688 (1989)). He observed that while the Murtha-McDade Plan achieved “the ultimate of equality with a maximum deviation of

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0.0000017%, consisting of a difference of just one person out of 565,793[,] [d]epartures from such mathematical perfection, according to the federal courts, are justified only to advance the cause of equality realistically in the following respects:

- avoiding fragmentation of local government territories and splitting of election precincts;
- effectuating adequate representation of a minority community;
- creating districts which are compact and contiguous;
- maintaining relationships of shared community interests; and
- not unduly departing from the useful familiarity of existing districts[.]

Mellow, 607 A.2d at 215 (citations omitted).

Judge Craig then stated that he must consider all plans “on the same footing,” as we must do here. In doing so, he considered the following items, which the Court quotes in full:

Column 1—Identification of Plan: In addition to the record name for each plan, this column identifies the specific legislative bills, if any, which have substantially embodied the plan in the General Assembly. None of the listed bills was passed by both houses.

Column 2—Maximum Deviation: As defined above, this percentage figure is the sum of the percentage by which the most populous district exceeds the ideal equality number, plus the percentage by which the least populous district falls below that ideal number.

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Column 3—Average Deviation: The mean figure which reflects an average of the percentage deviations for all 21 districts in the respective plan.

Column 4—Split Municipalities: Remembering that the term “municipality” includes counties, as well as cities, boroughs and townships in Pennsylvania, 1 Pa.C.S. § 1991, this column gives a count of the municipalities to which more than one of the proposed districts of the plan applies. This column treats Philadelphia as a county rather than a city.

Column 5—Split Election Precincts: Although a voting unit in Pennsylvania is officially termed an “election district,” 25 P.S. § 2602(g), the table and the record here use, for the same concept, the term “precinct” in order to avoid confusion with the congressional “districts” which are the principal subject matter of this proceeding.

Columns 6, 7—African–American Population of District 1: These columns relate to the potentiality of a second congressional district with an African–American majority population, which would be in addition to Congressional District 2, which all plans recognize as presently being a majority African–American district in Philadelphia. Column 6 gives the African–American population percentage of the respective proposed district, and Column 7 gives the percentage of voting age African–American population in the proposed district.

Column 8—Regional Communities of Interest: This column indicates those plans which recognize the community-of-interest relationships established by the evidence (discussed below) as to (1) Lehigh Valley's long-standing joinder of Lehigh and Northampton Counties in one congressional district, (2) Berks and Schuylkill Counties' long-standing joinder in one congressional district, (3) keeping Bucks County in one congressional district, and (4) retention of Carlisle and adjacent municipalities such as North Middleton Township, in Cumberland County, within the 19th Congressional District.

Column 9—Estimates of Party Balance of Seats: Based solely on party registration statistics, this column gives the number of congressional seats thus projected for each party with respect to each plan across the state.

Because the criterion of compactness and contiguity involves visual inspection of a graphic presentation of the shape of a congressional district, that factor cannot be reflected by means of the tabulation in Finding No. 16, but must be considered separately.

Id. at 215-16.

In comparing and contrasting the plans, Judge Craig first considered the mathematical exactitude of the Murtha-McDade Plan in terms of the equal population requirement, with a maximum deviation of 0.0000017%, but rejected it given its split of 22 election precincts and 27 local governments, noting that "a serious election administration problem arises from requiring the voters in a

single precinct to look to two different sets of congressional candidates.” *Id.* at 218. He then determined that all of the proposed plans were acceptable in terms of population equality, and that he would have to consider other criteria in evaluating the plans further.

In particular, Judge Craig noted that, “[w]hen possible, an increase in the number of minority-in-the-majority districts is constitutionally required.” *Id.* at 219 (citing *Gingles*, 478 U.S. 30, and other cases). “Minority voting should be maximized as much as possible.” *Mellow*, 607 A.2d at 219 (citing *Jeffers v. Clinton*, 730 F. Supp. 196 (1989)). Given the 9% African-American population of Pennsylvania at the time, Judge Craig noted that there was “a potential for two African-American majority districts.” *Mellow*, 607 A.2d at 219. In so noting, Judge Craig specifically considered Philadelphia, which he observed was, at the time, one of the three Pennsylvania counties large enough to be split into more than one congressional district, and also the only majority African-American congressional district (District 2), with about 81% African-American population. *Id.* He then considered the “key question” of whether another African-American majority congressional district could be mapped out of the then-adjointing District 1 by including it in the adjoining City of Chester (which was then the only city in Pennsylvania with an African-American majority of citizens), and in some small part of the already-existing super-majority in District 1. *Id.* Determining that it could, the issue in the case became one of what percentage of African-American population was appropriate in each of the districts. *Id.* In placing considerable emphasis on the percentages of African-Americans in each district, Judge Craig considered which of the plans

before him created a second African-American minority-majority district (*i.e.*, District 1), while also simultaneously maintaining a substantial majority population of African-Americans in District 2. *Id.* at 219-20. Ultimately, Judge Craig found that Plaintiffs' Plans Nos. 1 and 2 came closest to achieving as much, with 52.4% African-American population in District 1 and 62.242% in District 2, both above 50%, while all of the other plans kept District 2's percentage higher at the cost of achieving a lower African-American population in District 1 and thus risking the District 1 minority group's effectiveness. *Id.* Despite arguments made to the contrary, and given the absence of any supporting evidence, Judge Craig rejected the notion that a particular percentage of a minority was required in a minority-majority district in order to preserve that group's effectiveness. *Id.* at 220.

"On the basis of deviations from equality minimized as much as possible, with a lessened administrative problem as a result of minimal precinct splitting, and embodiment of a potential for two African-American majority districts," Judge Craig characterized Plaintiffs' Plan No. 2 "as the leading prospect for approval[.]" and advised that the next step in the inquiry must be "salient regional concerns, as voiced in th[e] record[.]" *Id.* at 220. In so doing, Judge Craig observed the following concerns established by the undisputed testimony and other evidence before him: a certain township's desire that it be kept entirely within its county in a particular congressional district; certain counties have been together within a single district since 1972, and share a valley, circulation arteries, common news media, and organizational and cultural ties, which have a unifying influence on the valley area; two counties share community of interest in

a common economic base, circulation arteries, and schools of higher education, among other things; an affinity of two townships in a county with other communities in one district as opposed to another; and the City of Pittsburgh having more commonality with certain suburbs as opposed to others. *Id.* at 220-24. Judge Craig concluded that Plaintiffs' Plans Nos. 1 and 2 were the only plans that substantially satisfied the regional concerns identified by the evidence.

Having considered the above factors, Judge Craig ultimately recommended Plaintiffs' Plan No. 2, which had a greater maximum deviation than the mathematically exact Murtha-McDade Plan, because the proponents of the plan showed that the variance between the districts was necessary to achieve the legitimate goals of minimally splitting precincts, achieving an enlarged number of two congressional districts with a majority of African-American population, and implementing the community-of-interest factors in those regions across the state that had identified them. *Id.* at 224.

In its opinion adopting Judge Craig's recommendation, the Supreme Court observed that Judge Craig properly considered the federal law requiring that congressional districts be equal in population to the greatest practical extent, and that slight departures from mathematical perfection have been justified by federal courts only to advance the cause of equality in terms of "avoiding fragmentation of local government territories and the splitting of election precincts; effectuating adequate representation of a minority group; creating compact and contiguous districts; maintaining relationships of shared community interests; and not unduly departing

from the useful familiarity of existing districts.” *Id.* at 206.

In addressing, and rejecting, a challenge to Judge Craig’s selection of Plaintiffs’ Plan No. 2 based on its higher maximum total deviation than other plans, the Supreme Court observed that the U.S. Constitution requires only that “districts be apportioned to achieve population equality ‘as nearly as is practical.’” *Id.* at 207. The Court identified a two-part test for determining whether the maximum total deviation of a plan satisfies the “one person, one vote” principle: “First, the party challenging a redistricting plan must show that ‘the population differences among districts could have been reduced or eliminated altogether by a good-faith effort to draw districts of equal population.’”; However, “‘a plan is not per se unconstitutional just because a smaller population deviation could be achieved.’” *Id.* The Court then observed that “the existence of plans with smaller deviations simply obligates a court to apply the second part of the test, *i.e.*, to ask whether the proponent of the plan can show that ‘each significant variance between districts was necessary to achieve some legitimate goal.’” *Id.* The Court also identified state objectives found to be legitimate, including making districts compact, **respecting municipal boundaries, preserving cores of prior districts**, and avoiding contests between incumbent representatives. *Id.* (citing various cases). Moreover, the Court observed that Judge Craig properly held that extremely small deviations in district populations may be justified by, *inter alia*: **a desire to avoid splitting of political subdivisions and precincts, to provide adequate representation to a minority group, and/or to preserve communities of interest.** *Id.* at 208.

The Supreme Court also agreed with Judge Craig that Plaintiffs' Plan No. 2 best protected minority voting rights. In so doing, it observed that "[t]he primary tool for preventing minority voting dilution is Section 2 of the [VRA, 52 U.S.C. §10301, *formerly* 42 U.S.C. §1973]," which prohibits the state from denying or abridging individuals' right to vote based on race. *Mellow*, 607 A.2d at 208-09. The Court noted that "there is no legal requirement either in the courts of the Commonwealth or the federal courts," that a redistricting plan have a specific percentage of African-American total population to satisfy Section 2, and rejected any arguments to the contrary. *Id.* at 210. Further, citing *Gingles*, the Court noted that many of the plans diluted the voting strength of African-American voters by concentrating those voters into one African-American district at the expense of voters in another African-American district. The Court then noted that while incumbency protection can be considered, "it may not be accomplished at the expense of minority voting potential." *Mellow*, 607 A.2d at 210. Finally, the Court identified two other factors for consideration: political fairness, in terms of achieving a politically fair balance in Pennsylvania's delegation and dividing the loss of two seats evenly; and minimizing municipality and precinct splitting. *Id.* Because Plaintiffs' Plan No. 2 met these requirements, the Court adopted Judge Craig's recommendation.

Turning to the instant matter, the question, as this Court understands it, is what Judge Craig aptly identified in *Mellow* as which of the dozen or so proposed plans timely submitted to this Court for consideration comes closest to meeting all of the pertinent constitutional standards, outlined above, including those "subordinate"

standards identified by *LWV II*, which this Court must now apparently consider given that most plans appear to at least minimally meet the “traditional redistricting criteria” on account of advances in map drawing technology and other analytical software.

C. Other Considerations

A. Voting Rights Act

As noted in *Mellow*, Pennsylvania is subject to section 2 of the VRA, 52 U.S.C. §10301. *See Mellow*, 607 A.2d at 208-10. Subsection 2(a) of the VRA prohibits any state law “which results in a denial or abridgement of the right of any citizen of the United States to vote on account of race or color” 52 U.S.C. §10301(a). Subsection 2(b) provides that a violation of subsection (a) is established, based upon the totality of the circumstances, if “it is shown that the political processes leading to nomination or election in the State or political subdivision are not equally open to participation by members of a class of citizens” referred to in subsection (a), “in that its members have less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice.” 52 U.S.C. §10301(b).

As it concerns the redistricting process, the U.S. Supreme Court has recently explained:

A State violates [section] 2 [of the VRA] if its districting plan provides “less opportunity” for racial minorities “to elect representatives of their choice.” *League of United Latin American Citizens v. Perry*, 548 U.S. 399, 425 . . . (2006) (*LULAC*). In a series of cases tracing back to . . . *Gingles*, 478 U.S. 30 . . . , we have interpreted this standard to mean that, under

certain circumstance, States must draw “opportunity” districts in which minority groups form “effective majorit[ies],” *LULAC*, *supra*, at 426

Abbott v. Perez, 138 S. Ct. 2305, 2315 (2018).

The circumstance in which a state must draw such opportunity districts, the Supreme Court has explained, is established by three findings derived from the Court’s opinion in *Gingles*. The so-called “*Gingles* requirements” are: (1) a racial minority group that is “sufficiently large and geographically compact to constitute a majority in a single-member district”; (2) that the racial group is “politically cohesive”; and (3) that “the white majority votes sufficiently as a bloc to enable it . . . usually to defeat the minority’s preferred candidate.” *Gingles*, 478 U.S. at 5051; *see also LULAC*, 548 U.S. at 425.

2. Deference to Legislature

The plan submitted by the Republican Legislative Intervenors is actually HB 2146. The Republican Legislative Intervenors asked this Court to give their proposed plan special deference because that plan was passed in the General Assembly on January 24, 2022. As such, the Republican Legislative Intervenors correctly note it went through the standard requirements for the making of any map. As stated earlier, it is the legislature who has the responsibility to draw a map. The plan was drawn by a well-known nonpartisan citizen, Amanda Holt, and it was vetted by the public in due course of its consideration before being adopted, with minor changes by the House and Senate. The Bill was then vetoed by the Governor.

Some state and federal courts have declined to accord deference to a map that made it only partway through

the legislative process but failed to become law. *See, e.g., O'Sullivan v. Brier*, 540 F. Supp. 1200, 1202 (D. Kan. 1982) (three-judge court) (“[W]e are not required to defer to any plan that has not survived the full legislative process to become law.”); *Carstens v. Lamm*, 543 F. Supp. 68, 79 (D. Colo. 1982) (three-judge court) (explaining that a vetoed legislative plan “cannot represent current state policy any more than the Governor’s proposal”); *Hippert v. Ritchie*, 813 N.W.2d 379, 380 n.6 (Minn. 2012) (“[B]ecause the Minnesota Legislature’s redistricting plan was never enacted into law, it is not entitled to . . . deference.”); *Wisconsin State AFL-CIO v. Elections Board*, 543 F. Supp. 630, 632 (E.D. Wis. 1982) (three-judge court). Other courts, however, have given deference to plans enacted by the legislature even though they were vetoed by the governor. *See Donnelly v. Meskill*, 345 F. Supp. 962 (D. Conn. 1972) (adopting the legislature’s proposed plan, explaining that “[t]he legislative adoption of [redistricting plan] tips the scales in favor of the plan . . . which provides districts essentially as outlined by the legislature . . .” and observing that the plan had “the added advantage that it is basically the plan adopted by the legislature”). The U.S. Supreme Court has also opined on this issue holding that a federal district court erred by displacing “legitimate state policy judgments with the courts own preference” by neglecting a recently enacted, but not precleared plan by the Department of Justice, legislative redistricting plan. *Perry v. Perez*, 132 S. Ct. 934, 941 (2012). In *Upham v. Seamon*, 456 U.S. 37 (1982) (*per curiam*), the U.S. Supreme Court held that district courts are not free to disregard the political program of state legislatures when fashioning reapportionment plans.

At this juncture, the Court will review HB 2146 along with the other plans submitted to the Court to assess its compliance with the constitutional traditional criterial factors adopted in *LWV II*, as well as other non-constitutional factors.

**IV. COMMONWEALTH COURT PROCEEDINGS
AND RECOMMENDED FINDINGS OF
FACTS AND CONCLUSIONS OF LAW**

**A. The Plans Presented by the Parties and Amicus
Participants**

FF1. The following plan was submitted by the Carter Petitioners. *See* Carter Petitioners' Brief (Br.) in Support of Proposed Congressional Redistricting Plan, Exhibit (Ex.) 2.

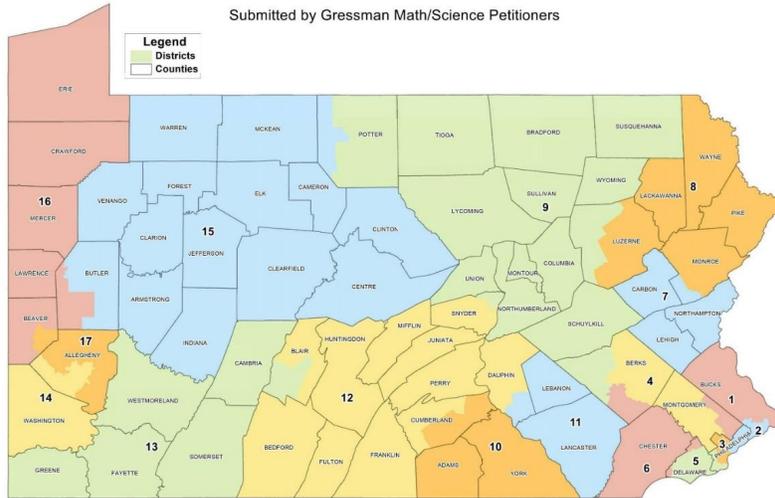
[image omitted from court opinion]

FF2. The following map, self-described as the "Math/Science Map," was submitted by the Gressman Petitioners. *See* Br. in Support of Gressman Math/Science Petitioners' Congressional Plan, Ex. 2, at 1.

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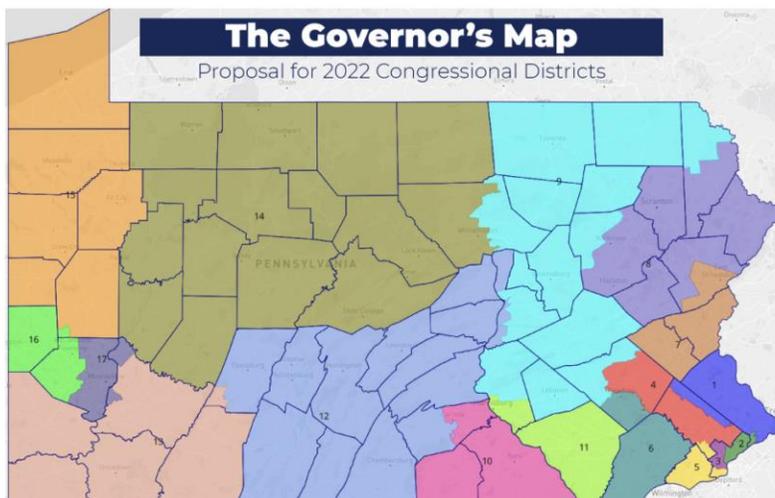
Proposed Congressional Map

Submitted by Gressman Math/Science Petitioners



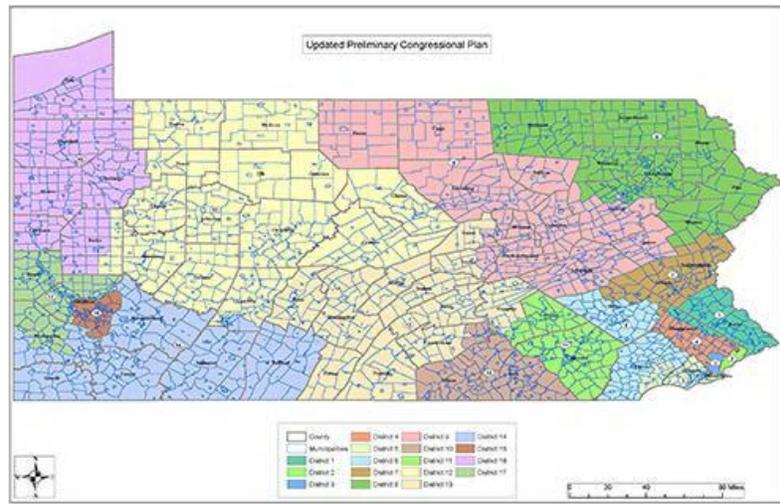
Carter v. Chapman, No. 464 M.D. 2021, and Gressman v. Chapman, No. 465 M.D. 2021.

FF3. The following plan, developed by the Governor's Office, was submitted by Governor Wolf. See <https://www.governor.pa.gov/congressionaldistricts-map-proposals>.



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FF4. The following plan, which is embodied in HB 2146, was submitted by the Republican Legislative Intervenors (House and Senate). *See* PreHearing Opening Br. of Senate Republican Intervenors, at PDF p. 181, Appendix (App.) C to John M. Memmi, Ph.D. Expert Report (Memmi Report); Corrected Opening Br. of House Republican Intervenors in Support of Proposed Congressional Redistricting Map, Ex. I, Ex. 1.



FF5. On December 8, 2021, House Bill 2146, Printer's Number 2491 was introduced and referred to the House State Government Committee. *See* Bill History.⁴²

FF6. House Bill 2146, Printer's Number 2491 embodied a 17-district congressional redistricting plan that a

42. *See* Bill History for HB 2416, available at https://www.legis.state.pa.us/cfdocs/billinfo/bill_history.cfm?year=2021&sind=0&body=H&type=B&bn=2146 (last visited Feb. 1, 2022).

citizen and good-government advocate, Amanda Holt, had created on her own. Corrected Opening Brief of House Republican Intervenors, Ex. A, Grove Letter (Jan. 6, 2022) (Grove Letter); Ex. I, Affidavit of Bill Schaller.

FF7. On December 15, 2021, the Bill was reported out of the House State Government Committee, as amended, as HB 2146, Printer's Number 2541 (HB 2146), and was brought up for first consideration on the same date. *See* Bill History.

FF8. HB 2146 was made available for public comment, engendering a total of 399 comments. *See* Grove Letter.

FF9. Those comments led to some additional changes to the bill that were designed to increase the compactness of certain districts and ensure that certain communities of interest were preserved. *Id.*

FF10. The Bill was brought up for second consideration on January 11, 2022, and, on January 12, 2022, the Pennsylvania House of Representatives passed HB 2146 by a 110-91 vote and referred it to the Senate State Government Committee for consideration. *See* Bill History.

FF11. HB 2146 was reported out of the Senate State Government Committee on January 18, 2022, and was brought up for first consideration on that same date. *See* Bill History.

FF12. HB 2146 was brought up for second consideration by the full Senate on January 19, 2022. *Id.*

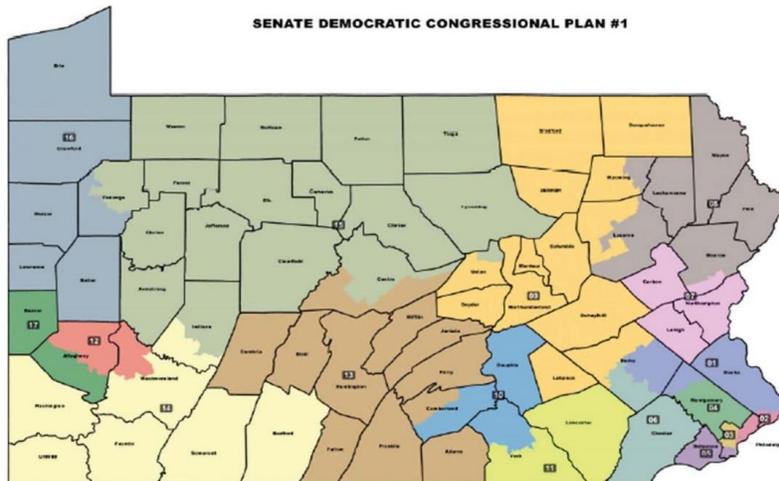
FF13. On January 24, 2022, HB 2146 was referred to the Senate Appropriations Committee, reported out of the committee, brought up for third consideration, and passed in a 29-20 vote. *Id.*

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FF14. Also on January 24, 2022, HB 2146 was presented to Governor Wolf, who subsequently vetoed the bill on January 26, 2022. *See Bill History.*

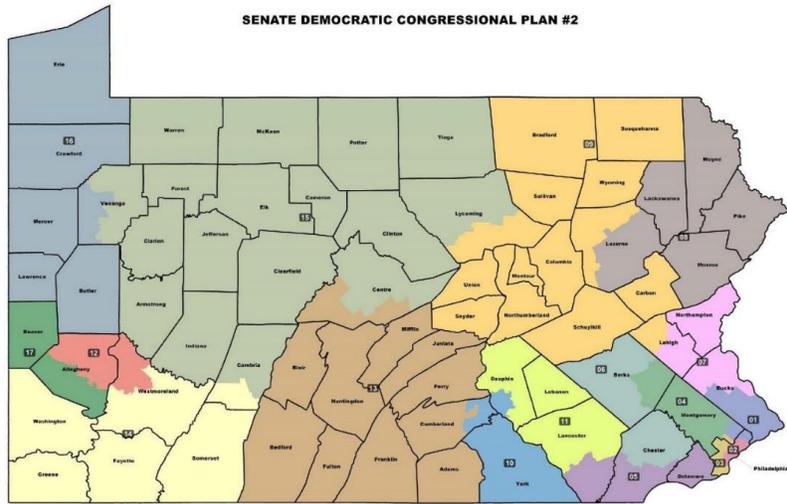
FF15. Two following plans were submitted by the Senate Democratic Caucus Intervenors. *See Senate Democratic Caucus' Br. in Support of Senate Democrats' Caucus' Proposed Redistricting Plan, Ex. A (Map 1) and (Map 2).*

(a) Senate Map 1



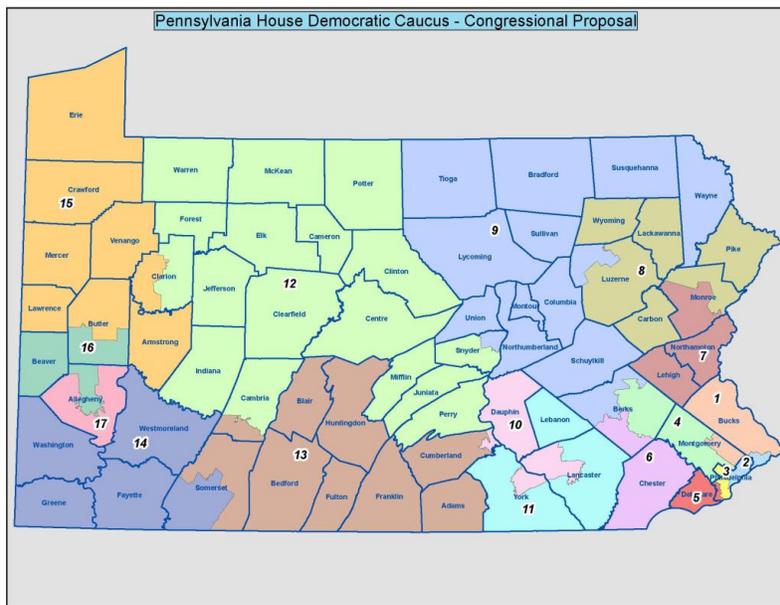
216a

(b) Senate Map 2



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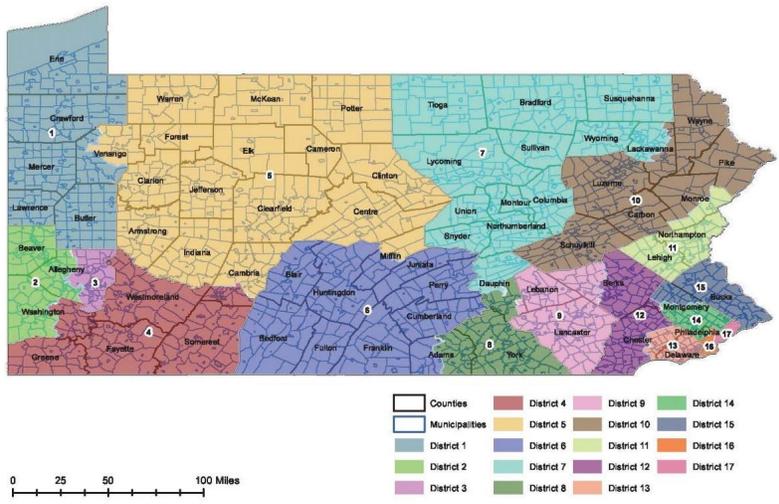
FF16. The following Plan was submitted by House Democratic Caucus Intervenor McClinton. *See Br. of House Democratic Caucus Intervenor McClinton in Support of Proposed Congressional Redistricting Plan*, uploaded to SharePoint as Ex. (unnumbered).



FF17. The following two Plans were submitted by the Congressional Intervenors. *See Br. of Congressional Intervenors, Ex. A (Map 1) and Ex. B (Map 2)*.

1. Resenthaler 1

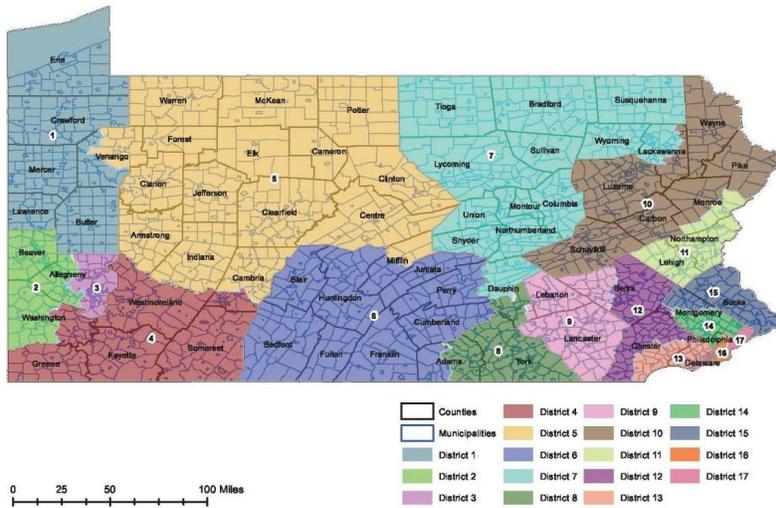
Resenthaler 1 Congressional Map



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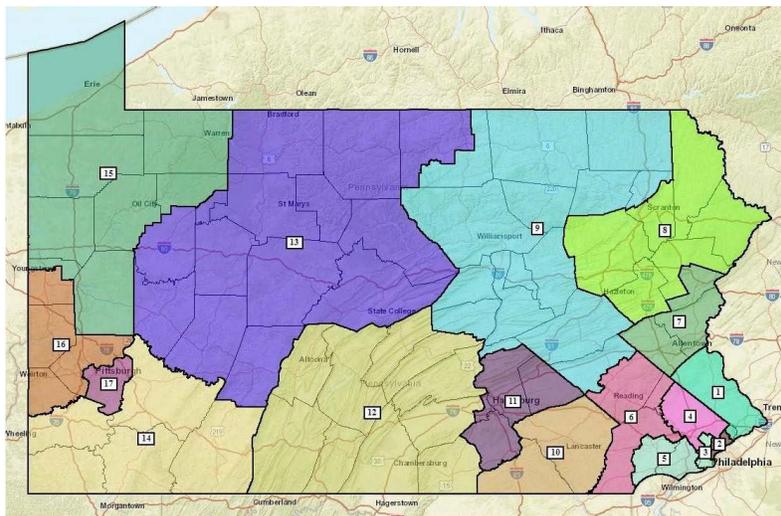
2. Reschenthaler 2

Reschenthaler 2 Congressional Map



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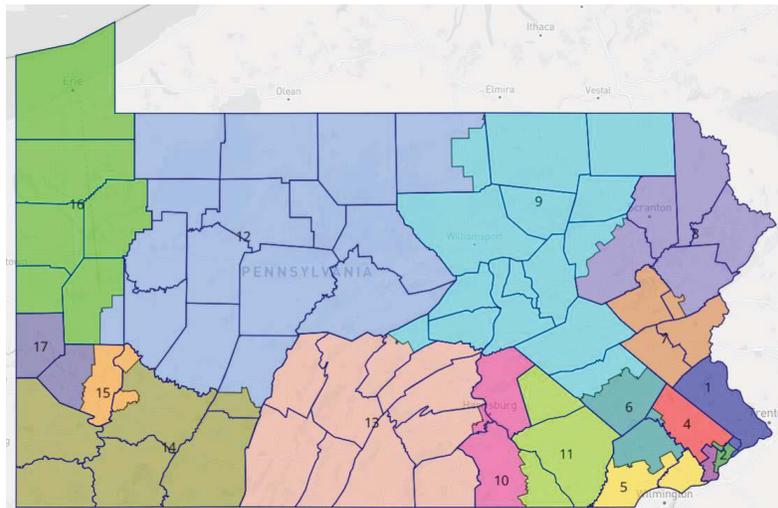
FF18. The following plan was submitted by Amici Voters of the Commonwealth (Voters of PA). *See* Br. of Amici Curiae Voters of the Commonwealth in Support of Their Proposed Plan, Ex. A, Sean Trende Expert Report (Trende Report), App. 2.



FF19. The Voters of PA are a group of Pennsylvania voters who specify that they intend to advocate and vote for Republican candidates in upcoming elections and view themselves as a “mirror image” of the Carter Petitioners. *See* Voters of PA Br. at 1.

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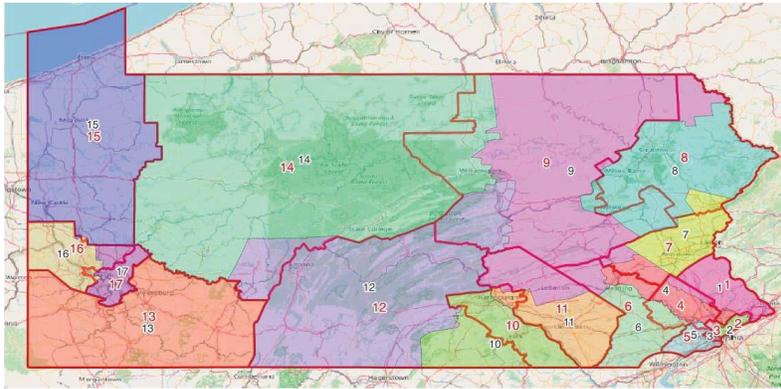
FF20. The following Plan was submitted by *Amici Draw the Lines PA*. See Proposed Redistricting Plan and Supporting Statement of Amici Curiae Draw the Lines PA Participants (*Draw the Lines PA Br.*), Ex. A, at 1.



FF21. Draw the Lines PA is a nonpartisan education and engagement initiative of the Committee of Seventy, a nonpartisan civic leadership organization, which has organized district mapping competitions among Pennsylvania's citizens. See *Draw the Lines PA Br.*, at 3.

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FF22. The following plan was submitted by Khalif Ali et al. *See* Br. of Amici Khalif Ali et al. (Ali Br.), Sarah Andre Expert Report (Andre Report), Ex. 2, at 1.



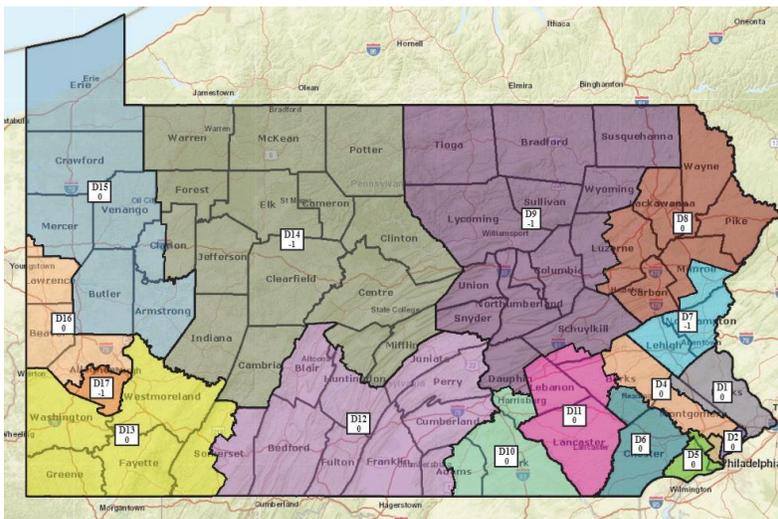
FF23. *Amicus* Participants Khalif Ali *et al.* (Ali *Amici*), used Governor Wolf’s plan as a starting point. (Ali Br. at 1 n.1.)

FF24. The Ali *Amici* are individual voters who are members of various advocacy groups, such as Common Cause Pennsylvania, the Voter Empowerment Education and Enrichment Movement, Fair Districts PA, and chapters of the League of Women Voters. (Ali Br. at 3-9.)

FF25. The Ali *Amici* advocate for the use of population data (Data Set #2), which has been adjusted to use the home addresses of state prisoners, so as to avoid the practice of “prison-based gerrymandering.” (Ali Br. at 9.)

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FF26. The following plan was submitted by Amici Citizen Voters. *See* Amicus Participants’ (“Citizen-Voters”) Proposed Remedial Map of Congressional Districts (Citizen Voters Br.), Ex. A.



B. Evidentiary Hearing

Hearings were conducted on January 27 and 28, 2022. Six experts offered expert testimony and were subjected to cross-examination by every other Party. Each of the Parties was given one hour to conduct a direct examination of their expert witness. Cross-examination was limited to 15 minutes per Party, per expert. The Court permitted each Party to make a 15-minute opening and a 15-20 minute closing statement and to submit post-trial submissions.

C. Expert Reports and Testimony**1. Johnathan Rodden, Ph.D. (Carter Petitioners)**

FF1 In support of their redistricting plan, the Carter Petitioners presented the expert opinion of Jonathan Rodden, Ph.D.

FF2. Dr. Rodden is a professor of political science at Stanford University, who specializes in research on the patterns of political representation, geographic location of demographic and partisan groups, and the drawing of electoral districts. (Rodden Report at 1-2.)

FF3. Dr. Rodden has authored numerous academic papers concerning the assessment of partisan gerrymandering, has authored a book on political districts and representation, has testified as an expert witness in six previous election law and redistricting cases across the country, and is currently working as a consultant for the Maryland Redistricting Commission. (Rodden Report at 2.)

FF4. Dr. Rodden prepared the Carter Petitioners' proposed plan. FF5. Pursuant to the Carter Petitioners' request, Dr. Rodden prioritized, to the extent possible, the preservation of the cores and boundaries of the existing 18-district plan enacted in 2018. (Rodden Report at 1; N.T. at 84.)

FF5. Pursuant to the Carter Petitioners' request, Dr. Rodden prioritized, to the extent possible, the preservation of the cores and boundaries of the existing 18-district plan enacted in 2018. (Rodden Report at 1; N.T. at 84.)

FF6. Because Dr. Rodden prioritized this consideration more than other parties, he was able to create a plan in which 86.6% of Pennsylvania's population would remain within the same district as under the existing

plan—a higher percentage than any other plan submitted to the Court. (Rodden Resp. Report at 2; N.T. at 115-17.)

FF7. With regard to the maintenance of the cores of the prior districts, and with regard to the districting process generally, Dr. Rodden observed that an important consideration is the population and demographic shifts that have occurred in Pennsylvania over the past decade.

FF8. During this time, the population of denser areas has increased, and the population of more sparse areas has decreased—rendering population-dense, metropolitan areas of southeast and southwest Pennsylvania even more dense, and making less-dense rural areas even more sparse. (Rodden Report at 6-8; N.T. at 8587.)

FF9. Dr. Rodden further noted that these population shifts are highly correlated with political party, as the growing, population-dense areas tend to contain voters who favor the Democratic party, and the rural areas that are losing population tend to contain voters who favor the Republican party. (Rodden Report at 9.)

FF10. Dr. Rodden drew the Carter Petitioners' plan to create 17 districts that are as close to equal in population as possible—deviating in population by no more than one person. (Rodden Report at 21; N.T. at 98-100.)

FF11. All of the other plans that Dr. Rodden reviewed also achieved equal population. (N.T. at 100.)

FF12. The Carter Petitioners' plan, along with all of the others, satisfied the contiguity requirement. (Rodden Report at 21; N.T. at 91.)

FF13. As for compactness, Dr. Rodden focused upon two metrics that received attention in the *LWV* decision—the Reock score and the Polsby-Popper score.

FF14. However, Dr. Rodden stressed that there is no single “best” compactness measurement, as each captures slightly different aspects of a compact district.

FF15. The Polsby-Popper score, for instance, “rewards districts with smooth perimeters and penalizes those with more contorted borders” that may nonetheless follow municipalities or geographic features, and the Reock score “can be sensitive to the orientations of a district’s extremities.” (Rodden Resp. Report at 3.)

FF16. Dr. Rodden calculated that the Carter Petitioners’ plan has an average Reock score of 0.46 and an average Polsby-Popper score of 0.32. (Rodden Report at 22.)

FF17. Dr. Rodden further reported a Schwartzberg compactness score of 1.7, a Population Polygon score of 0.73, and a Convex Hull score of 0.78; however, neither Dr. Rodden’s report nor his testimony detailed the method by which these scores are computed, or their relative merits. (Rodden Report at 22.) FF18. Although Dr. Rodden evaluated the other parties’ plans for compactness, he did not report the precise scores that he determined for each plan; rather, he concluded that all of the plans fell within a fairly “narrow range” of acceptable compactness scores. (Rodden Resp. Report at 3; N.T. at 93-94.)

FF18. Although Dr. Rodden evaluated the other parties’ plans for compactness, he did not report the precise scores that he determined for each plan; rather, he concluded that all of the plans fell within a fairly “narrow range” of acceptable compactness scores. (Rodden Resp. Report at 3; N.T. at 93-94.)

FF19. With regard to political subdivision splits, Dr. Rodden drew the Carter Petitioners’ plan so as to split

14 counties a total of 17 times, which he opined as performing well in comparison with other plans. (Rodden Resp. Report at 4; N.T. at 97.)

FF20. With regard to other political subdivisions, Dr. Rodden reports that the Carter Petitioners' plan splits 20 a total of 23 times, which he opined was in the middle of the distribution across the submitted plans. (Rodden Resp. Report at 4.)

FF21. Although he did not report on the division of wards, Dr. Rodden placed a unique focus on preferring not to split Voter Tabulation Districts (VTDs), which are the geographic entity in which elections are administered on the local level. (N.T. at 95-96.)

FF22. The Carter Petitioners' plan splits 14 VTDs. (Rodden Resp. Report at 6.)

FF23. In discussing his splitting of districts, Dr. Rodden stated generally, without much elaboration, that the Carter plan resolved problems that were apparent in the 2018 Remedial Plan with regard to splits of State College. FF24. When asked how the Carter plan respects communities of interest, Dr. Rodden stated it was similar to minimizing jurisdictional splits, that it would make sense to keep certain areas together, like Harrisburg, the Lehigh Valley, and State College, and that he "attempted to avoid splitting apart those types of communities." (N.T. at 111-14.)

FF25. Further, when asked about his overall conclusions about how the Carter plan compares to the 2018 Remedial Plan, Dr. Rodden did not give a straight answer, but testified that "the maps were very similar." (N.T. at 114-15.)

FF26. Dr. Rodden explained that he did not expressly consider any partisan or racial data when preparing the

Carter Petitioners' plan. (Rodden Report at 23; N.T. at 117-18.)

FF27. He testified that, after completing the plan, he evaluated its partisan performance using various metrics.

FF28. Principally, Dr. Rodden used precinct-level data from previous statewide elections in 2016, 2018, and 2020 to establish the statewide vote share for candidates from both the Democratic and Republican parties, and then used these data to estimate the partisan outcomes that might be expected in the various districts in the Carter Petitioners' plan. (Rodden Report at 23-24; N.T. at 119.)

FF29. Dr. Rodden concluded that these data suggest that the Carter Petitioners' plan produces 8 districts in which Democrats may be expected to win, but one of which would likely be highly competitive; 8 districts in which Republicans may be expected to win, but two of which would be potentially competitive; and 1 district that was effectively a "toss-up." (Rodden Report at 25.)

FF30. In his response report and his testimony, Dr. Rodden elaborated upon this analysis, opining that, although 10 of the districts facially lean Democratic based upon the statewide vote share data, two of them are very close, but none of the Republican-leaning districts were as close to "toss-ups"—meaning that the plan "could easily lead to a 9-8 Republican majority." (Rodden Resp. Report at 9; N.T. at 121-28.)

FF31. Dr. Rodden stressed that this sort of analysis does not allow predictions to be made with certainty, particularly because it does not consider the advantage often enjoyed by incumbents. (Rodden Resp. Report at 9-10; N.T. at 12428.)

FF32. With as many competitive districts as are exemplified by the Carter Petitioners' plan, Dr. Rodden opined, "a very small change . . . can turn what appears to be a 10 to 7 District [one] way into very easily a 10 to 7 District the other way." (N.T. at 128.)

FF33. Comparing the other proposed plans submitted to the Court, Dr. Rodden opined that several appeared to be outliers in terms of their potential seat distribution.

FF34. Dr. Rodden believed that HB 2146, the Voters of PA Plan, and the Reschenthaler 1 and 2 Plans produced lower numbers of Democratic-leaning seats than the other plans. (Rodden Resp. Report at 10; N.T. at 131-32.)

FF35. By contrast, he believed the House Democratic Caucus' Plan was an outlier in the other direction—producing more Democratic-leaning districts than the others. *Id.*

FF36. Dr. Rodden conducted one final measurement of the partisan performance of the various plans—the mean-median difference.

FF37. Dr. Rodden calculated the mean-median difference of the Carter Petitioners' plan to be 0.005. (Rodden Resp. Report at 11.)

FF38. He observed that most of the plans exhibit very small mean-median differences—close to zero—which indicates that most of the plans would not be likely to produce "an unusual number of comfortable victories" for either party. (N.T. at 134.)

FF39. However, Dr. Rodden concluded that certain plans contained a median district that is more Republican than the average: HB2146, the Voters of PA Plan, the

Citizen-Voters plan, and both Reschenthaler plans. (Rodden Resp. Report at 10-11; N.T. at 135-36.)

FF40. On cross-examination, Dr. Rodden conceded that he did not count splits of the six political subdivisions enumerated in the Pennsylvania Constitution in his analysis, including wards, but did consider the division of VTDs, which is not a factor in the Pennsylvania Constitution. (N.T. at 141-43.)

FF41. Dr. Rodden further clarified that his calculation of mean-median values was based upon data that were averaged across multiple elections, as opposed to data that were drawn from individual election results. (N.T. at 144-45.)

FF42. With respect to HB 2146 and the total county splits, Dr. Rodden initially testified that HB 2146 was “one of the plans with one of the higher numbers”; however, when it comes to VTD splits, he explained, “it is relatively low” in comparison to the Carter plan. (N.T. at 148.)

FF43. Dr. Rodden subsequently admitted, however, that he answered the question incorrectly that HB 2146 had a high number of total county splits, and corrected himself by stating that HB 2146’s number of counties split was “relatively low” in comparison to the Carter plan. (N.T. at 149-50; *see also* Rodden Resp. Report at 4, Table 2.)

FF44. Dr. Rodden also appeared to admit that there may be a slight discrepancy in his calculation of HB 2146’s total county subdivision splits (25 total county subdivision splits) as compared to the Legislative Data Processing Center’s tabulation of HB 2146’s total subdivision splits (18 total splits of the 16 political subdivisions), but that such discrepancy was “probably due to

something like” the specific category and/or municipality terminology used. (N.T. at 151-53; *see* also Rodden Resp. Report at 5, Table 3.)

FF45. Further, Dr. Rodden affirmed, according to his analysis, that the Carter Plan had two “coin toss” districts, and that no other plan garnered more than three “coin toss” districts. (N.T. at 155-57.)

FF46. Dr. Rodden also admitted that, despite having written extensively about simulation analysis methodologies to measure partisan fairness in the past, he did not conduct a simulation analysis in this case, although he was capable of doing so, because “it didn’t occur to [him] that drawing a [sic] 100,000 other plans was something that [he] should do.” (N.T. at 157-59, 172.)

FF47. When asked about his assessment that HB 2146 was an outlier (*i.e.*, not aligned with the statewide vote share) because it generated 8 expected Democratic seats, and further, why the Carter Plan could not also be characterized as an outlier in that it garnered 10 Democratic seats, Dr. Rodden explained that he only based his assessment on a comparison to the other proposed plans in this case and not the neutral simulations. (N.T. at 158-60.)

FF48. Dr. Rodden additionally agreed that Reschenthaler Plans 1 and 2 meet the equal population requirement, are contiguous, are relatively compact, and contain the least amount of split counties, among other splits. (N.T. at 164-70.) FF49. Further, Dr. Rodden confirmed that he only consider partisan fairness broadly in his analysis, and did not consider vote dilution or disenfranchisement. (N.T. at 183-84.)

FF50. Dr. Rodden again acknowledged that he did not consider racial data in his analysis, but stated that “it

would make sense after drawing a plan to then assess its compliance with the Voting Rights Act”; however, he explained he drew the Carter Plan based on the 2018 Remedial Map and that “the districts in the surroundings of minority communities changed hardly at all in [his] plan[, which] was the extent of his consideration of Voting Rights Act claims.” (N.T. at 190-91.) FF51. Finally, Dr. Rodden noted that “a good share of . . . simulations end up in a range . . . that produces . . . partisan fairness . . . [s]o it is not the case that the human geography in Pennsylvania requires us to draw unfair districts.” (N.T. at 192.)

2. Professor Daryl DeFord (Gressman Petitioners)

FF52. In support of their plan, the Gressman Petitioners offered the expert opinion of Daryl R. DeFord, Ph.D.

FF53. Dr. DeFord is an assistant professor of data analytics in the Department of Mathematics and Statistics at Washington State University. (DeFord Report at 1.)

FF54. Dr. DeFord’s work focuses upon the application of combinatorial and algebraic techniques to the analysis of social data, particularly political redistricting.

FF55. Dr. DeFord’s work on redistricting has been published in numerous academic journals.

FF56. Dr. DeFord has provided expert reports in connection with other redistricting litigation, and he has contributed analysis to the Colorado Independent Legislative Redistricting Commission. *Id.* at 1-2.

FF57. Dr. DeFord assessed the Gressman Petitioners’ plan for compliance with the traditional districting

criteria, and analyzed how it and the other plans performed on those and numerous other metrics.

FF58. Dr. DeFord evaluated the plans for population equality, respect for the boundaries of political subdivisions, compactness, contiguity, partisan fairness, and the presence of minority opportunity districts. (DeFord Report at 5-6; N.T. at 202.)

FF59. With respect to population equality, Dr. DeFord determined that the Gressman Petitioners' plan achieved the best possible outcome, with a difference of no more than one person between the largest and smallest districts in the plan. (DeFord Report at 6-7; N.T. at 203-04.)

FF60. Unlike some of the other experts, Dr. DeFord identified a minor population discrepancy in two of the other plans—the Carter Petitioners' plan and the House Democratic Caucus' Plan, both of which exhibited a maximum population deviation of two persons, rather than one. (DeFord Resp. Report at 4; N.T. at 204.) Dr. DeFord confirmed that all of the proposed plans satisfy the contiguity requirement. (DeFord Resp. Report at 9.)

FF61. With regard to the splitting of political subdivisions, Dr. DeFord focused upon all six such subdivisions expressly listed in the Pennsylvania Constitution and the *League of Women Voters* decision—counties, cities, incorporated towns, boroughs, townships, and wards. (DeFord Report at 7; N.T. at 205.)

FF62. Dr. DeFord evaluates this factor by considering both the number of subdivisions that are split and the number of times that each subdivision is split into “pieces.”

FF63. For instance, a county that is split once will consist of two pieces, while a county that is split twice

will consist of three pieces. (DeFord Report at 8; N.T. at 212.)

FF64. In performing his comparison of the plans, Dr. DeFord counted “pieces” that are above the minimum number, *i.e.*, not counting a whole county as one piece, and excluded municipality pieces that are necessarily created by county lines. (DeFord Resp. Report at 8.)

FF65. According to Dr. DeFord, the Gressman Petitioners’ plan splits a total of 15 counties into 17 pieces, which was less than all of the other plans except the Reschenthaler plans, both of which split 13 counties into 16 pieces, and the Draw the Lines Plan, which splits 14 counties into 16 pieces. (DeFord Resp. Report at 8, 27-28.)

FF66. Concerning municipalities—cities, incorporated towns, boroughs, and townships—Dr. DeFord counted the total number of splits, but excluded the municipality pieces that are created by county lines. (DeFord Resp. Report at 8.)

FF67. The Gressman Petitioners’ plan splits a total of 19 municipalities into 17 such pieces, which was less than all other proposed plans except the CitizenVoters plan, to which it is equal on this measure. (DeFord Resp. Report at 8.)

FF68. The Gressman Petitioners’ plan split 15 wards into 15 pieces, which was also less than all other proposed plans except the Senate Democratic Caucus’ Plan 2, which split 14 wards into 14 pieces. (DeFord Resp. Report at 8.)

FF69. According to Dr. DeFord, adding together the total number of split counties, cities, incorporated towns, boroughs, townships and wards for each plan reveals

that the Gressman Petitioners' plan splits the fewest of all proposed plans—49. (DeFord Resp. Report at 8.)

FF70. Similarly, totaling all of the pieces that Dr. DeFord reported for each political subdivision similarly reveals that the Gressman Petitioners' plan splits the fewest—also at 49. (DeFord Resp. Report at 8.)

FF71. This latter number is equaled by the Draw the Lines Plan. (DeFord Resp. Report at 28; N.T. 213.)

FF72. With regard to compactness, Dr. DeFord evaluated the Gressman Petitioners' plan and all other proposed plans with four metrics—the Reock score, the Polsby-Popper score, the Convex Hull Ratio, and the Cut Edges measure. (N.T. at 215.)

FF73. Dr. DeFord explained that the Convex Hull Ratio “measures what proportion of the area of the area of the smallest convex shape containing the district is filled by the district.” (DeFord Report at 17.)

FF74. Like the Reock and Polsby-Popper scores, a higher Convex Hull Ratio indicates a greater degree of compactness. (DeFord Report at 17.)

FF75. Dr. DeFord explained that the Cut Edges measure “represents the count of the number of adjacent units like wards or blocks that are not placed in the same district.” (DeFord Report at 20.)

FF76. Unlike the Reock score Polsby-Popper score, and Convex Hull ratio, a lower Cut Edges measure indicates a greater degree of compactness. (DeFord Report at 20.)

FF77. Dr. DeFord testified that under the convex hull ratio, the map proposed by the Governor and the first Resenthaler map scored the best. (N.T. at 264.)

FF78. Dr. DeFord also testified that these same two maps scored the best under the cut edges metric. (N.T. at 264.)

FF79. Like Dr. Rodden, Dr. DeFord emphasized that each compactness measure captures a different facet of the regularity of a shape or the notion of “compactness,” so it is important to look at a variety of measures. (N.T. at 214.)

FF80. For instance, the Polsby-Popper score “tends to prefer plans with smooth-looking boundaries,” the Reock score “tends to prefer those that are more circular in overall shape,” and the Convex Hull Ratio “prefers districts that do not contain significant indentations or tendrils.” (DeFord Report at 18.)

FF81. Dr. DeFord further explained that high compactness can result in trade-offs with other important criteria, particularly maintaining political subdivisions. (N.T. at 215-16.)

FF82. For instance, Dr. DeFord highlighted that the decision to keep all of the irregularly-shaped City of Pittsburgh within one district—which the Gressman Petitioners’ plan does—will result in a lower Polsby-Popper score than a plan that divides Pittsburgh and thereby creates smoother district boundaries that are preferred by that metric. (DeFord Report at 20-21; N.T. at 216-17.)

FF83. Notwithstanding its decision to keep Pittsburgh whole, Dr. DeFord opined that the Gressman Petitioners’ plan performed well on compactness and that its scores were quite good. (N.T. at 218.)

FF84. Dr. DeFord calculated an average Polsby-Popper score of 0.333, an average Reock Score of 0.395, an average Convex Hull Ratio of 0.799, and a Cut Edges

measure of 5,546 for the Gressman Petitioners' Plan. (DeFord Report at 9.)

FF85. Dr. DeFord further evaluated all of the proposed maps for indications of partisan fairness.

FF86. He explained that the measures used for this analysis are efforts to model how a plan treats voters from the two major parties, and whether they are being treated equally; however, as with the other metrics, there is no single number that reveals this. (N.T. at 218-19.)

FF87. For all of these calculations, Dr. DeFord used election results from 18 statewide general elections from 2012 to 2020 in order to obtain an array of information about political geography and voter behavior. (DeFord Report at 22; N.T. at 219-21.)

FF88. Dr. DeFord first used a "majority responsiveness" metric, which asks whether, for any given election, the party that won the majority of the statewide vote share would also have been likely to win a majority of the congressional seats under a given proposed districting plan. (DeFord Report at 24-25; N.T. at 223-24.)

FF89. For the 18 elections considered, the Gressman Petitioners' plan produced 15 majoritarian outcomes, and out of the three that did not, two of those outcomes favored Republicans and one favored Democrats. (DeFord Report at 2930; N.T. at 226.)

FF90. This, in Dr. DeFord's opinion, is a good indication that the Gressman Petitioners' plan treated Republican and Democratic voters equally. (N.T. at 226.)

FF91. Dr. DeFord opined that both Reschenthaler plans and HB 2146 both performed relatively worse on this metric, as they all produced five or more counter

majoritarian outcomes—all of which favored Republicans. (DeFord Resp. Report at 11-12; N.T. at 226-27.)

FF92. Like Dr. Rodden, Dr. DeFord also calculated the mean-median difference for the proposed plans; however, Dr. DeFord did so using each of the 18 elections considered, rather than using average election data, which was employed in *LWV II*.

FF93. Across all 18 elections, the Gressman Petitioners' plan produced mean-median values that remained close to zero, stayed within a small range, favored both parties. (DeFord Resp. Report at 13; N.T. at 230-31.)

FF94. By comparison, Dr. DeFord concluded that both Resenthaler plans, and HB 2146 scored lower on the mean-median metric, in that they had larger values and produced only Republican-favoring results. (DeFord Resp. Report at 13; N.T. at 231.)

FF95. Like the mean-median values, the efficiency gap for the Gressman Petitioners' plan across the 18 elections remained low, and had results that favored both parties depending on the election considered. (DeFord Resp. Report at 14; N.T. at 234-35.)

FF96. Dr. DeFord also ran all of the proposed plans through the PlanScore website,⁴³ which is a website available to the public which provides analysis and statistics of proposed districting plans, including partisan fairness metrics such as the efficiency gap. (N.T. at 235-26.)

FF97. According to Dr. DeFord on all of the metrics reported on PlanScore, the Gressman Petitioners' plan performed the best of all of the proposed plans except

43. <https://planscore.campaignlegal.org/#!2020-ushouse> (last visited 2/6/22)

for one measure—the Gressman Petitioners’ plan has an average efficiency gap of 1.4% favoring Republicans, and the House Democratic Caucus’ Plan has a slightly smaller efficiency gap of 1.2% favoring Republicans. (DeFord Resp. Report, App. D; N.T. at 236.)

FF98. In light of all of these measures, Dr. DeFord opined that the Gressman Petitioners’ plan performed the best of all proposed plans in terms of partisan fairness. (N.T. at 238.)

FF99. Dr. DeFord further evaluated the plans for compliance with the VRA, and concluded that the Gressman Petitioners’ plan created three minority opportunity districts. (DeFord Report at 41-56; N.T. at 242-43.)

FF100. Dr. DeFord also determined that the Gressman Petitioners’ plan was the best possible in terms of avoiding incumbent pairings. (N.T. at 240.)

FF101. On cross-examination, Dr. DeFord stated that, in his opinion, a county is a more fundamental political unit than a borough, and it is therefore more important to avoid a county split than a borough split. (N.T. at 250-51.)

FF102. He acknowledged that he was not purporting to offer an opinion on the Gingles factors under the VRA, and the statistics that he provided concerning candidate win rates in Philadelphia suggested that minority-preferred candidates are not usually defeated by white bloc voting. (N.T. at 283.)

FF103. He further admitted that, although he considered the impact of splitting Pittsburgh upon certain metrics, he did not consider the existence of any communities of interest in the surrounding region. (N.T. at 314-15.)

FF104. He testified that a districting plan can comply with neutral, traditional districting factors but still be optimized for partisan advantage. (N.T. at 319.)

FF105. Dr. DeFord agreed that House Bill 2146 splits the third least pieces of any of the plans he studied. (N.T. at 269.)

FF106. Dr. DeFord agreed that it is not absolutely necessary to split the City of Pittsburgh in a plan. (N.T. at 270.)

FF107. Dr. DeFord testified on cross examination that, applying the majority responsiveness metric he used to measure partisan fairness, he would consider a district potentially responsive if it elected at least one Republican and one Democrat, and that on that measure, House Bill 2146 has the most responsive districts of the three that he studied. (N.T. at 271.)

FF108. Dr. DeFord also agreed that the Governor's Plan had the highest number of "safe Democratic" districts of the three that he looked at. (N.T. at 271.)

FF109. Dr. DeFord also admitted that, while he criticized House Bill 2146 for having, anti-majoritarian outcomes on direct examination, virtually every plan produces an anti-majoritarian outcome under the 2012 auditor election and the 2016 auditor election. (N.T. at 272.)

FF110. Dr. DeFord agreed that there is a partisan advantage to Republicans based on the political geography of the state, and that it was not necessarily a surprise to see a slight tilt favoring Republicans present in the fairness metrics. (N.T. at 291.)

FF111. Dr. DeFord admitted that he did not take into consideration any communities of interest in his evaluation of the Gressman Plan or any other plan. (N.T. at 314-15.)

3. Dr. Moon Duchin (Governor Wolf)

FF112. In support of his plan, Governor Wolf presented the expert opinions of Dr. Moon Duchin, who is a Professor of Mathematics and a Senior Fellow in the Jonathan M. Tisch College of Civic Life at Tufts University. (Notes of Testimony (N.T.) 1/27/2022, at 325; Moon Duchin Expert Report (Duchin Report), attached as Exhibit A of Governor Wolf’s Brief in Support of Proposed 17District Congressional Redistricting Plan, at 1.)

FF113. Dr. Duchin was a Guggenheim Fellow and the Evelyn Green Davis Fellow, Radcliffe Institute for Advanced Study in 2018-19, and has published numerous scholarly works about redistricting. (Duchin CV at 1, attached to Duchin Report.)

FF114. Dr. Duchin is also the principal investigator of an interdisciplinary research lab focused on geometric and computational and analytical aspects of redistricting, as well as assessing characteristics of district maps. (N.T. at 325-26; Duchin Report at 1.)

FF115. Dr. Duchin described her work, just in this election cycle, with “various line-drawing bodies such as redistricting commissions, independent and bipartisan commissions around the country which have brought [her] into call balls and strikes as [she] see[s] it and try to put plans in the context in terms of metrics trying to understand the alternatives and the political geography.” (N.T. at 325-26.)

FF116. Dr. Duchin was retained by Governor Wolf to “evaluate several maps that have been proposed as alternatives for Congressional redistricting in Pennsylvania, and particularly to compare them in terms of traditional districting principles and partisan fairness.” (Duchin Report at 1.)

FF117. Dr. Duchin evaluated the Governor’s Plan and all of the other 12 plans submitted to the Court to determine which plans satisfied an “excellence standard” with regard to the traditional redistricting criteria of *LWV II*; however, the focus of her report was on the Governor’s plan, House Bill 2146, and what she termed the Citizens’ Plan (i.e., the Draw the Lines PA *Amicus* Participants’ plan). (N.T. at 326, 329; Duchin Report at 1-2; Duchin Resp. Report at 2.)

FF118. Dr. Duchin also included the Reschenthaler and Voters of PA Plans in the various charts she created. (*See generally* Duchin Report; Response Report at 2-3.)

FF119. Dr. Duchin also performed an “ensemble analysis,” which consisted of comparing 100,000 alternative plans that followed “the rules and priorities of Pennsylvania redistricting[.]” (N.T. at 326-27; Duchin Report at 2.)

FF120. Dr. Duchin used numerous data sets, including the raw decennial census data release, and two data sets released by the Commonwealth’s Legislative Redistricting Commission. (N.T. at 331-32; Duchin Report at 1.)

FF121. Dr. Duchin explained that she examined the maps under the “big six” traditional or neutral redistricting principles, including population equality under one person, one vote, minority opportunity to elect under the VRA, the Constitution, compactness, contiguity, and respect for political boundaries and communities of interest. (N.T. at 327-29; Duchin Report at 4-6.)

FF122. Dr. Duchin also identified least change, incumbency considerations, and partisan fairness/vote dilution. (N.T. at 328; Duchin Report at 6-7.)

FF123. Dr. Duchin opined that all submitted plans “form quite well across [the] range of different metrics” she considered, but that distinctions could be made with respect to considering “tiers of adherence to the traditional principles.” (N.T. at 330-31.)

FF124. With respect to **population balance under the one person, one vote principle, and contiguity**, Dr. Duchin testified that “[a]ll 13 plans are contiguous, and all 13 plans are closely population-balanced for either Census PL population[*i.e.*, the decennial census release,] or prisoner-adjusted population.” (Duchin Resp. Report at 2; N.T. at 331, 333; Report at 8 (noting that each plan has a “top-to-bottom” population deviation of 1).)

FF125. Dr. Duchin described contiguity as follows: “[c]ontiguity requires that, for each district, it is possible to transit from any part of the district to any other part, staying inside the district. That is, contiguity is the requirement that each district be composed of a single connected piece.” (Duchin Report at 5.)

FF126. Dr. Duchin explained, “the neutral criteria most relevant for distinguishing the plans are **compactness** and **respect for counties and municipalities**.” (Duchin Resp. Report at 2) (emphasis added).

FF127. Dr. Duchin explained that a plan’s **compactness** can be measured in several ways, including the most commonly used metrics of the PolsbyPopper score, which compares a region’s area to its perimeter via a mathematical formula, and the Reock score, which she defined as “a different measurement of how much a shape differs from a circle: it is computed as the ratio of a region’s area to that of its circumcircle, defined as the

smallest circle in which the region can be circumscribed.” (Duchin Report at 5.)

FF128. Dr. Duchin explained that higher scores for both types of scores are better and are optimized at 1. Id. She also noted three additional metrics from *LWV II*, including *Schwartzberg*, *Convex Hull*, and *Population Polygon*. (Duchin Report at 5.)

FF129. Dr. Duchin explained that “Schwartzberg is $P/2\sqrt{\pi A}$. Convex Hull is the ratio of the district’s area to that of its convex hull, or ‘rubber-band enclosure.’ and Population Polygon is the ratio of the district’s population to the state’s population within the convex hull.” (Duchin Report at 5 n.3.)

FF130. As for **respect for political boundaries**, Dr. Duchin described the principle as requiring that “counties, cities, and other relevant political and administrative geographies should be kept intact in districts as much as practicable.” (Duchin Report at 6; N.T. at 336.)

FF131. Dr. Duchin explained that, particularly when comparing the closely related principles of compactness and political subdivision splits, “there are trade-offs, and that perhaps if you split one more county you can get a better compactness score and so on. So these all reflect decisions about those tradeoffs.” (N.T. at 338.)

FF132. With respect to compactness, and considering the above metrics, Dr. Duchin opined that the Governor’s Plan is the most compact in five of the metrics, in that it has the second best Polsby-Popper score (0.3808), the second best mean Schwartzberg score (1.6534), the best mean Convex Hull score (0.8257), the best mean Population Polygon score (0.7834), and the fourth best cut edges score (5,185). (Duchin Report at 9; Resp. Report at 2, Table 1.; N.T. at 334-35.)

FF133. The cut edges score “counts how many adjacent pairs of geographical units receive different district assignments.” (Duchin Report at 6.)

FF134. Dr. Duchin then opined that with respect for maintaining political boundaries, all plans are within a range of 13 to 17 split counties, meaning no plan averaged more than 1 county split per congressional district. (Resp. Report at 2, Table 1.)

FF135. Dr. Duchin further explained that any plan with fewer than 17 county splits is “really considered excellent” given that all are drawing 17 congressional districts, and that all plans are within a range of 16-20 split municipalities—out of more than 2,000 total municipalities in the Commonwealth. (N.T. at 337, 493.)

FF136. Dr. Duchin compared the Governor’s Plan to House Bill 2146, which she opined consistently scores in the bottom four plans for compactness, as its mean Polsby Popper score is 11th out of 13, its mean Schwartz score is 12th out of 13, its mean Reock score is 13th out of 13, its mean Convex Hull score is 10th out of 13, its mean Population Polygon score is 9th of 13, and its cut edges score is 10th of 13, and thus is one of the least compact plans. (*See* N.T. at 335; Duchin Resp. Report at 2, Table 1.)

FF137. Ultimately, with respect to compactness of all the plans, Dr. Duchin opined that “the maps [submitted to the Court] are quite good across the board, but that you can still see some that are better.” (N.T. at 334.) She explained that:

By far the two most compact plans, considering these metrics overall, are VotersOfPA and GovPlan. The next two, some ways behind the leaders, are Resenthaler1 and CitizensPlan.

When it comes to splits, I judge all of the plans to be excellent, with the possible exception of Carter and SenateDemCaucus1. All eleven others have 13-16 county splits and 16-18 municipality splits, which may be close to optimal for reasonable 17-district plans in Pennsylvania (though it is computationally intractable to prove this rigorously).

(Duchin Resp. Report at 2.)

FF138. To summarize her quantitative analysis, Dr. Duchin identified two “tiers” of excellence to grade the plans’ adherence to the traditional criteria as follows. First, she identified four plans that meet a high excellence standard for traditional criteria: GovPlan, VotersOfPA, Reschenthaler 1, and CitizensPlan. (Duchin Resp. Report at 3.)

FF139. Dr. Duchin identified a second tier consisting of two plans that meet an excellence standard: KhalifAli and Reshcenthaler2. *Id.*

FF140. With respect to the principle of least change, Dr. Duchin compared the Governor’s Plan, House Bill 2146, and the CitizensPlan (*i.e.*, Draw the Lines PA’s plan), to the 2018 Remedial Plan.

FF141. Dr. Duchin explained that the doctrine “and associated metrics look to measure the degree of a plan’s resemblance to another plan” and that, in her comparison of the Governor’s Plan to the 2018 Remedial Plan, she explained, “[i]f you believe that the old plan is a good one, if you believe that the old plan has shown itself to perform in ways that are fair, if you believe that the old plan represents the principles that you’re trying to embody, then it does make some sense that you try to look a lot like it.” (N.T. at 345-47.)

FF142. Dr. Duchin concluded that the Governor's Plan "keeps the districts intact to the greatest extent of these three alternatives." (Duchin Report at 10, Table 4.)

FF143. Dr. Duchin addressed protection of incumbents, which she explained means, where possible, "double-bunking" two incumbent members of Congress in the same district should be avoided. (N.T. at 347-8.)

FF144. Dr. Duchin determined that the Governor's Plan, CitizensPlan, and House Bill 2146 each create two districts with two incumbent members of Congress and one district with no incumbent. (Duchin Report at 10, Table 5.)

FF145. Dr. Duchin also testified that it was her understanding "that District 5 and the Governor's plan [pairs] two Democratic incumbents. Just for the record, in my view, when I'm trying to assess whether a plan is a gerrymander for one party, I think it would avoid pairing incumbents of that party. So to me, this is a sign that this is not a Democratic gerrymander plan." (N.T. at 349; *see also* Duchin Report at 10, Table 5.)

FF146. Dr. Duchin next described, with respect to communities of interest, that the fundamental concept is that there is value to maintaining "geographical areas where the residents have shared interests that are relevant to their representation. . . . [T]his could be shared history, shared economics, shared culture, many other examples." (N.T. at 342-43.)

FF147. Dr. Duchin clarified, however, that the principle "doesn't always mean a community should be held whole. Sometimes it's more effectively split. But they should be kind of top of mind for the line drawers, as they draw." (N.T. at 343.) In her report, Dr. Duchin noted that communities of interest were a top priority consid-

eration in the Governor's plan, and that it was "drawn after a robust public input process and in view of hundreds of collected comments and suggestions." (Duchin Report at 11-12.)

FF148. Dr. Duchin opined that the Governor's Plan is "really an excellent plan on the grounds of the traditional principles. It's one of the very best. In my view it's extremely compact. It is economical in terms of political boundary splits and the splits that it is . . . have a good story. I find it to do well by the likes of incumbent pairing and least change across the board. It's an excellent plan on traditional districting principles." (N.T. at 349-50.)

FF149. In determining whether any maps exhibited partisan fairness and accountability and responsiveness to voters, Dr. Duchin used numerical measures that "address how a certain quantitative share of the vote should be translated to a quantitative share of the seats in a state legislature or Congressional delegation." (Duchin Report at 13.)

FF150. Dr. Duchin described partisan fairness and accountability to voters in terms of two core principles: (1) a political party winning the majority of votes ought, as a general matter, to win a majority of congressional seats (the "Majority-Rule Principle"); and (2) elections with close vote margins ought generally to result in a close split in the number of seats won (the "Close-Votes-Close-Seats Principle"), which she explained is close to the principle of Majority Rule, *i.e.*, that "a party or group with more than half of the votes should be able to secure more than half of the seats." (Duchin Report at 13.)

FF151. Using the same election information for the three plans, and with the help of figures and graphics in her initial Report, Dr. Duchin established that the Governor's Plan and the Draw the Lines PA's (CitizensPlan) "are far superior at leveling the partisan playing field," whereas she characterized House Bill 2146's performance as "consistently converting close elections to heavy Republican representational advantages." (N.T. at 364-65; Duchin Report at 14-16.)

FF152. Dr. Duchin considered the partisan fairness of the Governor's Plan and all of the other maps using her "ensemble" of 100,000 randomly drawn districting plans to see how they would perform across recent elections in terms of partisan fairness.

FF153. In considering partisan fairness, Dr. Duchin used the following metrics: the efficiency gap, the Eguia artificial partisan advantage, the mean-median score, and the partisan bias score. (Duchin Report at 17.)

FF154. Dr. Duchin defined "efficiency gap" as being "based on the idea of wasted votes, defined as any winning votes in excess of 50%, or any losing votes at all." (Duchin Report at 17.)

FF155. Dr. Duchin explained that a plan's "Eguia artificial partisan advantage compares the outcomes under districted plurality elections to the outcomes under ostensibly neutral political subdivisions, such as counties." (Duchin Report at 17.)

FF156. Dr. Duchin explained that the "mean-median score" indicates "how much of the vote in a state is needed to capture half of the representation." (Duchin Report at 17.)

FF157. Dr. Duchin explained that a "partisan bias score" captures "how much of the representation would

be captured by each party if the election underwent a uniform partisan swing to a 50-50 share.” (Duchin Report at 17.)

FF158. Dr. Duchin’s results appear in Table 3 of her Responsive Report, as to which she explained: “one thing that stands out is that the Governor’s plan is excellent across the board, that in all four of these metrics it gives scores that are either the closest or nearly the closest to zero.” (N.T. at 372.)

FF159. Dr. Duchin further concluded that of all the other plans considered, “the Governor’s Plan dominates[, meaning it is equal or better in every metric,] 10 and is in a trade-off position with the other two (Carter and HouseDemCaucus).” (Duchin Resp. Report at 4.)

FF160. On cross-examination, Dr. Duchin conceded that “the Gressman [Petitioners’] plan is an excellent plan.” (N.T. at 433.)

FF161. Dr. Duchin admitted to opining in her report that HB 2146 is population balanced and contiguous, shows strong respect for political boundaries, and is reasonably compact. (N.T. at 434-35.)

FF162. Dr. Duchin admitted, in relation to HB 2146, that “[o]n splits it’s better” than the Governor’s plan, and that the Governor’s plan is only better on the compactness criteria. (N.T. at 435-36.)

FF163. When asked whether Governor’s plan’s splitting of the City of Pittsburgh allowed for the creation of two Democratic leaning seats as opposed to one, Dr. Duchin relayed that she would “have to look at the seats surrounding it in plans that keep it whole . . . that’s not an [sic] specific analysis that I’ve done to say that it’s two instead of one” and that she “didn’t look at whether the

district surrounding the one that contains Pittsburgh specifically would be Democratic leaning.” (N.T. at 436.)

FF164. Dr. Duchin further disclosed to the Court on cross-examination that in generating 100,000 random plans (*i.e.*, maps) with a computer, which was programmed only to honor Pennsylvania’s minimum constitutional requirements, the “[r]andom plans tend to exhibit pronounced advantage to Republicans across this full suite of elections.” (Duchin Jan. 24, 2022 Report at 18.)

FF165. On the next page of her report, still analyzing the 100,000 plans drawn by a non-partisan, non-biased computer, Dr. Duchin once again concluded that “random plans favor Republicans[.]” (Duchin Jan. 24, 2022 Report at 19.)

FF166. Dr. Duchin, far from backing away from this analysis, agreed that these 100,000 plans produced a “pronounced advantage to Republicans,” N.T. 1/27/22 at 449:1-12.3, and that the most “typical outcome” for any randomly drawn, constitutionally compliant plan, which takes no account for impermissible partisan considerations, is one that will produce a Republican “tilt” based on election projections. N.T. 1/27/22 at 450:10-16; *see also* Duchin Jan. 24, 2022 Report at 17 (“In this section, I present a series of images that reinforce the theme elaborated above: the political geography of Pennsylvania creates a districting landscape that is tilted toward Republican advantage.”).

FF167. In this regard, Dr. Duchin testified as follows:

Q. But the most typical outcome is plans with a Republican tilt. Fair?

A. Absolutely. And I'm not aware of any rule that requires that we pick the most typical. I think we're trying to choose an excellent plan.

(N.T. at 450) (testimony of Dr. Duchin).

FF168. Upon questioning by Congressional Intervenors' counsel, Dr. Duchin conceded that Reschenthaler 1 and Reschenthaler 2 are both contiguous, closely balanced in terms of population, and "reasonably compact." (N.T. at 458.)

FF169. With respect to county splits, Dr. Duchin affirmed that Reschenthaler 1 and Reschenthaler 2 split 13 counties, which, she admitted, is the lowest county split of all the maps she reviewed and are examples of "aggressive pursuit of county integrity." (N.T. at 458-59.)

FF170. Dr. Duchin admitted that the Reschenthaler maps had the lowest "county pieces" (29) and municipal splits (16), and that it was tied for the lowest with respect to "municipal pieces" (33). (N.T. at 459.)

4. Michael Barber, Ph.D. (House Republican Intervenors Cutler & Benninghoff)

FF171. The House Republican Intervenors presented the opinions and expert report of Dr. Michael Barber, who is an associate professor of political science at Brigham Young University and faculty fellow at the Center for the Study of Elections and Democracy in Provo, Utah. (Barber Report at 1.)

FF172. Dr. Barber received his Ph.D. in political science from Princeton University in 2014 with emphases in American politics and quantitative methods/statistical analyses. *Id.*

FF173. Dr. Barber teaches a number of undergraduate courses in American politics and quantitative re-

search methods, including classes about political representation Congressional elections, statistical methods, and research design. *Id.*

FF174. The House Republican Intervenors asked Dr. Barber to review HB 2146.

FF175. Dr. Barber first examined the political geography of Pennsylvania and concluded that partisan tendencies are not evenly distributed throughout the Commonwealth, as “Democratic majorities are geographically clustered in the largest cities of the state while Republican voters dominate the suburban and rural portions of the state[,]” which puts “the Democratic Party at a natural disadvantage when single-member districts are drawn.” (*See Barber Rep. at 5, 8, Figure 1; N.T. at 506-10.*)

FF176. Dr. Barber opined that “districts drawn to be contiguous, compact, and contain minimal county and municipal splits will naturally create several districts in the Philadelphia and Pittsburgh areas that contain substantial Democratic majorities with many ‘wasted votes.’” (*Barber Report at 5, 9.*)

FF177. Dr. Barber stated that because Philadelphia is large enough to constitute roughly 2.1 congressional districts, any plan that attempts to avoid splitting counties would draw two districts entirely within the City of Philadelphia and will be overwhelmingly Democratic and have thousands of wasted votes. (*Barber Report at 9.*)

FF178. Dr. Barber opined that because Pittsburgh is not large enough to contain a single congressional district, any plan that draws geographically compact districts that avoid splitting counties and cities will contain a district within Allegheny County that also contains the City of Pittsburgh, and it will be extremely Democratic

as a result of strong Democratic support in Pittsburgh and its immediate suburbs. (Barber Report at 9; *see also* Barber Rebuttal Report at 9.)

FF179. Dr. Barber explained his methodology in determining whether HB 2146 was a partisan gerrymander. (Barber Report at 11.)

FF180. Specifically, Dr. Barber prepared a set of 50,000 simulated maps using only the traditional redistricting criteria of equal population, compactness, contiguity, and minimizing political subdivision splits. (Barber Report at 13-14; N.T. at 518.)

FF181. Dr. Barber did not consider partisanship, race, the location of incumbent legislators, or other political factors in his analysis, but he found this set of simulated plans was helpful because it provides a set of maps to compare to HB 2146 that also accounts for geographic distribution of voters. (Barber Report at 11; N.T. at 515.)

FF182. Dr. Barber explained that by comparing HB 2146 to the simulated districts, “we are comparing the proposal to a set of alternative maps that we know to be unbiased that holds constant with the political geography of the state.” (Barber Report at 11; N.T. at 515-17.)

FF183. Alternatively, Dr. Barber explained, if HB 2146 “significantly diverges from the set of simulated maps, it suggests that some other criteria that were not used in drawing the comparison set of maps may have guided the decisions made in drawing the proposed map.” *Id.*

FF184. With regard to population, boundary splits, and compactness, Dr. Barber opined that HB 2146, which splits 15 counties, is within the range of county splits in the simulations. (Barber Report at 16; Barber Rebuttal Report at 8, Table 1.)

FF185. Dr. Barber testified that HB 4126 only divides 16 municipalities, one of which is Philadelphia, which has to be divided because the city population is more than a single district. *Id.*

FF186. Dr. Barber testified that HB 2146 has only nine precinct splits; thus, overall, the plan performs very well regarding political subdivision splits. *Id.*

FF187. As for compactness, Dr. Barber opined that HB 2146's average district compactness score (Popper-Polsby) of 0.32 closely aligns with the results of the simulations, which garnered a 0.28 score. (Barber Report at 16.)

FF188. Dr. Barber considered partisan lean of districts, analyzing a set of all statewide elections from 2012-2020, which resulted in 9 Democratic-leaning seats and 8 Republican-leaning seats, whereas the current delegation is represented by 9 Democrats and 9 Republicans, and further determined the most likely outcome in his 50,000 simulated maps, created without using partisan data, is 8 Democratic-leaning seats and 9 Republican-leaning seats. (Barber Report at 23, Figure 3; N.T. at 518-20, 532-33.) He further opined that HB 2146 creates a significant number of competitive districts. (Barber Report at 19.)

FF189. Specifically, in analyzing districts that have a Democratic vote share of 0.48 to 0.52, a common range when analyzing competitive elections, HB 2146 creates five competitive seats, four of which lean Democratic, which is more competitive districts than any other plan. (Barber Report at 13, 19, 21, Figure 2; N.T. at 529.)

FF190. Dr. Barber testified that at a district-by-district level, HB 2146 reflects partisan fairness con-

sistent with the range of outcomes seen in simulated plans. (Barber Report at 22-23.)

FF191. Dr. Barber testified that for each district, HB 2146 sits in the middle of the distribution of the simulations. (Barber Report at 23-24, Figure 4.)

FF192. On other partisan fairness metrics, including mean-median, efficiency gap, and a uniform swing analysis, Dr. Barber opined that HB 2146 is demonstrated to be very nearly unbiased, with a mean-median of -0.015, which is very close to zero and which demonstrates that HB 2146 is more favorable to Democrats than 85% of the simulation results. (Barber Report at 27-28, Figure 5, 30-31; Barber Rebuttal Report at 21-22.)

FF193. Dr. Barber testified that this further demonstrates that HB 2146 is fair. (Barber Rep. at 27-34, Figures 5-7.)

FF194. With regard to the efficiency gap for HB 2146, which is -0.02, and very close to zero, Dr. Barber testified that it shows that Democratic votes are not much more likely than Republican votes to be “wasted” across districts. (Barber Report at 31.)

FF195. Dr. Barber testified that HB 2146’s mean median score and efficiency gap score are within the range, in that they have similar scores compared to the other plans; the difference in scores for the other plans, however, can be accounted for based on the particular elections used for the calculations. (N.T. at 543-50.)

FF196. Dr. Barber opined further that for the other plans that garnered 10 Democratic-leaning seats with an efficiency gap of 0.034, it shows those plans are favorable to Democrats, as “positive numbers indicate bias for Democrats, [and] negative numbers indicate bias for Republicans.” (Barber Rebuttal Report at 22.)

FF197. Dr. Barber said there are differences, which can be accounted for based on the particular elections that are used for the calculations. (N.T. at 550.)

FF198. Dr. Barber performed a uniform swing analysis, which considers how a plan performs under a variety of different electoral environments by randomly adding certain percentages from previous elections uniformly to each district in the plan. (Barber Report at 33-34.)

FF199. Like the other metrics, Dr. Barber's uniform swing analysis demonstrated that the HB 2146 is fair, as it is nearly exactly in the middle of the distribution, meaning roughly half of the simulations are worse for Democrats and nearly half are better. (Barber Report at 34, Figure 7.)

FF200. Dr. Barber additionally noted in his Rebuttal Report that the uniform swing measure varies across the all plans considered from 7.9 to 10.1 expected Democratic-leaning districts; however, HB 2146 is in the middle of the simulation results. (Barber Rebuttal Report at 22.)

FF201. Dr. Barber also conducted a district-by-district racial composition of HB 2146, examining 1,852 simulated plans from his race-blind sample that likewise created 2 majority-minority districts including 1 majority Black district. (Barber Rep. at 35-36; N.T. at 515-16.)

FF202. Dr. Barber generated another set of 5,000 simulated race conscious maps where he instructs the model to ensure that every simulated plan had at least 3 districts that have at least 35% non-white voting age population. (Barber Report at 36; N.T. at 518.)

FF203. From this, Dr. Barber determined that even when using "race conscious" simulations, a map with 9 Democratic-leaning seats, *i.e.*, the same as HB 2146, re-

mains the most common outcome, occurring in 70.6% of the simulations. (Barber Report at 35-36.)

FF204. When asked whether he thought House Bill 2146 was the best plan, Dr. Barber stated “I think that that is not for me to decide. I think that is the unenviable task of this Court.” (N.T. at 559.)

FF205. With respect to Dr. Barber’s opinions as to the other plans, Dr. Barber testified that looked specifically at how the other plans treated Pittsburgh because of the fact that Pittsburgh is not large enough such that it has to be split, and that all the other plans, including the Governor’s, Senate D1 & D2, Draw the Lines PA, and Khalif Ali, stand out as examples of plan “possibly violating the neutral districting criteria” in an attempt “to avoid municipal splits unnecessarily by intentionally dividing Pittsburgh for partisan gain.” (N.T. at 524-25; Barber Rebuttal Report at 8, Table 1., 23.)

FF206. On that topic, Dr. Barber believed “it calls for additional inquiry as to why that might be the case.” *Id.*

FF207. With regard to the House Democrats’ plan specifically, which combines Pittsburgh with rural, heavily Republican voters in Beaver and Butler Counties to create 2 Democratic-leaning districts rather than 1 heavily Democratic district in Allegheny County, and which is poised to create 11 Democratic leaning districts, Dr. Barber characterized the House Democrats’ plan as “an extreme outlier,” as none of the simulations generated that outcome. (N.T. at 534; Barber Rebuttal Report at 15.)

FF208. Dr. Barber also noted that HB 2146, Senate D1 Plan, Voters of PA plan, and both Resenthaler Plans generate 9 Democratic-leaning districts, which “are in line with the modal outcome in the race-conscious

simulations and are within the central part of the distribution in the race-blind simulations. (Barber Rebuttal Report at 15-16.)

FF209. When compared to the non-partisan simulations conducted, Dr. Barber concluded that nine of the other plans are Democratic partisan outliers, including the Governor, Carter, Gressman, House D, Senate D1 & D2, Citizen Voters, and Draw the Lines PA plans. (Barber Rebuttal Report at 23.)

FF210. On other measure of partisan bias, Dr. Barber concluded that there are variations amongst the plans, but that “all share the common feature of being generally more favorable to Democrats than the non-partisan simulations.” (Barber Rebuttal Report at 23.)

FF211. On cross-examination, Dr Barber conceded that every other plan except for the two Reschenthaler plans have mean-median scores closer to zero, meaning they are less biased than HB 2146. (N.T. at 575-78.)

FF212. Dr Barber agreed that, in conducting his analysis, he did not consider all elections that took place for every office, incumbent pairings, if every plan had two or three majority-minority voting age populations, voter registration information (in terms of votes cast or the partisan registration of individual voters), equal population (as he had a variance of 30), the splitting of wards, or communities of interest concerns. (N.T. at 586-91, 593-94, 628-29, 646, 649-54.)

FF213. When asked whether assigning the City of Pittsburgh to one congressional district would be considered packing, Dr. Barber explained, “So I think this is an excellent example because sometimes what might be called intentional partisan gerrymandering might actually be the result of the combination of the geography of

the state and neutral redistricting criteria. . . . on prospective would look at [the splitting of Pittsburgh] and say that's packing, that's clearly gerrymandering. And the other person might say oh no, that's not packing at all. That's just following the neutral redistricting criteria [stating not to split Pittsburgh]." (N.T. at 627-28.)

5. Dr. Keith Naughton (Congressional Intervenors)

FF214. The expert testimony of Keith Naughton, Ph.D., an expert in public policy and political science, was offered by the Congressional Intervenors for the purpose of demonstrating that they drew their lines with the goal of keeping communities of interest intact and to dispel any notions that the lines they drew were for partisan purposes.

FF215. Dr. Naughton began by acknowledging that he not a mathematician and he has "no particular experience in redistricting," and has never served as an expert in redistricting litigation before. (N.T. at 668-69, 777.)

FF216. Dr. Naughton spent 15 years working in Pennsylvania campaign politics at all levels. (N.T. at 687.)

FF217. Dr. Naughton's areas of expertise include congressional politics, about how constituents interact with their members, and the theoretical basis of representation. (N.T. at 687-90.)

FF218. Dr. Naughton explained that "much of [his] professional career has been dedicated to helping Republican candidates in Pennsylvania win their seats." *Id.* at 769-70. However, he believed his opinions apply equally whether someone is a Republican or Democrat. *Id.*

FF219. Dr. Naughton agreed that his report "does not identify any particular methodology" that he used to

arrive at his conclusions, and does not “cite any authority or particular evidence for [his] opinions.” N.T. at 779; *see also id.* at 813. Rather, his expert opinions were based on his work experience.

FF220. Dr. Naughton conceded that he provided no quantitative analysis of how any of the proposed plans perform on the neutral redistricting criteria. *Id.* at 792.

FF221. The testimony of Dr. Naughton was unique in this regard as no other expert was offered to opine on the community interests undergirding the Free and Equal Elections Clause.

FF222. The Court is not particularly persuaded by the argument that we should not credit Dr. Naughton’s testimony because he has a history of working for candidates seeking political and judicial office for the Republican Party.

FF223. Suffice it to say, given the nature of this litigation, most of the litigants and their experts have histories of representing one party or the other.

FF224. The Court has no intention of crediting one party or expert over the other based on that proclivity.

FF225. Despite the fact that Dr. Naughton had never testified before as an expert in redistricting litigation, the Court nevertheless finds his testimony helpful, especially his opinions on the issues of the importance of keeping communities of interest intact, how that relates to a congressional representative’s ability of to respond to the unique and varied inquiries of his or her constituents and the reasons why the lines on Reschenthaler Plan 1 and 2 were drawn where they were.

FF226. Dr. Naughton testified that keeping people with common interests together allows for better representation of those interests. (N.T. at 697-98.)

FF227. Dr. Naughton testified in this regard as follows:

Q. So if you were going to design, for instance, a district in a region that had a significant elderly population, you would want to know that. Right?

A. Yes.

Q. Why?

A. Well because they have common interests. And you know, grouping with people with common interests is very important because, besides this R versus D issue, they have specific needs. They need Social Security protected. They need money for Access, you know, for public transit. They - - you know, they need just a whole variety of issues. You know, people who are aged require healthcare and so forth. Well, if you have them sort of split up chock-a-block in different districts, what kind of representation are they going to get?

Id.

FF228. Regarding the decision to maintain the City of Pittsburgh in one district in Reschenthaler maps 1 and 2, Dr. Naughton testified Pittsburgh's communities of interests are best represented by keeping the City within the same district. (N.T. at 712-15.)

FF229. Dr. Naughton thought splitting Pittsburgh into two districts was a "terrible idea." *Id.* at 713. He explained:

1. Because the City is its [own] political unit and the City is a diverse city, there's a lot of differ-

ent interests. But the fact that it's together unites people's interests for resources. They vote, you know, for the same elected officials. I mean, just the fact that they are within this municipal unit gives them a serious of common interests. And I think splitting them up, I think, that's a mistake. I think it dilutes their advocacy.

Id.

FF230. Regarding the decision to connect Philadelphia with Delaware County in District 16 in Reschenthaler maps 1 and 2, Dr. Naughton testified that Delaware County and Philadelphia County share similar communities of interest along their border, and that a map connecting them was ideal. (N.T. at 786; 840-41)

FF231. With respect to the decision to place Scranton and Wilkes-Barre in different districts in Reschenthaler maps 1 and 2, Dr. Naughton testified that Scranton and Wilkes-Barre, in the past, were in separate districts and that those communities prefer being in separate districts. (N.T. at 734-36.)

FF232. With regard to partisan fairness and the effect of political geography, Dr. Naughton testified that nonpolitical issues cause voters and nonvoters to coalesce in certain parts of the state. (N.T. at 696.)

FF233. In Dr. Naughton's view, scientific models predicting future elections cannot account for the various factors that contribute to winning an election, including the party of the current president, whether it is a mid-term election, the state of the economy, and campaign fundraising. (N.T. at 700-04.)

FF234. Dr. Naughton agrees that scientific models used by Dr. Rodden, Dr. DeFord, and Dr. Duchin do not

account for these extraneous factors that contribute to winning an election. (N.T. at 703.)

FF235. According to Dr. Naughton, running congressional races in Pennsylvania is “very geographical,” and certain mapping choices, such as splitting the City of Pittsburgh or splitting Bucks County and Philadelphia can result in losing representation. (N.T. at 713-15.)

FF236. In Dr. Naughton’s expert opinion, there is no perfect variable to put in the equation to create a perfect map because there is going to be subjectivity. (N.T. at 766.)

**6. Dr. Devin Caughey & Michael Lamb
(Senate Democratic Caucus Intervenors)**

FF237. In support of its two plans, Senate Map 1 and Senate Map 2, the Senate Democratic Caucus offered the expert report and testimony of Dr. Devin Caughey, an Associate Professor in Political Science at the Massachusetts Institute of Technology.

FF238. Dr. Caughey’s academic specialty involves the interaction between American politics and statistical methods, focusing primarily on public opinion, election, and representation. (N.T. at 894.)

FF239. Dr. Caughey has published numerous academic articles, particularly with regard to partisan gerrymandering at the state level and how it relates to the representational process, and has previously testified as an expert witness, offering his opinion as to the partisan bias of a districting map in the State of Oregon. *Id.* at 895.

FF240. In conducting his current analysis, Dr. Caughey, focusing only on partisan bias factors, reviewed the Supreme Court’s 2018 Map, Governor Wolf’s

plan/map, the House Republican Caucus plan/map, and the Reschenthaler 2 map. *Id.* at 896-98.

FF241. Dr. Caughey then compared those plans/maps with Senate Map 1 and Senate Map 2 to evaluate partisan fairness based on four commonly accepted measurement models, namely (1) partisan symmetry/partisan bias, (2) the efficiency gap, (3) the mean-median difference, and (4) declination.

FF242. At the hearing, Dr. Caughey explained that an assessment of partisan symmetry/partisan bias “is based on the concept of what’s called the seats votes curve [and] the seats votes function, which is basically just the relationship between a party’s vote share and their expected seat share.” *Id.* at 900-01.

FF243. As an example, Dr. Caughey stated that it is “sort of easy to think about when we just consider what happens if both parties get 50 percent of the vote[.] If they both get 50 percent of the vote, they tie, right. But if they win 50 percent of the vote and one party gets 55 percent of the seats, that indicates a bias of five percentage points in favor of the party that got more seats[.] So that is what we call partisan bias.” *Id.* at 903.

FF244. Concerning the efficiency gap, Dr. Caughey testified that it is “another way of operationalizing [the] notion of a partisan fairness,” *i.e.*, “that a map should treat the parties equally or mutually,” stating that “instead of focusing directly on the seats votes curve, it focuses on [the] notion of wasted votes.” *Id.* at 905.

FF245. According to Dr. Caughey “the efficiency gap is based on the idea that the number of wasted votes or the share of wasted votes for each party should be equal,” elaborating that a “wasted vote” is “a vote cast for a losing candidate or a vote cast for a winning candi-

date beyond the minimum necessary to ensure that that candidate won, beyond 50 percent plus one.” *Id.*

FF246. Dr. Caughey stated that “when one party wastes more votes than the other party, then their votes, in sum and substance, count for less,” because “[m]ore of their votes don’t make a difference in terms of who wins seats” and, thus, the votes are “diluted relative to the other party.” *Id.* at 905-06.

FF247. In discussing the mean-median factor, Dr. Caughey testified that “the mean-median difference . . . is [] the difference [between] the average vote share amongst districts, which if [it] turn[s] out equal is [] a statewide share that a party earns, and the difference in the median district.” *Id.* at 909.

FF248. Dr. Caughey explained that “mean-median [] picks up on the asymmetry of the distribution of district partisanship, the skewness . . . of the distribution of partisanship.” *Id.*

FF249. Concerning the measure of declination, Dr. Caughey testified that this measurement “is a little bit more technical and recently developed measure,” adding that “[i]t was originally formulated in thinking about how the angles, if you line up all the districts and the Democratic districts are over here and the Republican districts [are] over here, the angle—how the angle changes where partisanship shifts,” and “where party control shifts.” *Id.* at 910.

FF250. In his expert report, Dr. Caughey calculated the figures for the various plans as follows. First, the Supreme Court’s 2018 Map had a partisan bias of 2.1%; an efficiency gap of 2.9%; a mean-median of 0.8 %; and a declination of 0.08%. Second, Governor Wolf’s plan had a partisan bias of 2.9%; an efficiency gap of 3.5%; a mean-

median of 1.0%; and a declination of 0.10%. Third, the House Republican Caucus plan/map had a partisan bias of 6.3%; an efficiency gap of 6.6%; a mean-median of 2.3%; and a declination of 0.19%. Fourth, Senate Map 1 had a partisan bias of 1.8%; an efficiency gap of 2.3%; a mean-median of 0.7%; and a declination of 0.06%. Fifth, Senate Map 2 had a partisan bias of 1.5%; an efficiency gap of 2.4%; a mean-median of 0.5%; and a declination of 0.07%. (Caughey Report at 18.) In his supplemental report, Dr. Caughey calculated the Reschenthaler 2 map as possessing these values: a partisan bias of 5.9%; an efficiency gap of 6.3%; a mean-median of 2.4%; and a declination of 0.18%. (Caughey Suppl. Report at 24.)

FF251. At the hearing, Dr. Caughey discussed the Plans Score website, which analyzes map plans for partisan fairness and/or gerrymandering.

FF252. Dr. Caughey testified that the website is open to the public, is non-profit and non-partisan, and is completely transparent about the methodology it utilizes to arrive at its predictions. (N.T. at 914-17.)

FF253. In employing the Plans Score website, Dr. Caughey stated that he uploaded the various maps to the website and downloaded the predications, was “projecting what would happen [] if no incumbents were running,” and that, based on the results, districts 1, 7, 10, and 17 identified in the Senate Maps were competitive districts where “there’s substantial uncertainty about where they will land.” *Id.* at 923, 925.

FF254. In his expert report, Dr. Caughey reiterated the findings he obtained with regard to the various plans from using the Plans Score website as follows. First, the Supreme Court’s 2018 Map had a partisan bias of 23%; an efficiency gap of 32%; a mean-median of 13%; a decli-

nation of 35%; and a final average of 26%. Second, Governor Wolf's plan had a partisan bias of 27%; an efficiency gap of 41%; a mean-median of 14%; a declination of 37%; and a final average of 30%. Third, the House Republican Caucus plan/map had a partisan bias of 55%; an efficiency gap of 64%; a mean-median of 36%; a declination of 60%; and a final average of 54%. Fourth, Senate Map 1 had a partisan bias of 16%; an efficiency gap of 26%; a mean-median of 9%; a declination of 27%; and a final average of 20%. Fifth, Senate Map 2 had a partisan bias of 13%; an efficiency gap of 26%; a mean-median of 7%; a declination of 27%; and a final average of 18%. (Caughey Report at 18.) Ultimately, based on the above numbers, Dr. Caughey opined that Senate Maps 1 and 2 are superior to the other maps that he compared them with.

FF255. On cross-examination, Dr. Caughey admitted that he did not analyze the Carter Petitioners' proposed plan/map prepared by Dr. Rodden or the Gressman Petitioners' proposed plan/map prepared by Dr. DeFord. (N.T. at 956, 965-66.)

FF256. Dr. Caughey conceded that the plans/maps submitted by both the Carter Petitioners and Gressman Petitioners had better results in terms of partisan fairness than the plans/maps that he reviewed and compared in his expert and supplemental expert reports. (N.T. at 966-72.)

FF257. Dr. Caughey conceded that his analytical methods did not account for political geography. (N.T. at 999.)

FF258. Notably, Dr. Caughey could not conclude that HB 2146 was unfair. (N.T. at 992.)

FF259. As noted above, the Senate Democratic Caucus also submitted a Declaration by Shoenberg, detailing the number of splits in Senate Map 1 and Senate Map 2, and an Analysis by Michael Lamb, Pittsburgh City Controller, pertaining to the split of the City of Pittsburgh in both of the proposed Senate Maps.

7. John M. Memmi, Ph.D. (Corman & Ward)

FF260. Senate Republican Legislative Intervenors Corman and Ward submitted the expert report of John M. Memmi, Ph.D., who is a consultant in the field of redistricting and has more than 20 years of experience in the process of drawing redistricting maps.

FF261. Dr. Memmi's report states that he evaluated HB 2146 in relation to traditional and applicable criteria for compactness, contiguity, population equality, and maintenance of political subdivisions.

FF262. In conducting his evaluation, Dr. Memmi explained that he used generally accepted methodologies in the field of drawing and evaluating congressional redistricting maps and relied on numerous sources of information.

FF263. Dr. Memmi opined, to a reasonable degree of scientific certainty, that House Bill 2146 meets the four traditional criteria for redistricting.

FF264. Dr. Memmi first noted that the two most common ways to measure compactness are the Polsby-Popper and Reock scores.

FF265. Dr. Memmi explained that Polsby-Popper evaluates irregularity in the perimeter of a district, and Reock examines district area. Both scores range from 0 to 1.

FF266. Dr. Memmi stated that “the more compact the district the greater the score.” (See John M. Memmi Expert Report, attached to Pre-Hearing Opening Br. of Senate Republican Intervenors Corman and Ward, at 1-2.)

FF267. Dr. Memmi stated that the Polsby-Popper scores of HB 2146 range from 0.19 to 0.49, and the Reock scores range from 0.30 to 0.62, revealing that no district has an extreme, or low, score. *Id.* at 2-3; Memmi Expert Report, Figure 1.

FF268. Dr. Memmi defined “contiguity” using the National Conference of State Legislature definition: “as the condition in which ‘all parts of a district are connected geographically at some point with the rest of the district.’” *Id.* at 2.

FF269. Dr. Memmi opined that HB 2146 is comprised of 17 contiguous districts, as verified by *autoBound-EDGE* redistricting software published by Citygate GIS even despite the non-contiguous municipalities and precincts existing in Pennsylvania. *Id.*

FF270. Dr. Memmi further opined that Pennsylvania must have 12 districts with total populations of 764,865 and 5 districts with total populations of 764,864, for a grand total of 13,002,700 people, and that HB 2146 meets this criterion. *Id.* at 2-3; *see also* Memmi Expert Report, Table 1.

FF271. Dr. Memmi observed that “[c]ounty and municipal governments function more efficiently when their jurisdictions are within one district[,]” and that splits are only necessary when the total population of a district is greater than one district. *Id.* at 3.

FF272. Utilizing a chart showing the split political subdivisions in congressional districts under House Bill

2146, Dr. Memmi opined that House Bill 2146 splits only 0.3% of the of Pennsylvania 16,127 political subdivisions (i.e., counties, municipalities, wards, precincts). *Id.*; *see also* Memmi Expert Report, Figure 2.

8. **Thomas L. Brunell (Congressional Intervenors)**

FF273. The Congressional Intervenors also presented the expert opinion of Thomas L. Brunell, Ph.D., a Professor of Political Science and program head for the Political Science program at the University of Texas at Dallas.

FF274. In 2021, Dr. Brunell was appointed by the Director of the U.S. Census Bureau to serve a three-year term on the Census Scientific Advisory Committee.

FF275. Dr. Brunell published a book on redistricting and dozens of peer-reviewed articles in the top journals in the fields of redistricting, the Voting Rights Act, elections, and representation. He served as an expert witness in redistricting related litigation often over the last 20 years, testifying in state and federal courts around the country.

FF276. Dr. Brunell was asked by the Congressional Intervenors to evaluate their two proposed congressional maps, Reschenthaler 1 and Reschenthaler 2, using the 2018 Remedial Plan as a benchmark, to examine equal population, compactness, contiguity, preserving communities of interest, and compliance with the VRA.

FF277. Dr. Brunell was also asked to analyze the underlying partisanship of the two maps.

FF278. After concluding that the 2 Reschenthaler maps are correctly populated, contiguous and reasonably compact, Dr. Brunell analyzed the political subdivision splits and concluded that the 2 Congressional Interven-

nors maps have the same number of county splits as the current map. (Brunell Report at 4-9.)

FF279. In terms of cities and townships, the Reschenthaler maps both split fewer municipalities and have fewer segments than the 2018 Remedial Plan.

FF280. Dr. Brunell examined several measures of partisan advantage including, the efficiency gap, partisan voter index (the “PVI”), and the mean-median vote gap.

FF281. In calculating PVI, Dr. Brunell used the results of the 2016 and 2020 presidential elections as the basis for determining the likely partisanship of each district because they were both high profile elections with well-funded candidates, both elections were relatively close, and the Republican carried Pennsylvania in 2016 and the Democrat carried the state in 2020. *Id.* at 9.

FF282. Dr. Brunell averaged the vote percentage for the Democrat for each district across these two elections and then subtracted 50% from each one.

FF283. Based on PVI, Dr. Brunell opined that the Reschenthaler 1 and Reschenthaler 2 maps create enough competitive districts such that “the majority of the state’s congressional delegation may be decide by the political tides and the quality of the candidates and campaigns in each election.” *Id.* at 8 (Ex. C).

FF284. According to Dr. Brunell’s PVI analysis, the Reschenthaler 1 and Reschenthaler 2 maps are substantially similar to the competitiveness of the 2018 Remedial Plan, each creating eight republican, five democrat, and 4 toss-up districts, as compared to the 2018 Remedial Plan’s seven-six-five breakdown. *Id.* at 10.

FF285. Regarding the mean-median differences, Dr. Brunell explained that this “method takes the mean (average) vote percentage for one party across all the dis-

tricts and compares it to the median of the same set of vote percentages.” *Id.*

FF286. For example, Dr. Brunell explained that “[i]f the Democratic average votes percentage is 55 percent and the Democratic median vote percentage in the same election is 50 percent, there is a 5 percent difference that favors Republicans.” *Id.*

FF287. Dr. Brunell explained that this metric is based on logic that if “one party is ‘packed’ into a handful of districts they are at a disadvantage and this will inflate the average vote percentage for that party, while the median of a distribution will be unaffected.” *Id.*

FF288. For his analysis, Dr. Brunell calculated the mean-median differences for the 2018 Remedial Plan and the Reschenthaler 1 and Reschenthaler 2 maps across all of the presidential, senatorial, and gubernatorial elections in Pennsylvania for the last decade.

FF289. Dr. Brunell also added the three other statewide elections from 2020 because “Pennsylvania made two important changes to their elections beginning in 2020—[it] eliminated straight-party voting and instituted no excuse vote-by-mail.” *Id.*

FF290. Dr. Brunell found the Reschenthaler 1 and 2 maps had meanmedian averages of 1.86% and 1.89%, respectively, which were indicative of a sufficiently competitive map. *Id.* at 9 (Table 10).

9. Sarah Andre (Khalif Ali et al.)

FF291. Khalif Ali submitted the expert report of Sarah Andre, who works as a Redistricting Demography/Mapping Specialist for Common Cause and is responsible for conducting spatial and demographic analyses of local, state, and federal district boundaries and

providing support to Common Cause state offices in the form of district map analysis trainings. (Sarah Andre Report (Andre Report) at 1.)

FF292. Ms. Andre has a Master of Public Policy from the UCLA Luskin School of Public Affairs and a Bachelor of Arts in Human Development from California State University, Long Beach. *Id.*

FF293. Ms. Andre was asked by Khalif Ali et al. to use the proposed congressional plan that Governor Wolf publicly released on January 15, 2022, as a starting point and to adjust for “underlying Census data to count incarcerated individuals in their homes rather than their cells,” and “to improve a small number of areas where the Governor’s Plan, as adjusted for prisoners’ home addresses, could more effectively preserve communities of interest.” *Id.*

FF294. She was also asked to ensure that the Ali Plan complied with the traditional neutral redistricting criteria, specifically equal population, contiguity, compactness, and minimizing splits of political subdivisions. *Id.*

FF295. Ms. Andre did not consider any partisan data or incumbent or challenger home addresses in her analysis. *Id.*

FF296. Ms. Andre used the adjusted Data Set # 2 (with prisoner reallocation) adopted and used by the Pennsylvania Legislative Reapportionment Commission in drafting legislative plans. *Id.*

FF297. Ms. Andre further explained that she “identified and attempted to improve a small number of areas where the Governor’s Plan did not sufficiently account for protecting communities of interest, and specifically, she focused on the Pittsburgh area (Districts 16 and 17),

the Capital Region (Districts 10 and 11), and minor adjustments in Philadelphia, as well as other areas, relying on publicly available testimony and public comment from a variety of sources. (Andre Report at 4-13.)

FF298. In Ms. Andre's opinion, the Governor's Plan and the Ali Plan are "as nearly as equal in population as practicable," as they only have a one-person variance, with 4 districts with 764,864 residents, and 8 with 764,864 residents. *Id.* at 13.

FF299. Ms. Andre opines that the Governor's Plan and the Ali Plan are contiguous, in that "[a]ll districts are composed exclusively of contiguous territory and no district is contiguous only by a single point." *Id.* at 13-14.

FF300. Ms. Andre opines that the Governor's Plan and the Ali Plan are compact on the widely used measures of compactness, the Reock scale and Popper-Polsby test, and are comparable to the 2018 Remedial Plan.

FF301. Noting that "[t]he closer the number is to 1, the more compact the plan is," Ms. Andre observed that the Ali Plan has a Reock score of 0.4070 and a Polsby-Popper score of 0.3418, while the current plan has a Reock score of 0.4278 and a Polsby-Popper score of 0.3675, and the Governor's Plan has a Reock score of 0.4012 and a Polsby-Popper of 0.369. (Andre Report at 14.)

FF302. In comparing the plans, Ms. Andre opined that the Ali Plan compares favorably to both the Governor's Plan and the 2018 Remedial Plan. *Id.*

FF303. Ms. Andre opined that the Governor's Plan and the Ali Plan are comparable in minimizing splits. *Id.*

FF304. Ms. Andre testified that the Governor's Plan has 19 county splits and 178 municipality splits, whereas

the Ali Plan has 19 split and the 177 municipality splits. *Id.*

FF305. Thus, according to Ms. Andre, the Ali Plan preserves population equality among congressional districts, is contiguous, compact, and aimed to reduce county, municipal, and voting precinct splits. *Id.* at 13-15.

FF306. Ms. Andre testified that neither the Governor's Plan nor the Ali Plan sets out to avoid pitting incumbents against one another, as both plans have two pairs of districts that group together incumbents. *Id.* at 14-15.

10. Sean Trende (Voters of the Commonwealth)

FF307. Sean Trende authored a report that analyzed the map submitted by the Voters of PA *Amici*.

FF308. Mr. Trende is currently a doctoral candidate in political science at Ohio State University, working on a dissertation that focuses on applications of spatial statistics to political questions, and he has obtained a master's degree in applied statistics from Ohio State University and a law degree from Duke University.

FF309. After practicing law for 8 years, Mr. Trende joined RealClearPolitics in January of 2009 and is presently a Senior Elections Analyst.

FF310. Mr. Trende has provided expert reports in numerous cases throughout the country concerning election laws, voting rights, and redistricting.

FF311. In his report, Mr. Trende states that he utilized a statistical and graphics programming language called "R" and made a block assignment file to match the shapefile of the blocks to their respective districts to ultimately create a shapefile of the districts in the map for the Voters of PA Plan.

FF312. Mr. Trende opined that the proposed map consists of 17 contiguous districts, which vary in population by no more than one person.

FF313. In terms of the compactness of the districts, Mr. Trende stated he employed three commonly used metrics: Reock, Polsby-Popper and Schwartzberg. While noting “the importance of looking at multiple standards of compactness,” Mr. Trende explained that “[t]he Reock score looks at the ratio of the area of the district to the area of the smallest circle that would enclose the district (also known as a ‘minimum bounding circle’)” and “[a] ‘perfect’ Reock score is 1, while a zero reflects a theoretical perfectly non-compact district.” (Trende Report at 10.)

FF314. Mr. Trende explained that “[t]he Polsby-Popper score looks at the ratio of the area of a district to the area of a circle that has the same perimeter as the district,” “[a] ‘perfect’ Polsby-Popper score is 1,” and “a theoretical perfectly non-compact district would score a zero.” *Id.*

FF315. Mr. Trende stated that “[t]he Schwartzberg score takes the perimeter of the district and compares it to the perimeter (circumference) of a circle that has the same area as the district” and that “the scores are . . . scaled from 0 to 1, with 1 representing a perfectly compact district.” *Id.* at 10-11.

FF316. After providing the Reock, Polsby-Popper and Schwartzberg scores for each individual district in the proposed map, Mr. Trende noted that “[o]ne drawback of these measures is that there is no clear definition of when a district becomes non-compact, and scores for districts that most lay observers would consider quite

compact can nevertheless deviate significantly from a ‘perfect’ district.” *Id.* at 11.

FF317. Mr. Trende calculated a comparison of the proposed map with the Supreme Court’s 2018 Map (*i.e.*, the existing map) and arrived at the following figures: (1) the mean, median, and minimum Reock scores for the proposed map were 0.4419%, 0.4335%, and 0.3432%, respectively, and 0.4280%, 0.4101%, and 0.3243% for the 2018 Map, respectively; (2) the mean, median, and minimum Polsby-Popper scores for the proposed map were 0.3951%, 0.3791%, and 0.2289%, respectively, and 0.3356%, 0.3244%, and 0.1808% for the 2018 Map, respectively; and (3) the mean, median, and minimum Schwartzberg scores for the proposed map were 0.6256%, 0.6157%, and 0.4784%, respectively, and 0.5754%, 0.5695%, and 0.4252% for the 2018 Map, respectively.

FF318. Mr. Trende analyzed the splits in the proposed map, determining that the proposed “map splits only 15 counties between the 17 districts” and does so “in a manner consistent with the way counties have historically been split in the Commonwealth,” especially considering that “[t]here are three counties in Pennsylvania that must be split due to their population: Philadelphia, Montgomery and Allegheny” and “[o]utside of these mandatory splits, the splits in the [p]roposed [m]ap impact just 25.1% of the population.” *Id.* at 12-13, 15.

FF319. According to Mr. Trende, the proposed map “also splits relatively few municipal divisions,” a total of 17, and that, notably, “the only large city the [p]roposed [m]ap splits is Philadelphia (which must be split due to its population),” while “[l]arge cities such as Pittsburgh,

Allentown, Erie, and Reading are kept intact.” *Id.* at 15-16.

FF320. Concerning the VRA, Mr. Trende “does not purport to conduct a racially polarized voting analysis, and thus does not make claims as to whether a district is required by the VRA,” but notes “that, as with the current plan, there is at least one district that is consistent with the VRA.” *Id.* at 17.

FF321. In this regard, Mr. Trende states that “[b]lack voters comprise a majority of the Voting Age Population (“VAP”) in Congressional District 3” and, further, that “Black voters would be well-positioned to elect the candidate of their choice in Congressional District 2, where minority groups together comprise almost 65% of the VAP, but where Black voters comprise a plurality of the non-white VAP.” *Id.*

FF322. Mr. Trende testified that incumbents are paired together in two districts. *Id.* at 16-17.

FF323. On the issue of partisanship, Mr. Trende provided the meanmedian and efficiency gap scores for both proposed map and the 2018 Map for three different periods/election races, “Trump-Biden only,” the “2020 Elections,” and the “2016-2020 Elections.” *Id.* at 21.

FF324. Mr. Trende calculated the efficiency gap for the proposed map during these periods/election races as 0.036%, 0.030%, and 0.056%, respectively, and -0.010%, -0.016%, and -0.041% for the 2018 Map, respectively.

FF325. Mr. Trende also calculated the mean-median for the proposed map during these periods/election races as 0.030%, 0.020%, and 0.022%, respectively, and 0.007%, -0.004%, and 0.002% for the 2018 Map, respectively.

FF326. Mr. Trende provided figures for the Governor’s map/plan and concluded that “the Governor’s Map

is less compact across virtually every measure than the [p]roposed [m]ap and is less compact than the existing map in multiple instances.” *Id.* at 22.

11. Justin Villere (Draw the Lines PA)

FF327. The Draw the Lines *Amici* submitted a statement from Justin Villere, Managing Director of Draw the Lines PA, to support what the amici refer to as the “Pennsylvania Citizens’ Map” or the “Citizens’ Map.”

FF328. In the words of Mr. Villere,

The Citizens’ Map, in effect, represents the values of everyday Pennsylvania mappers more than any other map that has been published or considered. Further, by using direct hands-on public involvement to draw the original map, publishing the map, asking for feedback, and then revising it, Draw the Lines has modeled a transparent and accountable public process. The Citizens’ Map is not a perfect map but it represents what our thousands of mappers and a clear majority of public commenters would want to see in their congressional maps.

(Villere Report at 2.)

FF329. As explained by Mr. Villere, the Citizens’ Map contains 17 districts that are contiguous and deviate in population by no more than one person.

FF330. In terms of compactness scores, Mr. Villere states that the map has a Reock score of 0.451, a Polsby-Popper score of 0.376, a Schwartzberg score of 1.67, a Pop-Polygon score of 0.77, and Convex Hull score of 0.81. *Id.* at 4.

FF331. Mr. Villere notes that “limiting jurisdictional splits was not a top-3 priority for our mappers,” but

nonetheless explains that the Citizens' Map "splits 14 counties a total of 16 times, equal to the 14/16 split by the 2018 map" and, also, "splits 16 municipalities," which is "an improvement on the 19 splits in the 2018 map." *Id.* at 4.

FF332. According to Mr. Villere, "[s]ome municipal splits are unavoidable due to size (like Philadelphia), or due to the zero[-]population deviation requirement. Other splits (like Pittsburgh) were the result of trade-offs to maximize other values (like communities of interest, compactness, and political competitiveness)." *Id.*

FF333. Mr. Villere states that, in the Citizens' Map, "[t]o adhere to the Voting Rights Act, Districts 2 and 3 are majority-minority districts. District 2 is a coalition district (29% Black, 22% Hispanic, 10% Asian), while District 3 is majority Black (55%)." *Id.*

FF334. On the issue of competitive districts, Mr. Villere submits that "[t]he Citizens' Map, using 2016-2020 composite election data, would yield five strongly Democratic and six strongly Republican districts" and "[s]ix districts would produce competitive elections (major party candidates within 10% of each other)." *Id.*

FF335. Mr. Villere adds that using PlansScore, which evaluates maps for partisan fairness, the Citizens' Map, when not factoring in the status of incumbents, "has an efficiency gap of 3.5% in favor of Republicans," which "means Republicans would win an extra 3.5% of 17 seats, or an extra half-seat.

FF336. According to Mr. Villere, when factoring incumbency, there is a 0.2% gap in favor of Republicans." *Id.* at 5.

FF337. Mr. Villere provides a detailed description of the geographical contours for each district and brief

statements as to why the composed districts preserve the relevant community interests.

FF338. The Court finds that all experts presented were qualified to offer expert opinions on the subjects of their testimony.

FF339. Citizen Voters *Amici* did not submit an expert report.

D. Evidentiary Objections

During trial, the Governor objected to the admission of Dr. Memmi's and Dr. Brunell's reports on the grounds that the reports are inadmissible hearsay, and allowing the reports into evidence would bestow an unfair advantage on the parties proffering them. The Governor also argued that the reports submitted by the *Amici*'s experts should be weighed in a manner that appropriately reflects their lack of exposure to cross-examination. The Governor readily acknowledged the Court's rationale for allowing those *Amicus* Participants to submit expert reports and that the Court was attempting to balance consideration of those Participants' views and proposed maps, on the one hand, with the need to ensure that the evidentiary hearing, in which the *Amicus* Participants were not permitted to participate, was manageable on the other hand. It is also important to note that the Governor's expert report included analysis of all of the *Amicus* Participants' reports based on a request by the Governor to do so. The Governor nonetheless argued that the *Amicus* Participants' expert reports were not subject to the kind of rigorous adversarial testing applied to the reports submitted by the experts who testified at the hearing. Therefore, he requested that the

Court's assessment of the *Amicus* Participants' reports take account of that difference.

The Court submits that it did not abuse its discretion in overruling the objection. Due to the expedited nature of the proceedings, the Parties were permitted to present one to two plans and corresponding expert reports but were only permitted to have one expert testify at the trial. The *Amicus* Participants were permitted to present one plan and one expert report, and were not permitted to participate in trial. All Parties were given the opportunity to file counter expert reports to respond to any of the expert reports of the other Parties and the *Amicus* Participants. Because the expert reports submitted by the *Amicus* Participants were subject to adversarial testing, and the Parties and the *Amicus* Participants all had the opportunity to point out to the Court the shortcomings of the other expert reports, everyone was in equal circumstances. It is also noteworthy to add that none of the Parties objected to the admission of the Declarations moved into evidence by the Senate Democratic Caucus Intervenors or the Statement by Michael Lamb on the basis of hearsay. In fact, a number of parties and applicants during the intervenor hearing stated that the Court could just request maps and reports and decide without a hearing. Hence, the Court believes it was correct to overrule the objection.

Moreover, in its January 26, 2022 order denying Khalif Ali's appeal, the Supreme Court seemingly countenanced this Court's strategy of limiting the *Amicus* Participants' participation in this matter to the submission of an expert report and plan in writing. Doubtless, if the Supreme Court had not approved, it would have clarified

that before the Court and Parties expended time and resources by proceeding in this manner.

The Governor also objected to admission of Dr. Memmi's and Dr. Brunell's reports based on fairness. It argued that Dr. Memmi's report addressed the same map as does the report of the Republican Legislative Intervenors' testifying witness, Dr. Barber. And, although the Congressional Intervenors submitted two maps, they had Dr. Brunell address one map, while their testifying expert, Dr. Naughton, addressed the other. Both experts' reports were proffered in support of both maps. The other Parties at the hearing all offered expert reports by one witness, namely, the witness who testified at the hearing and was subject to cross-examination. The Governor argued that to safeguard the truth-seeking process and place the parties on a level playing field, the expert reports of Dr. Memmi and Dr. Brunell should not be admitted into evidence.

The Court further points out that the Speaker and Majority Leader of the Pennsylvania House of Representatives and the President Pro Tempore and Majority Leader of the Pennsylvania voluntarily offered to join together as one party in a good faith attempt to streamline the proceedings and avoid the duplication of efforts at trial. The House Democratic Caucus Intervenors and Senate Democratic Caucus Intervenors did not join as intervenors and were permitted to file 1-2 reports each. By allowing Democratic House and Senate Intervenors the opportunity to provide two reports and maps each just because they did not join as intervenors, but precluding Republican House and Senate Intervenors from doing so because they joined as intervenors would be prejudicial. Recognizing each would have been entitled

to submit up to two plans and two expert reports had they not joined together, the Court did not perceive any unfair advantage to the Governor or any other party. The Court also did not believe it was fair to penalize those parties for making an effort to accelerate the proceedings in light of the exigent timeline. Moreover, as the Court explained to counsel, the object of soliciting expert reports and proposed plans from the parties, intervenors and *amici* was to educate the Court and provide an array of options for the Court. The Court submits that it did not abuse its discretion in overruling the objection.

Exhibits introduced in trial and attached to briefs were admitted into evidence. All exhibits are part of the record in this matter.

E. Parties' and Amicus Participants' Arguments

The Court will now summarize the parties' and *Amici* Participants' arguments.

1. Carter Petitioners

The Carter Petitioners first assert that their proposed plan meets or exceeds the 2018 Remedial Plan's performance on the traditional redistricting criteria that our Supreme Court set forth in *LWV II*, and additionally reflects the partisan preferences of Pennsylvania voters. (Carter Pet'rs' Br. in Support, at 1.) The Carter Petitioners point out that their Plan "implements a least-change approach," in that they used the "superior or comparable" Supreme Court 2018 Remedial Plan as a starting point, which they claim is "a common strategy courts deploy when, as here, the existing map is rendered obsolete by population changes." *Id.* at 4-5. With respect to taking a least-change approach, the Carter Petitioners assert that their Plan "preserves district cores, creates continuity in representation, and respects communities of inter-

est[,]” and satisfies the *LWV II* criteria and other redistricting principles previously relied upon by our Supreme Court. *Id.* at 4. Specifically, the Carter Petitioners assert that they “were able to preserve the core of the 2018 Remedial Plan’s districts and create continuity for the overwhelming majority of Pennsylvania residents.” *Id.* at 6 (citing *Karcher v. Daggett*, 462 U.S. 725, 740 (1983), and *Reynolds v. Sims*, 377 U.S. 533, 578-79 (1964)). They point out that their Plan allows 87% of Pennsylvania’s population to remain in their respect districts under the 2018 Remedial Plan. *Id.*

In terms of the traditional redistricting criteria, the Carter Petitioners assert that their Plan meets the equal population requirement of *LWV II*, because it “includes 4 districts with the ideal population and 13 districts with a deviation of plus or minus one person[,]” which “level of population deviation readily satisfies constitutional requirements.” *Id.* at 7. The Carter Petitioners next contend that their Plan is similar in compactness to the 2018 Remedial Plan. *Id.* In this regard, they point out that they have complied with *LWV II* by providing the Plan’s Reock, Schwartzberg, Polsby-Popper, Population Polygon, and Area/Convex Hull measures of compactness for each district. *Id.* at 8. They further point out that their Plan’s Reock score matches the 2018 Remedial Plan’s score, and that the Plan nearly matches (each by 0.01) the 2018 Remedial Plan’s scores on the other measures. *Id.* The Carter Petitioners explain that some decreases in compactness measures was caused by their attempt to maintain population equality in Districts 4 and 5. Moreover, they explain that population deviations in the counties comprising those districts (Bucks and Delaware Counties) required them “to reach outside of those sub-

divisions for additional population.” *Id.* at 9. The Carter Petitioners also assert that their Plan meets the contiguity requirement. *Id.* Finally, the Carter Petitioners argue that their Plan “maintains and builds upon the 2018 Remedial Plan’s respect for the integrity of political subdivisions[,]” in that it “has the same or fewer county, county subdivision, and vote tabulation district splits.” *Id.*

In terms of other redistricting principles, the Carter Petitioners first claim that their Plan preserves minority voting rights as reflected in the 2018 Remedial Plan. The Carter Petitioners maintain that their Plan complies with *Mellow* and the VRA, because “[i]t closely follows the boundaries of the 2018 Remedial Plan with regard to those areas of the state with sizeable minority populations, thus preserving [the 2018] minority opportunity districts” *Id.* at 10-11. They also point out that their expert, Dr. Rodden, did not take racial data into account when making adjustments for population changes. *Id.* at 11. The Carter Petitioners next assert that their Plan “creates districts that represent the natural and well-defined communities of interest” and, where changes were required, “follows natural and political subdivision boundaries with a focus on keeping communities together.” *Id.* at 12 (noting District 7 needed more population, so Carbon County added to unify the Allentown-Bethlehem-Easton metropolitan area consisting of entirety of Northampton, Lehigh, and Carbon Counties; and new District 15 that avoids split of Centre County that previously separated State College from some suburbs, resulting from loss of District 12). Finally, the Carter Petitioners assert that their Plan reflects Pennsylvania voters’ partisan preferences because it essen-

tially matches the 2018 Remedial Plan, while also containing “truly competitive districts.” *Id.* at 13-14.

In their response brief, the Carter Petitioners add that the Court should not select a plan that overly favors one party or another and/or that splits communities of interest, including the plans of the House and Senate Republican Intervenors and the Republican Congressional Intervenors, and Amici Participants Voters of the Commonwealth and Citizen Voters. (Resp. Br. in Support of Carter Plan at 6-11.) Last, the Carter Petitioners contend that this Court owes no deference to any of the submitted plans, including that of the House and Senate Republican Intervenors. *Id.* at 12-17.

2. Gressman Petitioners

In their supporting brief, the Gressman Petitioners, who characterize themselves “[a]s the only nonpartisan party before this Court,” first explain the guiding legal principles that this Court must consider in reviewing the various plans submitted to the Court for consideration, which include the neutral criteria of *LWV II*, article II, section 16 of the Pennsylvania Constitution, and the VRA. (Br. in Support of Gressman Pet’rs’ Plan at 2, 12-14.) The Gressman Petitioners also note that there are other permissible factors the Court may consider, such as metrics, which include a plan’s maximum population deviation and compactness measures. *Id.* at 14. The Gressman Petitioners assert that their proposed Plan is superior because it “achieves or approaches the best metrics that can be attained on all of Pennsylvania’s legal requirements, while appropriately considering the additional permissible redistricting factors.” *Id.*

Specifically, the Gressman Petitioners assert that their Plan, which has 5 districts with 764,864 residents

and 12 districts with 764,865 residents, has the best population equality compared to the other proposed plans. *Id.* at 15-16. The Gressman Petitioners also claim that their Plan outperforms the 2018 Remedial Plan, the House Republican Intervenors' Plan, and the Governor's Plan in terms of splitting political subdivisions, as it splits only 15 counties, 19 municipalities, 1 city, 3 boroughs, 15 townships, and 15 wards. *Id.* at 17-24. The Gressman Petitioners also claim their Plan is contiguous in accordance with *LWV II*. *Id.* at 24. The Gressman Petitioners further assert that their Plan is compact, and they focus on their Plan's mean scores for Polsby-Popper (0.33), Reock (0.40), and Convex Hull (0.80), as well as the Plan's cut edges score (5,546). *Id.* at 25-29. In doing so, the Gressman Petitioners contend that their Plan substantially outperforms the House Republican Intervenors' Plan on compactness, the 2018 Remedial Plan on three of the four measure, and is equal to or comparable to the Governor's Plan. *Id.* at 27.

The Gressman Petitioners further assert that their plan exhibits partisan fairness under the Free and Equal Elections Clause, which is measured by a number of metrics including direct majority responsiveness (resulting in larger vote share being rewarded with larger seat share), the efficiency gap (achieving a gap near zero for each election analyzed), and the mean-median score (scoring very close to zero). *Id.* at 29-40. The Gressman Petitioners also argue that their Plan complies with the Fourteenth Amendment to the United States Constitution and section 2 of the VRA, because it contains three districts in the Philadelphia area in which minority-group members constitute 51%, 52%, and 57% of the voting age population. (Br. in Support of Gressman Pet'rs'

Plan at 40-46.) Moreover, the Gressman Petitioners point out, their Plan would, for the first time, create a Latino majority-minority district. *Id.* at 43-46. The Gressman Petitioners also claim their Plan is superior based upon other factors, such as pairing zero incumbents in the same districts and maintaining respect for communities of interest, as recognized in *Mellow*. *Id.* at 47-48; *see also id.* at 49-63 (demonstrating preserved communities of interest). For all of the above reasons, the Gressman Petitioners urge this Court to adopt their proposed Plan.

In their responsive brief, the Gressman Petitioners largely repeat the above arguments, but add that they take no position with respect to making changes to the 2022 Primary Election calendar. (Gressman Pet'rs' Resp. Br. at 24.)

3. Governor Wolf Intervenor

In his Brief in Support, Governor Wolf Intervenor asserts that he “is the only party to this litigation who has a constituency of, and thus represents the interests of, *all* Pennsylvania voters.” (Governor Wolf Intervenor Br. in Support of Plan at 1.) Acknowledging that the Free and Equal Elections Clause of the Pennsylvania Constitution (article I, section 5), the principles announced in the Supreme Court’s *LWV II* decision, the Supreme Court’s and this Court’s prior decisions in *Mellow*, and Article I, Section 2 of the U.S. Constitution (one person, one vote) govern this Court’s analysis, Governor Wolf argues that his Plan complies with all of the above requirements. (Governor Wolf Intervenor Br. in Support of Plan at 7-11.)

Specifically, Governor Wolf asserts that his Plan contains districts that are essentially equal in population, as “no district has more than 764,865 persons and no dis-

trict has fewer than 764,864 persons” *Id.* at 18. Further, he claims that the compactness of his Plan is shown by its Polsby-Popper (0.381), Reock (0.431), and voting district cut edges (5185) scores, which demonstrate that his Plan is more compact than other proposed plans, such as HB 2146. *Id.* at 19-20. Governor Wolf additionally asserts that his plan is contiguous, similar to the 2018 Remedial Plan. *Id.* at 20. Regarding splits, Governor Wolf points out this his plan splits only 16 counties, which is comparable to the 2018 Remedial Plan’s 13 split counties and the 19 split counties in Mellow. *Id.* He claims that the splits were necessary in both Philadelphia and Allegheny Counties because their “populations [are] too large to subsume in a single congressional district.” *Id.* Governor Wolf further asserts that his Plan is superior because it “carefully considered decisions to ensure that cohesive communities of interest are preserved” based on feedback he received “via the Governor’s Public Comment Portal[,]” “testimony received in listening sessions held by the Governor’s Redistricting Advisory Council[,]” and the nearly 500 submissions to the Redistricting Public Comment Portal. *Id.* at 20-21. As examples, Governor Wolf points to numerous comments received requesting that the City of Reading and Centre County be kept whole, which requests the Plan honored. *Id.* at 22.

Governor Wolf next contends that his plan is superior because it does not entrench a structural partisan advantage and promotes accountability and responsiveness to voters, which is shown by his expert Dr. Duchin’s overlay method analysis. *Id.* Governor Wolf asserts that Dr. Duchin’s analysis shows that his Plan results in a “level ‘partisan playing field,’ while the House Map ‘en-

trenches a Republican advantage.’” *Id.* at 24-25. Therefore, according to Governor Wolf, his Plan provides voters of this Commonwealth with an equally effective power to select the representatives of their choice. *Id.* at 25. Governor Wolf further contends that Dr. Duchin’s ensemble analysis of randomly drawn plans compared to his Plan, as well as her use of the efficiency gap (+0.10), Eguia artificial partisan advantage (0.05), the mean-median score (-0.01), and the partisan bias score (-0.018) as measurements, confirms that Governor Wolf’s Plan does not create any systematic partisan advantage, but rather “creates a level electoral playing field and promotes accountability and responsiveness to voters” and “districts [that] are responsive to Pennsylvania political trends and prevailing voter preference.” *Id.* at 26-27. Overall, the Governor contends, using both methods reflects that his Plan: “reflects the Majority Rule Principle, as the political party winning the majority of votes statewide is predicted, as a general matter, to win a majority of congressional seats”; “adheres to the Close-Votes-Close-Seats Principle, meaning an electoral climate with a roughly 50-50 split in partisan preference should produce a roughly 50-50 representational split”; and “preserves ‘swing’ districts that can be won by members of either major political party under recent voting patterns.” *Id.* at 27. Accordingly, Governor Wolf requests that this Court choose his proposed Plan, as it comports with redistricting principles of *LWV II*. *Id.* at 28.

In his responsive brief, Governor Wolf repeats his arguments, summarized above, and additionally observes that this case is more similar to *Mellow* than *LWV II*, and, as such, “goes beyond simply asking whether each

plan satisfies the requirements of” *LWV II*. (Governor Wolf’s Resp. Br. at 3.) Further, Governor Wolf responds to the Senate and House Republican Legislative Intervenor’s argument that HB 2146 is entitled to special deference, asserting that no special deference is due. *Id.* at 6-11.

4. Republican Legislative Intervenor’s (Senate and House Leaders)

a. Senate Republican Intervenor’s (Corman & Ward)

Senate Republican Intervenor’s Corman and Ward acknowledge in their opening brief that the traditional, constitutionally-derived redistricting principles set forth in *LWV II* govern this matter. (Pre-hearing Opening Br. of Senate Republican Intervenor’s at 1-5.) They also contend that additional principles and factors must be considered, including the VRA (citing *Gingles*, 478 U.S. at 71), the Fourteenth Amendment to the United States Constitution (citing *Shaw v. Reno*, 509 U.S. 630, 641 (1993)), and other political factors, such as protection of incumbents and the maintenance of political balance that existed after the prior reapportionment. (Prehearing Opening Br. of Senate Republican Intervenor’s at 5-8.) Senate Republican Intervenor’s further point out that, while the *LWV II* Court stated, in *dicta*, that subordinate factors utilized as part of creating a redistricting plan “may not ‘unfairly dilute the power of a particular group’s vote for a . . . representative[,]’” “[i]t did not attempt to define the contours of ‘unfair’ vote[]dilution.” (Pre-hearing Opening Br. of Senate Republican Intervenor’s at 8.) Senate Republican Intervenor’s then recognize the principle that a court is permitted to intervene when the General Assembly and Governor reach an im-

passee in enacting a restricting scheme. *Id.* at 10. However, given that “there is no doubt that redistricting remains a fundamentally legislative act[,]” Senate Republican Intervenors contend that their proposed Plan, *i.e.*, HB 2146, is “entitled to deference and special weight as a reflection of the legislative process (given that the House has passed it and it is making its way through the Senate) and the will of the people’s elected representatives.” *Id.* at 1012 (citing numerous federal and U.S. Supreme Court cases). On this basis, Senate Republican Intervenors request that this Court choose their proposed Plan, HB 2146, “in order to honor the General Assembly’s constitutional prerogative to engage in redistricting.” *Id.* at 12.

b. House Republican Intervenors (Cutler & Benninghoff)

House Republican Intervenors Cutler and Benninghoff, who have submitted the same plan as the Senate Republican Intervenors, assert that the traditional redistricting principles of *LWV II* should guide this Court in selecting an appropriate congressional districting plan. (House Republican Intervenors Corrected Opening Br. at 5.) The House Republican Intervenors contend that HB 2146 was passed by the House following “the most open and transparent Congressional redistricting process in recent history” and “is nearly identical to the map drawn by a citizen and good government advocate[,]” Amanda Holt. *Id.* The House Republican Intervenors point out that Ms. Holt’s proposal was selected because “it was drawn without political influence, met constitutional standards, limited the splits of townships and other municipalities, and offered districts that were company and contiguous.” *Id.* at 6. They note that the

proposal was amended to its current form, and subsequently amended based upon 399 comments from citizens. *Id.* at 6-7.

Acknowledging that congressional redistricting is unquestionably the prerogative of the General Assembly, the House Republican Intervenors observe that nearly all impasse cases generally involve a disagreement between the legislature and the governor on an appropriate redistricting plan. *Id.* at 10. However, the House Republican Intervenors contend that “impasse does not mean that the General Assembly’s plan—despite the failure to the Governor to sign it into law—is entitled to no special consideration when the judiciary must take up the unwelcome obligation of redistricting the Commonwealth.” *Id.* Stated otherwise, the House Republican Intervenors urge this Court to give HB 2146 special consideration, notwithstanding the Governor’s veto thereof, “because it best reflects state policies and the people’s preferences.” *Id.* at 11.

Moreover, the House Republican Intervenors contend that HB 2146 closely adheres to, and does exceptionally well on, traditional redistricting principles and was drawn without any partisan data. *Id.* at 12-13. In this regard, the House Republican Intervenors highlight that HB 2146 has a population deviation of plus or minus one, which is the best that can be achieved, and it is also contiguous and compact. *Id.* at 13. Specifically, HB 2146 achieved a 0.324 Polsby-Popper score, which is similar to the 2018 Remedial Plan’s 0.327 and, thus, comparable to that plan in terms of compactness. *Id.* at 13-14. The House Republican Intervenors further highlight that HB 2146 only splits 15 counties with 18 total splits, which is also very similar to the 2018 Remedial Plan that split 14

counties 19 times. *Id.* at 14. Further, HB 2146 splits only 16 municipalities with a total of only 18 splits, while the 2018 Remedial Plan split 18 municipalities a total of 19 times. *Id.* The House Republican Intervenors additionally highlight that HB 2146 creates two districts with a minority voting age population greater than 50%, including one with a black voting age population over 50%. *Id.* at 15.

The House Republican Intervenors next assert that, although not required by the Constitution, HB 2146 “is demonstrably fair under numerous partisan fairness measures.” *Id.* Specifically, the House Republican Intervenors contend that HB 2146’s partisan fairness was established via its expert’s, Dr. Barber’s, comparison of the bill to a set of simulated maps following only the traditional criteria, which not only accounts for partisan fairness but also the geographic distribution of voters across the Commonwealth. *Id.* at 15-16. The House Republican Intervenors further highlight the results of Dr. Barber’s analysis, which “demonstrate that the House Plan follows the[] traditional redistricting criteria similar to that of the simulated plans” and “that, if anything, the House Plan is more favorable to Democrats.” *Id.* at 16. In particular, they point out that HB 2146 “is predicted to result in 9 Democratic-leaning seats and 8 Republican-leaning seats using an index of statewide elections from 2012 to 2020”; “[t]he most common outcome, however, is 9 Republican-leaning seats and 8 Democratic-leaning seats.” *Id.* at 16-17. This, the House Republican Intervenors contend, shows how HB 2146 “is fair and can flip seats depending on different election outcomes.” *Id.* at 17.

The House Republican Intervenors further highlight HB 2146's mean-mean score of -0.015, which is close to zero, its efficiency gap of -0.02, which is also close to zero, and its uniform string analysis, all of which revealed that HB 2146 is fair. *Id.* at 17-18. The House Republicans also point out that HB 2146 creates five competitive districts, four of which are Democratic-leaning, and, in using raceconscious simulations, a map with 9 Democratic-leaning seats is the most common outcome. *Id.* at 20-21. Finally, the House Republican Intervenors suggest that this Court should reject any maps that subordinate traditional redistricting criteria in favor of a map that seeks proportional representation. *Id.* at 21-24. For the above reasons, the House Republican Intervenors request that this Court adopt HB 2146.

5. Congressional Intervenors

Congressional Intervenors argue that this Court's decision in this matter is guided by the same constitutional requirements as the General Assembly. (Brief of Congressional Intervenors at 9.) In particular, Congressional Intervenors contend that their two plans, Reschenthaler 1 or Reschenthaler 2, submitted to this Court for consideration, both meet the U.S. Constitution's one person, one vote requirement, comply with the VRA, and comport with the Free and Equal Elections Clause of the Pennsylvania Constitution. *Id.*

Citing *Mellow*, Congressional Intervenors first assert that both of their plans have a maximum total deviation of one voter, and thus, they meet the equal population requirement. *Id.* at 10. Further, Congressional Intervenors' plans both comply with the VRA "because sufficiently polarized voting does not exist and, thus, the

VRA is simply not implicated.” *Id.* at 12. Citing the three *Gingles* factors, which are threshold conditions for demonstrating vote dilution under section 2 of the VRA, Congressional Intervenors explain that only “[i]f the *Gingles* factors are met[is] there [] good reason to believe that Section 2 of the VRA mandates the creation of a minority-majority district, but, as succinctly put by the [United States] Supreme Court, ‘if not, then not.’” (Br. of Congressional Intervenors at 12-13.) They further explain that if one of the factors, such as white bloc voting, cannot be established, “then the requisite good reason for drawing a minority-majority district does not exist.” *Id.* at 13. As applied to their two plans, Congressional Intervenors contend that the data analyzed by their expert, Dr. Brunell, does not indicate racially polarized voting, which would necessitate the creation of a minority-majority district. *Id.* at 14-15. Therefore, Congressional Intervenors assert that in the absence of the third *Gingles* factors showing racially polarized voting that would preclude a minority from electing the candidate of their choice, the VRA is not implicated. *Id.* at 15-16.

Congressional Intervenors next contend that their plans satisfy the traditional redistricting criteria of *LWV II*. *Id.* at 17. Specifically, the plans amply satisfy the compactness requirements, with Resenthaler 1’s Reock score of 0.435 and Polsby-Popper score of 0.363, which exceeds the 2018 Remedial Plan’s score by 0.28 units. *Id.* at 19. Further, Resenthaler 2’s yields similar scores, with a Reock score of 0.424, and a Polsby-Popper score of 0.352, both of which are better than the 2018 Remedial Plan. *Id.* Congressional Intervenors also contend that their plans are contiguous. *Id.* at 19-20. Further, according to Congressional Intervenors, their plans

maintain the integrity of municipalities because they only split 13 counties into fewer than 29 segments and 16 municipal splits into 33 segments, compared to the 2018 Remedial Plan, which contains 13 split counties into 30 segments and 19 municipal splits into 39 segments. *Id.* at 21.

Congressional Intervenors focus, at length, on how their plans properly account for communities of interest under the Free and Equal Elections Clause. While acknowledging this concept “often proves difficult to measure,” Congressional Intervenors contend that “perhaps most relevant with respect to the Court’s compactness and political subdivision split analysis because a fair map will, at times, sacrifice mathematical exactitude to maintain contiguity of communities that share similar interests.” *Id.* at 23-24. According to Congressional Intervenors, the term encompasses “school districts, religious communities, ethnic communities, geographic communities which share common bonds due to locations of rivers, mountains and highways,” “a community’s circulation arteries, its common news media . . . , its organization and cultural ties, its common economic base, and the relationship among schools of higher education as well as others.” *Id.* at 24-25 (citing *Mellow* and *Holt I*). Congressional Intervenors contend that the Court should consider this and any evidence, objective and subjective, consistent with the Commonwealth’s precedent. *Id.* at 27. Notably, they point out that their plan keeps Pittsburgh intact, it keeps certain areas intact based on transportation corridors; shared school districts; shared commercial commuter connections; shared manufacturing interests, a public transit authority, and a regional health system; commuter suburbs, universities and hos-

pital networks, and a camp and resort region; commercial centers and communities; shared commercial, cultural, and transportation connections; a manufacturing sector versus a more rural area without manufacturing. *Id.* at 29-33. Congressional Intervenors contend that mathematical “compactness scores will not fully that Reschenthaler 1 and 2 attempt to keep political subdivisions whole—consistent with communities of interests.” *Id.* at 33.

Finally, Congressional Intervenors acknowledge the Court’s ability to consider other subordinate factors, including competitiveness, incumbency protection, and partisan fairness. In this regard, they contend, Reschenthaler 1 and 2 are substantially similar to the 2018 Remedial Plan, in that each Reschenthaler map creates eight Republican, five Democrat, and four toss-up districts, compared to the 2018 Plan’s seven-six-five breakdown. *Id.* at 38. Moreover, Congressional Intervenors note, the mean-median index across different elections ranges from 0 to 3.8, while the average mean-median indexes are 1.85 and 1.89, showing the plans are sufficiently competitive. *Id.* at 39-40. Congressional Intervenors further claim the map creates a fair partisan balance. *Id.* at 41-42. On these bases, Congressional Intervenors request that this Court adopt either Reschenthaler 1 or Reschenthaler 2.

Finally, Congressional Intervenors assert that “Petitioners have attempted to create a number of false ‘deadlines’ by which . . . this Court must purportedly act to either enact or select a congressional reapportionment plan before the date of the 2022 General Primary Election. *Id.* at 43. In doing so, Congressional Intervenors suggest that the Court has until at least February 22,

2022, to review, consider, and select an appropriate congressional reapportionment plan before the 2022 General Primary Election would be impacted, which is similar to what occurred in *LWV II*. *Id.* at 43-45.

6. House Democratic Caucus Intervenor (McClinton)

House Democratic Caucus Intervenor McClinton asserts that the House Democratic Caucus Plan should be accepted by the Court because it meets the constitutional requirements governing congressional redistricting, as set forth by the Supreme Court in *LWV II*. (House Democratic Caucus Intervenor Br. in Support at 5.) House Democratic Caucus Intervenor McClinton specifically asserts that, under the Caucus’s Plan, “populations between districts are as equal as practicable and reflect population shifts in the 2020 Census[,]” noting that they reflect “a population deviation of only two people between the largest and smallest districts.” *Id.* at 7-8. House Democratic Caucus Intervenor McClinton also maintains that the Caucus’s Plan is compact, with a Reock score of 0.43 and a Polsby-Popper score of 0.28, which scores are in line with the 2018 Remedial Plan, and contiguous. *Id.* at 8. Further, the Plan minimizes splits of political boundaries, with 16 counties, 18 municipalities, and 16 voting precincts that are divided. *Id.* at 9. For these reasons, House Democratic Caucus Intervenor McClinton requests that this Court accept the House Democratic Caucus’s Plan.

7. Senate Democratic Caucus Intervenors (Costa et al.)

The Senate Democratic Caucus Intervenors, like other Parties and *Amicus* Participants, acknowledge that the traditional redistricting criteria of *LWV II*, the

Free and Equal Elections Clause, and the VRA guide this Court's analysis in choosing a map. (Senate Democratic Caucus's Br. in Support at 8-14.) The Senate Democratic Caucus contends that its Proposed Plan 1 complies with the above requirements because it creates districts of equal population, maintains a majority-minority district, and employs the traditional redistricting criteria to avoid vote dilution. *Id.* at 14-18. Specifically, the Senate Democratic Caucus's Proposed Plan 1 achieves equal population, with 12 districts with 764,865 residents, and 5 districts with 764,864 residents; provides minorities with equal opportunity to elect the candidate of their choice under the VRA and create a number of potential coalition district to increase the voices of minorities; is compact, contiguous, and does not split any political subdivisions unnecessarily; and avoids partisan vote dilution, as evidenced by its partisan bias metric score, efficiency gap metric score, the meanmedian difference metric, and a declination metric, and the number of competitive districts in the Plan. *Id.* at 14-16; *see* Senate Democratic Caucus's Expert's Report at 11-18. While the Plan, and Proposed Plan 2, splits the City of Pittsburgh, the Senate Democratic Caucus contends it does so in a way so as to preserve communities of interest. *Id.* at 16. As for its Proposed Plan 2, the Senate Democratic Caucus informs that the primary difference between Plan 1 and Plan 2 is that Plan 2 creates an expanded minority coalition in District 2 in Philadelphia. *Id.* at 19-20. Accordingly, the Senate Democratic Caucus requests that this Court adopt one its redistricting plans.

In its response brief, the Senate Democratic Caucus responds to the Senate and House Republican Leaders' argument that HB 2146 is entitled to deference, finding

such argument to be without merit. (Senate Democratic Caucus Resp. Br. at 9-12.) Further, with respect to the various arguments set forth about changing the 2022 Primary Election calendar, the Senate Democratic Caucus indicates it would defer to the executive branch ability to determine its needs in terms of administering the election laws. *Id.* at 13.

8. Khalif Ali et al.

Amicus Participants Khalif Ali et al. assert that any new redistricting plan must make use of the Legislative Reapportionment Commission’s (LRC) adjustments to the United States Census Bureau’s data, which “returns nearly 30,000 state prisoners to their home addresses from their [prison] cell addresses.” (Br. of *Amici* Khalif Ali et al. at 9-10.) Accordingly, Ali et al. inform that their proposed Plan is drawn based on the prisoner-adjusted data used by the LRC. *Id.* at 10. Ali et al. claim that counting prisoners in their cells unfairly distorts districts in violation of the Pennsylvania Election Code⁴⁴ and the Free and Equal Elections Clause of the Pennsylvania Constitution. *Id.* at 10-13. Moreover, Ali et al. claim that districting plans can be based on adjusted census data because there is nothing in federal or state law that prohibits the Commonwealth from doing so. *Id.* at 14-16. Although Ali et al. used the prisoner-adjusted data in creating their Plan, they agree that any redistricting plan should preserve, and in fact give precedence to, communities of interest in accordance with *Mellow*. (Br. of *Amici* Khalif Ali et al. at 16-23.) Ali et al. further agree with the other Parties and *Amicus* Participants

44. Act of June 3, 1937, P.L. 1333, as amended, 25 P.S. §§ 2600-3591.

that the neutral redistricting criteria are paramount, not impermissible partisan or political criteria. *Id.* at 24-27. Finally, Ali et al. assert that their Plan meets the threshold neutral redistricting criteria and is comparable to the Governor's Plan. *Id.* at 28-29. For these reasons, Ali et al. suggest that the Court should choose their Plan.

9. Voters of the Commonwealth

Voters of the Commonwealth assert that their Plan is contiguous, because “[e]ach precinct within each district borders at least one other precinct within that same district; no part of any district is wholly physically separate from any other part.” (Br. of *Amici Curiae* Voters of the Commonwealth in Support of Plan at 11-12.) Further, Voters of the Commonwealth state that their Plan achieves equal population amongst districts, in that 5 districts contain 764,864 residents and the other 12 districts contain 764,865. *Id.* at 13. Regarding compactness, Voters of the Commonwealth claim that their Plan has higher mean, median, and minimum Reock, Polsby-Popper, and Schwartzeberg measure scores than the 2018 Remedial Plan, and also compares favorably to the Governor's Proposed Plan. *Id.* at 13-16 (*see* Tables 3 and 8). Voters of the Commonwealth further assert that their Plan minimizes splits of political subdivisions, with only 15 county splits, and keeps intact both Bucks County and Montgomery County each in one congressional district, as has historically been the norm. *Id.* at 16-17. Further, Voters of the Commonwealth point out that their Plan splits only 17 municipalities, while keeping intact the state's largest cities including Pittsburgh, Allentown, Reading, and Erie. *Id.* at 19.

Voters of the Commonwealth additionally argue that their Plan accounts for VRA principles, in that the Plan “creates at least one district in which Black voters comprise a majority of the Voting Age Population[, which] is the same number of such districts in the existing plan.” *Id.* at 21-22. They also highlight that “minority groups comprise almost 65% of the Voting Age Population in another district . . .” *Id.* at 22. Voters of the Commonwealth further assert that their Plan places most incumbents in districts by themselves, which assures that neither political party is adversely affected. Finally, noting that the Supreme Court in *LWV II* did not adopt a particular measure to determine the extent to which partisan considerations may be taken into account but that numerous measures have since been used therefor, Voters of the Commonwealth contend that their Plan’s mean-median gap of between 2% and 3% is within the normal range, as is their Plan’s efficiency gap of between 3% and 5.6%, which is comparable to the 2018 Remedial Plan. *Id.* at 24-25. Accordingly, Amicus Participants Voters of the Commonwealth would like this Court to consider their proposed Plan.

10. Draw the Lines PA

In its Statement submitted in support of its proposed 17-district congressional district map submitted to this Court for consideration, *Amicus* Participant Draw the Lines PA informs that its Plan is a “nonpartisan Citizens’ Map . . . that aggregates what over 7,200 Pennsylvanians, representing 40 of Pennsylvania’s 67 counties, collectively mapped” via a group of citizen mappers from throughout the Commonwealth, which group was formed following Draw the Lines PA’s public mapping competition. (Proposed Redistricting Plan and Supporting Statement

of *Amici Curiae* Draw the Lines PA Participants at 2.) Draw the Lines PA asserts that its Plan is superior in terms of the traditional redistricting criteria of *LWV II*, and further complies with the VRA, “and other metrics important to Pennsylvanians, including competitiveness, partisan fairness, and representation of communities of interest.” *Id.* Draw the Lines PA informs that it presented its Plan to leaders of the General Assembly, “as a potential starting point[,]” and they claim that Governor Wolf has also “touted the Citizens’ Map as meeting the principles proposed by his Pennsylvania Redistricting Advisory Council[.]” *Id.* at 2-3. On these bases, Draw the Lines PA would like for this Court to consider their proposed Plan.

11. Citizen Voters

Amicus Participants Citizen Voters have submitted a proposed 17-district congressional district plan for this Court’s consideration. (Citizen Voters’ Proposed Map of Congressional Districts at 1.) Citizen Voters contend that their proposed Plan “restores the following counties which were split by Pennsylvania’s 2018 Congressional District Map: Washington, Cambria, Butler, and Centre.” *Id.* Citizen Voters maintain that their proposed Plan “endeavors to maintain communities of interest in one congressional district[,]” and, as an example, they point to their Plan’s inclusion of “the City of Pittsburgh and the South Hills of Allegheny County in one district in District 17.” *Id.* Citizen Voters further asserts that their proposed Plan splits less municipalities than the 2018 Remedial Plan with fewer than 16 municipality splits, as compared to the 19 municipality splits in the 2018 Remedial Plan. *Id.* at 1-2. Citizen Voters also note that their

Plan splits only 14 counties, with 3 counties splitting into 3 congressional districts and 11 counties split into 2 congressional districts. *Id.* at 2. On these bases, Citizen Voters would like for this Court to consider their proposed Plan.

V. ANALYSIS AND FINDINGS OF FACT AND CONCLUSIONS OF LAW⁴⁵

A. Traditional Neutral Criteria

1. Contiguity

CL1. All plans presented to the Court met the contiguous requirement. All plans proposed districts of contiguous territory. *See* Duchin Expert Rebuttal 2; *see also* DeFord Expert Rebuttal 9.

CL2. No part of any district in any plan was wholly separated from any other part and the configuration of the districts in all plans allows travel from any point within the district to another point without leaving the district.

CL3. Accordingly, all 13 plans presented to the Court satisfy the contiguity requirements.

2. Population Equality

CL1. Each and every proposed plan in this case satisfies the command in the Free and Equal Elections Clause that congressional districts be created “as nearly equal in population as practicable.” *See* Pa. Const. art. II, § 16 (stating that “representative districts . . . shall be composed of compact and continuous territory as nearly equal in population as practicable . . .”).

45. The Concerned Citizens for Democracy’s proposed redistricting plan was filed late, the group was thus denied amicus status, and its proposed plan therefore will receive no consideration.

CL2. Every plan contains districts that have a maximum population deviation of one person, with the exception of the Carter Plan and the House Democratic Plan, which both yield districts that have a two-person deviation.

FF1. It has been argued by the Congressional Intervenors and others that a two-person deviation renders the above plans flawed.

CL3. The “one person, one vote” principle is not literal, and the U.S. Supreme Court has held that where the maximum population deviation between the largest and smallest district is less than 10%, a state or local legislative map presumptively complies with the one person, one vote rule. *See Abbott*, 136 S. Ct. at 1124; *see also Mellow*, 607 A.2d at 207.

FF2. All the experts agree that the ideal district population for each of the Commonwealth’s 17 reapportioned congressional districts is approximately 764,864 or 764,865 persons.

CL4. While a two-person district might in itself be statistically insignificant and was apparently the by-product of legitimate efforts to limit the number of municipal splits, most of the maps were able to achieve a one-person deviation. *See Mellow*, 607 A.2d at 207; *Larios v. Cox*, 300 F. Supp. 2d 1320, 1338 (N.D. Ga.) (three-judge court), *aff’d mem.*, 542 U.S. 947 (2004).

FF3. The Court finds that because all parties, but two, were able to produce maps with a one-person deviation, the maps that were unable to do so will be given less weight.

FF4. With the exception of one *Amicus* Participant, Ali, all Parties and *Amici* relied on Pennsylvania’s Legislative Reapportionment Commission (LRC) Data Set #1,

which takes the 2020 Census Redistricting Data (Public Law 94-171) Summary File for Pennsylvania and adjusts it “to contain the most recent voting precinct boundaries in Pennsylvania, reflecting any boundary changes that occurred after the data was last submitted to the Census Bureau.” Pennsylvania Redistricting: Maps, <https://www.redistricting.state.pa.us/maps/#congressional-districts>. (last visited Jan. 30, 2022.) *See* Dr. Duchin N.T., 1/27/22 Tr. 331:25-332:17.

FF5. The Ali Plan instead relied on the LRC’s Data Set #2, which “contains the same updated geography as Data Set #1, but also contains population adjustments to account for the reallocation of most prisoners to their last known addresses prior to incarceration.” Legislative Reapportionment Comm’n, Pennsylvania Redistricting: Maps, <https://www.redistricting.state.pa.us/maps/#congressional-districts>. (last visited Jan. 30, 2022); *see also* Dr. Duchin N.T., 1/27/22 Tr. 332:10-13, 332:17-20.

CL5. Consistent with the Supreme Court’s approach in *LWV III*, 181 A.3d at 583, n.8, and in *Mellow*, 607 A.2d at 218-19, the Court believes that, on comparison, the most appropriate map for this case would rely on Data Set #1.

CL6. In seeking to alter the presumptive norm and traditional and commonly accepted practice of relying on LRC’s Data Set #2, Ali is essentially asking the Court to make a determination that prisoners have a constitutional, statutory, or common law right to have their home residential addresses considered as the place for calculating the geographical breakdowns in population. These issues are not properly before the Court.

CL7. While we appreciate the goals and concerns expressed by Ali, absent legislation or a constitutional re-

quirement to the contrary, the Court cannot find that Data Set #2 should be used at this time for congressional districting. See Pa. House Res. 165 (requiring the use of Data Set #1 in any congressional redistricting legislation before the 2030 Census).

CL8. The Ali Plan's adjustments in population, relocating prisoners to their residential addresses, would result in a population deviation of 8,676 people. *See, e.g.,* Gressman Post-Trial Submission at Ex. A, p.3.

CL9. Given that the Ali Plan relies on Data Set #2, while all the other plans utilize Data Set #1, this Court ultimately places little to no weight on the Ali plan or map and, based on its other credibility and evidentiary weight determinations, discussed below, finds that the Ali plan or map cannot appropriately be compared to other maps.

CL10. Applying the traditional neutral criteria, the Court concludes that the remaining 12 plans are contiguous, and all 12 plans are closely population-balanced for the 2020 Census population.

CL11. Accordingly, in agreement with the expert for the Governor, the neutral criteria most relevant for distinguishing the remaining 12 plans are compactness and respect for counties and municipalities.

3. Comparison of Remaining 12 Maps under Traditional Neutral Criteria

FF1. Dr. Duchin examined the Governor's Plan and the other twelve plans submitted to the Court to determine which plans satisfy an "excellent standard" regarding the traditional criteria, *i.e.*, the *LWV II* neutral benchmarks. *See* Duchin Report at 2; Amended Post Hearing Submission of Intervenor-Respondent Gov Tom Wolf (Wolf Post Hearing Submission) ¶40.

FF2. Applying the traditional criteria, Dr. Duchin concluded that “[a]ll 13 plans are contiguous, and all 13 plans are closely population-balanced for either Census PL population or prisoner-adjusted population.” (Duchin Resp. Report at 2; Wolf Post Hearing Submission ¶47.)

FF3. Dr. Duchin stated that, “the neutral criteria most relevant for distinguishing the plans are **compactness** and **respect for counties and municipalities.**” *Id.* (emphasis in original); Wolf Post Hearing Submission ¶48.

FF4. Dr. Duchin included the following chart showing a comparison of compactness and splitting metrics for each of the plans submitted to the Court.

Table 1: Comparison of compactness and splitting metrics.

name	mean Polsby	mean Schwartz	mean Reock	mean ConvHull	mean PopPoly	cut edges	split counties	county pieces	split munis	muni pieces
GovPlan	0.3808	1.6534	0.4313	0.8257	0.7834	5185	16	35	18	37
CitizensPlan	0.3785	1.6625	0.4512	0.8120	0.7725	5237	14	30	16	33
HB- 2146	0.3212	1.8197	0.4087	0.7987	0.7524	5907	15	33	16	34
Carter	0.3214	1.8103	0.4499	0.7922	0.7416	5926	14	31	20	41
Gressman/GMS	0.3478	1.7351	0.4261	0.8176	0.7582	5582	15	32	16	33
HouseDemCaucus	0.2787	1.9693	0.4286	0.7717	0.7205	6853	16	34	18	37
SenateDemCaucus1	0.3147	1.8144	0.4137	0.7918	0.7519	6047	17	36	19	39
SenateDemCaucus2	0.3346	1.7478	0.4146	0.8153	0.7601	5505	16	34	16	33
Resenthaler1	0.3629	1.6859	0.4347	0.8238	0.7737	5090	13	29	16	33
Resenthaler2	0.3524	1.7127	0.4231	0.8161	0.7658	5237	13	29	16	33
CitizenVoters	0.3490	1.7133	0.4412	0.8082	0.7575	5173	14	31	16	33
VotersOfPA	0.3965	1.6069	0.4697	0.8209	0.7681	5052	15	31	18	37
KhalifAli	0.3523	1.7204	0.4448	0.8111	0.7456	5266	16	35	18	37

4. Political Subdivision Splits

CL1. As noted repeatedly throughout this opinion, a central consideration is the degree to which a proposed districting plan respects the boundaries of political subdivisions.

CL2. According to *LWV II*, when applying the Pennsylvania Constitution to a congressional districting plan, courts must look to article II, section 16, which provides that, unless necessary to ensure equality of population, the plan must not divide any “county, city, incorporated town, borough, township or ward.” Pa. Const. art. II, §16.

FF1. Although many of the experts who provided analysis of the proposed plans identified the number of political subdivision splits present in each plan, it is noteworthy that the numbers that these experts reported do not always agree.

FF2. By and large, the Parties also did not offer much in the way of evidence challenging the numbers of political subdivision splits that each Party reported with respect to its own plan, or the methodology by which the experts counted such splits.

CL3. Accordingly, in this Court's view, the fairest way to assess the number of political subdivision splits in the proposed plans is to generally accept the figures offered by each Party's expert with respect to that Party's plan.

FF3. There are two caveats to this approach. First, the Court notes that the political subdivision numbers reported by Dr. Duchin and Dr. Barber are highly consistent, and have only a few small differences. (*See* Duchin Resp. Report at 2; Barber Resp. Report at 8.)

FF4. Accordingly, where a Party or *Amicus* Participant fails to identify a relevant figure, or a number is such an outlier that it strains credulity, the Court will look to Dr. Duchin and Dr. Barber's charts and, if consistent, accept that number.

FF5. Second, numerous Parties and *Amicus* Participants did not identify the number of divided wards in their plans, or did not compare the other proposed plans on that point. Dr. DeFord, however, provided a comprehensive assessment of the ward splits in all of the proposed plans. (*See* DeFord Resp. Report at 8, 27.)

FF6. Accordingly, where a Party or *Amicus* Participant fails to identify the number of divided wards in its proposed plan, or the reported number is a significant

outlier, the Court will accept the number reported by Dr. DeFord.

a. Carter Plan

FF7. The Carter Plan divides 13 counties.

FF8. It divides 19 municipalities. (Rodden Report at 21-22.)

FF9. The Carter Petitioners do not identify the number of ward divisions, but Dr. DeFord reports that the Carter Plan splits 25 wards. (DeFord Resp. Report at 8.)

b. Gressman Plan

FF10. The Gressman Plan divides 15 counties, 19 municipalities, and 15 wards. (DeFord Report at 9, 13-15, 16-17.)

c. Governor's Plan

FF11. The Governor's Plan divides 16 counties.

FF12. It further divides 18 municipalities. (Duchin Report at 8.)

FF13. The Governor does not identify the number of ward divisions, but Dr. DeFord reports that the Governor's Plan splits 25 wards. (DeFord Resp. Report at 8.)

d. HB 2146

FF14. HB 2146 divides 15 counties.

FF15. Dr. Memmi reports that HB 2146 divides 19 municipalities, but Dr. Barber reports that it divides 16. (Memmi Report at 5; Barber Report at 16.)

FF16. Dr. Duchin also reports that it divides 16 municipalities, which agrees with Dr. Barber, and this number is therefore accepted. (Duchin Resp. Report at 2.)

FF17. Dr. Memmi reports that HB 2146 divides 9 wards, but this number is a significant outlier in comparison to all other proposed plans. (Memmi Report at 5.) Dr. DeFord reports that HB 2146 divides 18 wards. (Dr. DeFord Resp. Report at 8.)

e. Senate Democratic Caucus Plan 1

FF18. The Senate Democratic Caucus 1 Plan divides 17 counties, 19 municipalities, and 18 wards. (Schoenberg Decl. ¶¶38-40.)

f. Senate Democratic Caucus Plan 2

FF19. The Senate Democratic Caucus 2 Plan divides 16 counties, 16 municipalities, and 14 wards. (Schoenberg Decl. ¶¶48-50.)

g. House Democratic Caucus Plan

FF20. The House Democratic Caucus Plan divides 16 counties, 18 municipalities, and 22 wards. (House Democratic Caucus Br., App. B (Legislative Data Processing Center Report).)

h. Resenthaler 1 Plan

FF21. The Resenthaler 1 Plan divides 13 counties, 16 municipalities, and 25 wards. (Brunell Report at 4-6.)

i. Resenthaler 2 Plan

FF22. The Resenthaler 2 Plan also divides 13 counties and 16 municipalities, but divides 24 wards. (Brunell Report at 4-6.)

j. Draw the Lines PA Plan

FF23. The Draw the Lines Plan divides 14 counties and 16 municipalities. (Villere Statement at 4.)

FF24. The Draw the Lines *Amici* do not identify the number of ward divisions, but Dr. DeFord reports that the Draw the Lines Plan splits 16 wards. (DeFord Response Report at 27.)

k. Ali Plan

FF25. The Ali *Amici*'s expert did not expressly identify the number of political subdivision splits in the Ali Plan.

FF26. The Ali *Amici*'s report 19 total splits of counties, but do not specify the number of counties that are split. (Ali Br. at 28.)

FF27. They report a remarkably high 177 municipality splits, but this is an extreme outlier. *Id.*

FF28. Dr. Duchin and Dr. Barber both report that the Ali Plan divides 16 counties and 18 municipalities, so the Court accepts these numbers instead. (Duchin Resp. Report at 2; Barber Resp. Report at 8.)

FF29. The Ali *Amici* also do not identify the number of ward divisions, but Dr. DeFord reports that the Ali Plan splits 33 wards. (DeFord Resp. Report at 27.)

l. Citizen-Voters Plan

FF30. The Citizen-Voters Plan divides 14 counties and 16 municipalities. (Citizen-Voters Br. at 2.)

FF31. The Citizen-Voters *Amici* did not include any expert report in support of their proposal; however, Dr. Duchin and Dr. Barber both report identical numbers, so they are accepted as accurate.

FF32. The Citizen-Voters *Amici* do not identify the number of ward divisions, but Dr. DeFord reports that that the Citizen-Voters Plan splits 21 wards. (DeFord Resp. Report at 27.)

m. Voters of PA Plan

FF33. The Voters of PA Plan divides 15 counties and 17 municipalities. (Trende Report at 13, 16.)

FF34. The Voters of PA *Amici* do not identify the number of ward divisions, but Dr. DeFord reports that the Voters of PA Plan splits 41 wards. (DeFord Resp. Report at 27.)

n. Summary

FF35. With these figures collected, we can begin to draw some conclusions about which proposed plans perform the best on this criterion.

FF36. The plans that split the fewest counties are: both Reschenthaler Plans, and the Carter Plan, all of which divide 13 counties; followed by the Draw the Lines Plan, which splits 14 counties.

FF37. The plans that split the fewest municipalities are: HB 2146, both Reschenthaler Plans, the Senate Democratic Caucus 2 Plan, the Draw the Lines Plan, and the Citizen-Voters Plan, all of which divide 16 municipalities.

FF38. The plans that split the fewest wards are: the Senate Democratic Caucus 2 Plan, which divides 14 wards; the Gressman Plan, which divides 15 wards, the Draw the Lines Plan, which divides 16 wards, and HB 2146, which divides 18 wards.

FF39. In total, then, the plans which divide the fewest counties, cities, incorporated towns, boroughs, townships, and wards are: the Senate Democratic Caucus 2 Plan, which divides 46; HB 2146 and the Gressman Plan, which both divide 49; the Citizen-Voters Plan, which divides 51; and the Reschenthaler 1 and 2 Plans, which divide 53 and 54, respectively.

FF40. Quite apparently, most of these plans perform quite well in terms of maintaining the boundaries of political subdivisions.

FF41. It is worth emphasizing, however, that of all the plans proposed, only the Reschenthaler Plans were able to divide only 13 counties and 16 municipalities—the lowest number in both categories.

FF42. Indeed, a number of experts testified that it is possible to create a 17-district plan that splits only 13 counties and 16 municipalities. (N.T. at 170 (testimony of Dr. Rodden), 287 (testimony of Dr. DeFord), 461 (testimony of Dr. Duchin).)

FF43. This is precisely what both Reschenthaler plans managed to do.

5. Compactness

FF1. Dr. Duchin concluded that, with respect to compactness, “the maps [submitted to the Court] are quite good across the board, but that you can still see some that are better.” (N.T. at 334:15-21.)

FF2. Dr. Duchin explained:

By far the two most compact plans, considering these metrics overall, are VotersOfPA and GovPlan. The next two, some ways behind the leaders, are Reschenthaler1 and CitizensPlan.

(Duchin Resp. Report at 2.)

FF3. We find Dr. Duchin’s opinion in this regard to be credible.

FF4. Dr. Duchin testified that Governor Wolf’s proposal to split Pittsburgh into two congressional districts actually allowed his plan to achieve higher compactness scores, specifically on the Polsby-Popper measure. (N.T. at 216-17 (testimony of Dr. DeFord), 436 (testimony of Dr. Duchin); Villere Report at 4.)

CL. This effect on compactness compromises Governor Wolf’s compactness scores and renders them not comparable to other maps which did not split Pittsburgh into two congressional districts.

6. Splitting of Pittsburgh Into Two Congressional Districts

FF1. Among the considerations addressed by the parties relating to the splitting of political subdivisions, and an important one in this Court's view, is whether a proposed plan divides the City of Pittsburgh into multiple districts.

FF2. By all accounts, the City of Pittsburgh has remained within a single congressional district in all previous districting plans, including the existing plan enacted in 2018.

CL1. It cannot be gainsaid that, under the standards listed in the Pennsylvania Constitution and applied to congressional redistricting by our Supreme Court, boundaries such as those of City of Pittsburgh should not be divided across multiple districts unless it is *absolutely necessary* to achieve population equality. See Pa. Const. art. II, §16 (“Unless absolutely necessary no county, city, incorporated town, borough, township or ward shall be divided”); *LWV II*, 178 A.3d at 816-17 (congressional districts shall not “divide any county, city, incorporated town, borough, township, or ward, except where necessary to ensure equality of population”).

FF3. As Pennsylvania's second largest city, Pittsburgh is certainly an important political unit.

FF4. Despite its size, however, it is undisputed that Pittsburgh's population is not so great that it is *necessary* to divide the city into multiple congressional districts, as is the case with Philadelphia.

FF5. Philadelphia is the only municipality in the Commonwealth that is larger than a population of a single congressional district.

FF6. Thus, Philadelphia must be split into districts. *See, e.g.*, N.T. at 270 (testimony of Dr. DeFord), 524 (testimony of Dr. Barber).

FF7. The splitting of Pittsburgh, then, may achieve certain other ends, but population equality is not one. For instance, due to its irregular border, the decision to split Pittsburgh into two districts allows a plan to achieve higher compactness scores, specifically on the Polsby-Popper measure. (N.T. at 216-17 (testimony of Dr. DeFord), 436 (testimony of Dr. Duchin).)

FF8. Another end that can be achieved by splitting Pittsburgh is that it may allow a plan to use Pittsburgh's Democratic-leaning population to create two districts in the immediately surrounding area that are likely Democratic-leaning, instead of only one. (N.T. at 526-27 (testimony of Dr. Barber).)

CL2. An effort to achieve a partisan advantage through the splitting of a city is, of course, suspect. *See* Barber Report at 28 ("the true purpose served by splitting Pittsburgh in half is likely the achievement of partisan ends").

FF9. The Court further heard credible evidence which supports the conclusion that the City of Pittsburgh in many ways constitutes a community of interest, such that its division would not be in the best interest of its residents.

FF10. Dr. Naughton testified that Pittsburgh voters tend to particularly favor local candidates in statewide elections. (N.T. at 695-96.) The Court finds this testimony credible as no other party put forth any evidence that refuted the veracity of his opinion.

FF11. Moreover, City of Pittsburgh residents share common interests in a representative's advocacy for the

acquisition of federal funds and the obtaining of constituent services. (N.T. at 836-37 (testimony of Dr. Naughton).) The Court finds this testimony credible as no other party put forth any evidence that refuted the veracity of his opinion.

FF12. In addition, splitting the City of Pittsburgh into two districts would create two districts in which portions of the City would be grouped with surrounding suburban areas. This could incentivize candidates and representatives to favor either parts of the City or parts of the suburbs depending upon where they believe they can get more votes, and thereby place less representational focus on the disfavored areas. (N.T. at 713-15 (testimony of Dr. Naughton).) The Court finds this testimony credible as no other party put forth any evidence that refuted the veracity of his opinion.

FF13. To the extent that the Declaration of Michael Lamb advocates for the splitting of the City of Pittsburgh into two congressional districts, this Court finds the declaration unpersuasive because it is based on Mr. Lamb's life and subjective **personal** experiences, which the Court does not find particularly useful or credible. Moreover, Mr. Lamb's was not presented as an expert and his declaration does not address why it is absolutely necessary to split the City of Pittsburgh to achieve population equality in any congressional district.

FF14. It is also notable that in *Mellow*, the City of Pittsburgh had been and was proposed by all to remain entirely within one district. *Mellow*, 607 A.2d at 223.

CL3. In light of all of these considerations, this Court concludes that the maintenance of the City of Pittsburgh within one district is an important factor, which is entitled to weight in the ultimate analysis.

FF15. The Governor's Plan, the Senate Democratic Caucus Plan 1 and Plan 2, the Draw the Lines PA Plan, and the plan submitted by Khalif Ali propose to divide the City of Pittsburgh.

FF16. None of the parties who split the City of Pittsburgh, including the Governor, presented any credible evidence as to why it was "absolutely necessary" to split the second largest city in Pennsylvania, in order to achieve equal population.

FF17. Dr. Naughton emphasized the community of interest factor and opined the City of Pittsburgh should absolutely not be split. The Court finds this testimony credible as no other party put forth any evidence that refuted the veracity of his opinion.

FF18. Without evidence substantiating the absolute necessity to split the City of Pittsburgh, the Court finds that the end that was to be achieved by doing so was to divide the City of Pittsburgh's Democratic leaning population to create two districts in the immediately surrounding area that are Democratic leaning, instead of one. *See* N.T. at 524-25 (Barber); Barber Rebuttal Report at 8, Table 1, 23.

FF19. The five plans that split the City of Pittsburgh into two congressional districts, *i.e.*, the Governor's Plan, the Senate Democratic Caucus Plan 1 and Plan 2, the Draw the Lines PA Plan, and the plan submitted by Khalif Ali, will be given less weight than the plans which did not split the City of Pittsburgh. FF20. Although the House Democratic Caucus's Plan keeps the City of Pittsburgh whole, it instead draws a Freddy Krueger-like claw district in Allegheny County to "grab" Pittsburgh to combine it with small Republican-leaning areas to the north.

7. Communities of Interest

The discussion of splitting Pittsburgh is an appropriate segue into the importance of considering communities of interest relationships in redistricting efforts. As the Supreme Court has recognized, “redistricting efforts may properly seek to preserve communities of interest which may not dovetail precisely with the static lines of political subdivisions.” *Holt*, 67 A.3d at 1241.

A common thread running through the Supreme Court’s opinion in *LWV II* is that, to the greatest degree practicable, a congressional redistricting plan should avoid dividing a community with shared interests and concerns.⁴⁶ In adopting these “neutral criteria,” the Supreme Court reasoned that “[t]hese standards place the greatest emphasis on creating representational districts that both maintain the geographical and social cohesion of the communities in which people live and conduct the majority of their day-to-day affairs[.]” *LWV II*, 178 A.3d

46. Notably, *LWV II* repeatedly references the significance of communities in its analysis. 178 A.3d at 816 (“When an individual is grouped with other members of his or her community in a congressional district for purposes of voting, the commonality of the interests shared with the other voters in the community increases **the ability of the individual to elect a congressional representative for the district who reflects his or her personal preferences.**”). Moreover, in evaluating the historic underpinnings that lead to the development of the neutral criteria it prescribed, the Court emphasized that the Free and Equal Elections Clause, in its original form, provided that “all elections ought to be free; and that all free men **having a sufficient evident common interest with, and attachment to the community,** have a right to elect officers, or to be elected into office.” *Id.* (quoting Pa. Const. of 1776, art. I, § VII) (emphasis added).

at 814. Accordingly, although compactness, contiguity, and respect for municipal boundaries are undoubtedly the primary tool for evaluating the constitutionality of a redistricting plan, we understand these principles serve to advance the Free and Equal Elections Clause’s overarching goal of protecting the interest of communities. In many ways, redistricting’s most basic objective is to provide communities with adequate representation. As Dr. Naughton credibly testified, this is accomplished by joining communities that share one or more substantial interests that may be the subject of state legislative action. **Indeed, “[t]o be an effective representative, a legislator must represent a district that has a reasonable homogeneity of needs and interests; otherwise the policies he supports will not represent the preferences of most of his constituents.”** *Prosser v. Elections Board*, 793 F. Supp. 859, 863 (W.D. Wis. 1992) (emphasis added); *see also Hall v. Moreno*, 270 P3d 961, 971 (Colo. 2012) (“if an important issue is divided across multiple districts, it is likely to receive diffuse and unfocused attention from the multiple representatives it affects, as each is pulled in other directions by the many other issues confronting their districts. However, if a discrete and unique issue is placed in one district, that representative may familiarize herself with the complexities of the issue and the stakeholders it affects.”).

The term “communities of interest” encompasses “school districts, religious communities, ethnic communities, geographic communities which share common bonds due to locations of rivers, mountains and highways[.]” *Holt I*, 38 A.3d at 746. In *Mellow*, the Court considered a community’s “circulation arteries, its common news me-

dia . . . , its organization and cultural ties[,]” its “common economic base[,]” and the relationship among “schools of higher education as well as others.” 607 A.2d at 220-21. “The matching of interests and representation allows voters with shared interests to have a voice in the legislature that is roughly correlated to their numbers.” Stephen J. Malone, *Recognizing Communities of Interest in a Legislative Apportionment Plan*, 83 VA.L.REV. 461, 465-66 (1997). See also Michael Li, Yuriy Rudensky, *Rethinking the Redistricting Toolbox*, 62 How. L.J. 713, 732 (2019) (a communities of interest analysis when, “[w]ielded well,” can be “powerful in enhancing representation”).

FF1. Not all Parties provided the Court with evidence or expert opinion on how their plans maintain the contiguity of communities that share similar interests.

FF2. The Congressional Intervenors have provided the Court with an expert opinion of Dr. Naughton about how the Reschenthaler 1 and 2 Plans endeavored to keep people with common interests together when considering where to draw the congressional district lines.

FF3. The Court finds Dr. Naughton’s testimony, as it pertains to the importance of keeping of community interests together is based on his professional and personal experience, to be credible as no other party put forth any evidence or expert opinion that refuted the veracity of Dr. Naughton’s opinion.

FF4. Dr. Naughton’s opinions reflect his established and comprehensive knowledge of the communities of interest factor, as it pertains to the political and geographic population and voting tendencies of the people of the Commonwealth upon which he opined, and no other party put forth any evidence or expert opinion that refuted

the veracity of Dr. Naughton's opinions and they are consistent with the opinions of Dr. Duchin.

FF5. Dr. Naughton testified that the City of Pittsburgh, and its various communities, are best served by keeping the City within one congressional district. (N.T. at 712-15.) The Court finds this testimony credible as no other party put forth any evidence or expert opinion that refuted the veracity of Dr. Naughton's opinion.

FF6. Like Dr. Naughton, Dr. Duchin recognized the significance of communities in her redistricting analysis. Dr. Duchin credibly described, with respect to communities of interest, that the fundamental concept is that there is value to maintaining "geographical areas where the residents **have shared interests that are relevant to their representation**. . . . [T]his could be shared history, shared economics, shared culture, many other examples." (N.T. at 342-43) (emphasis added).

FF7. We find Dr. Duchin's testimony about the importance of considering Pennsylvania's communities when redistricting to be credible as it is consistent with Dr. Naughton's opinions and no other party refuted or challenged the veracity of Dr. Duchin's opinion.

FF8. In the Court's careful review of the evidence presented, the Gressman Petitioners did not establish that they considered community interests when deciding to erect boundary lines across the Commonwealth, which is an important factor in the Court's assessment of the evidence.

FF9. Having heard and reviewed the various experts' testimony and reports in this case, the Court has credited the generally accepted proposition that the division of counties and municipalities is not simply a metric that depends solely on mathematical calculation and a numer-

ical result, because many variables are at play and can be altered or otherwise manipulated in the overall calculus, individually or collectively.

FF10. At the hearing, the Gressman Petitioners' expert, Dr. DeFord, confirmed that he did not consider communities of interest when splitting counties and municipalities to compose the map's districts, and he specifically admitted that he did not conduct "any analysis with respect to the communities of interest related to the City of Pittsburgh." (N.T. at 314-315, 318-22.) In this regard, the Court finds Dr. DeFord's methodology should be given less weight.

FF11. The Citizen Voters did not provide an expert report to support their map. Consequently, the Court received no expert testimonial or written explanation concerning why the map drew the lines in the particular manner that it did and, perhaps, more importantly, to demonstrate why the divides in the maps were absolutely necessary to achieve population equality as opposed to some other secondary or impermissible goal. There was no discussion or evidence whatsoever presented by Citizen Voters that their district lines preserved communities of interests. Left with this evidentiary mode of speculation, the Court provides little to no weight to the map submitted by the Citizen Voters.

FF12. With regard to the Carter Petitioners, their expert, Dr. Rodden, although utilizing a "least change" approach to redistricting, which is discussed more fully below, did not explicitly examine or appear to have considered the specific considerations that need to be taken into account when establishing that splits maintain the surrounding communities of interest.

FF13. To the extent the Carter Petitioners try to equate a “least change” analysis to a community of interest analysis, *see* Carter’s Br. at 12, the Court disagrees, because the “least change” method focuses on the preexisting status of a map’s boundary lines, and Dr. Rodden admitted in his report and testimony that, in the past 10 years, there has been dramatic population shifts in Pennsylvania and fluctuating levels of density in specific areas throughout the Commonwealth, which presumably would have resulted in differing communities of interest. *See* Rodden Report at 6-10; N.T. at 85-87, 115-17. *See also* discussion *infra* on the “least change” doctrine.

FF14. In his map details online, the Governor included a statement of the communities of interest he considered when considering where to draw the congressional district lines. *See* <https://www.governor.pa.gov/congressionaldistricts-map-proposals>.

FF15. Dr. Naughton testified that Bucks County should not be split into districts but should be entirely within one district and that Bucks County has been wholly contained within a single district for decades. (N.T. at 715-16; Dr. Naughton Report at 7) (opining that “[t]he right Bucks County district would have Bucks in its entirety.”). The Court finds this testimony credible as no other party put forth any evidence or expert opinion that refuted the veracity of his opinion.

FF16. Regarding whether to combine Philadelphia’s surplus population with Bucks County, Dr. Naughton testified that the communities in Bucks County are more similar to those in Montgomery County, and thus Bucks County should add population by extending the district line into Montgomery County, rather than Philadelphia

County. *Id.* Dr. Naughton testified in this regard as follows:

Q. Next split, Philadelphia and Bucks County. Talk to us about what you think should be done in Philadelphia and Bucks County.

A. Bucks County should absolutely not be combined with the city. **The right Bucks County district would have Bucks in its entirety and then move into Montgomery County, as they've done for decades as they're used to, as they have common interests.** I mean, **that border between Bensalem and Philadelphia**, you know, you don't know if you haven't been there. If you—you know, **if you walk across that line, you know you're in Bucks County. You know it. It is—those are two different places.** And Bucks, even though it is a diverse place and there's diversity between lower Bucks and upper Bucks, it's used to being together. They work together. They like being a unit. They don't want to be part of the city. I guarantee you that.

(N.T. at 715-16) (emphasis). The Court finds this testimony credible as no other party put forth any evidence or expert opinion that refuted the veracity of Dr. Naughton's opinion.

FF17. In his expert report, Dr. Naughton further opines with respect to Bucks County and Philadelphia's surplus population:

Historically, municipalities in eastern Montgomery County have been attached to Bucks. These are highly similar communities to their

Bucks neighbors in demography, economics and land use. Commercial and commuting flow easily across this boundary. Both Counties have robust open space programs.

Attaching the lower Bucks communities to Philadelphia would render these communities “orphans” from an interest and advocacy standpoint. I would go as far to say they could essentially lose representation. And I repeat, the separation of Bensalem and, in one map adjacent lower Bucks municipalities, is entirely unnecessary. Note that equally unfair is a map that is based in Bucks and draws in a portion of northeast Philadelphia—which would, in my opinion, “orphan” the residents of the city and dilute the city’s political influence.

(Dr. Naughton Report at 7-8.) The Court finds this testimony credible as no other party put forth any evidence or expert opinion that refuted the veracity of his opinion.

FF18. Dr. Naughton opined that Philadelphia’s surplus population would be best combined with a district with maximum commonality—that is, with common interests with Philadelphia, such as use of public transit, recipient of federal transfer payments and common commercial and industrial interests. It for that reason, Dr. Naughton concluded that the most sensible plan would attach surplus Philadelphia residences to Delaware County. (Dr. Naughton Report at 7.) The Court finds this testimony credible as no other party put forth any evidence that refuted the veracity of his opinion.

FF19. Dr. Naughton testified that Delaware County and Philadelphia County share similar communities of interest along their border, and that a map connecting

them was ideal. (N.T. at 786, 840-41.) The Court finds this testimony credible as no other party put forth any evidence or expert opinion that refuted the veracity of Dr. Naughton's opinion.

FF20. Dr. Naughton explained credibly that Philadelphia County should extend into Delaware County to obtain additional population because the communities along the Philadelphia and Delaware County borders have similar needs. (N.T. at 786, 840.)

FF21. This Court finds this is important because, as Dr. Naughton credibly explained, a great deal of federal funding flows through county government. (N.T. at 783-84.)

FF22. Contrary to Dr. Naughton's recommendation, Governor Wolf's Plan splits Bucks County. *See* <https://www.governor.pa.gov/congressional-districts-map-proposals>.

FF23. Consistent with Dr. Naughton's recommendation, HB2146 does not split Bucks County. *See* <https://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2021&sessInd=0&billBody=H&billTyp=B&billNbr=2146&pn=2541>.

FF24. Contrary to the recommendation of Dr. Naughton, the Governor's Plan connects Philadelphia's surplus population to the southern Bucks County/Bensalem area. *See* <https://www.governor.pa.gov/congressional-districts-map-proposals>.

FF25. Consistent with Dr. Naughton's' recommendation, HB 2146 does not connect Philadelphia's surplus population to Bucks County. <https://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/>

btCheck.cfm?txtType=PDF&sessYr=2021&sessInd=0
&billBody=H&billTyp=B&billNbr=2146&pn=2541.

FF26. Consistent with Dr. Naughton’s recommendation, HB 4126 connects Philadelphia’s surplus population with Delaware County.
[https://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2021&sessInd=0
&billBody=H&billTyp=B&billNbr=2146&pn=2541.](https://www.legis.state.pa.us/CFDOCS/Legis/PN/Public/btCheck.cfm?txtType=PDF&sessYr=2021&sessInd=0&billBody=H&billTyp=B&billNbr=2146&pn=2541)

FF27. The Court finds Dr. Naughton’s testimony, as it pertains to the splitting of City of Pittsburgh and Bucks County, the treatment of the surplus of population from Philadelphia, and the importance of protecting communities of interest, to be credible based on his professional and personal experience.

FF28. Dr. Naughton’s opinions in this regard reflect his established and credible knowledge of the communities of interest factor, as it pertains to the political and geographic population and voting tendencies of the people of the Commonwealth upon which he opined and no other party put forth any evidence or expert opinion that refuted the veracity of Dr. Naughton’s opinions.

B. Extra-Constitutional Considerations

There was considerable evidence presented regarding the “competitiveness” or “partisan fairness” of the plans. Our inquiry into these subordinate considerations is strictly circumscribed. Specifically, while the Supreme Court in *LWV II* “recognize[d] that other factors have historically played a role in the drawing of legislative districts, such as the preservation of prior district lines, protection of incumbents, or the maintenance of the political balance which existed after the prior reapportionment[,]” it cautioned that it “view[s] these factors to be

wholly subordinate to the neutral criteria of compactness, contiguity, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts.” 178 A.3d at 817.

As the Supreme Court stated in *LWV II*, meeting the floor of the Free and Equal Elections Clause traditional criteria, “is not the exclusive means by which a violation of article I, section 5 may be established.” *Id.* The Court repeatedly emphasized that the overarching objective of this provision of our constitution “is to prevent dilution of an individual’s vote by mandating that the power of his or her vote in the selection of representatives be equalized to the greatest degree possible with all other Pennsylvania citizens.” *Id.* In *LWV II*, the Supreme Court noted that there exists the possibility that advances in map drawing technology and analytical software can potentially allow mapmakers to engineer congressional districting maps, which although minimally comporting with this neutral “floor” criteria nonetheless unfairly dilute the power of a particular group’s vote for a congressional representative. *Id.*

1. Partisan Fairness

a. Political Geography

In *LWV II*, Dr. Chen addressed the impact of the structural or political geography of Pennsylvania upon the measures of partisan bias and considered the impact of Pennsylvania’s political geography on the 2011 Plan. Dr. Chen explained that he measured the partisan bias of the 2011 Plan by utilizing a common scientific measurement referred to as the mean-median gap. *LWV II*, 178 A.3d at 774. As the Supreme Court stated, “Dr. Chen recognized that ‘Republicans clearly enjoy a small natural geographic advantage in Pennsylvania because of the

way that Democratic voters are clustered and Republican voters are a bit more spread out across different geographies of Pennsylvania.” *Id.* at 774.

FF1. Democratic voters in Pennsylvania are clustered in cities and urban areas, but Republican voters are more evenly distributed in rural areas.

FF2. Based upon the evidence credited, the Court finds that Pennsylvania’s unique “political geography” affects the analysis of partisan advantage in any proposed map.

FF3. In a 2013 article authored by Dr. Rodden regarding unintentional gerrymandering, his results “illustrate[d] a strong relationship between the geographic concentration of Democratic voters and electoral bias favoring Republicans.” (N.T. at 178-80.) The Court finds the article be credible as no other party put forth any evidence that refuted the veracity of his opinions therein.

FF4. To overcome this natural geographic disadvantage, “Democrats would need a redistricting process that intentionally carved up large cities like pizza slices or spokes of a wheel, so as to combine some very Democratic urban neighborhoods with some Republican exurbs in an effort to spread Democrats more efficiently across districts.” (House Republican Intervenors’ Br. at 23, n.20 (quoting Barber Report at 10 (quoting Jonathan A. Rodden, *Why Cities Lose: The Deep Roots of the Urban-Rural Political Divide*, at 155 (Basic Books 2019))).)

FF5. Dr. Rodden also concluded in this article that “proving such intent in court will be difficult in states where equally egregious electoral bias can emerge purely from human geography.” (N.T. at 181.)

FF6. Dr. Rodden believes these statements to be true today about Pennsylvania. (N.T. at 181.) The Court finds

this opinion to be credible as no other party put forth any evidence that refuted the veracity of his opinion.

FF7. The Gressman Petitioners' expert, Dr. DeFord, credibly concurred, opining that there is a "partisan advantage to Republicans based on the political geography of the state[,]" so it is "not necessarily a surprise to see a slight tilt favoring Republicans" on the metrics he used. (Dr. DeFord Report ¶104; N.T. at 291.) The Court finds this opinion to be credible as no other party put forth any evidence that refuted the veracity of his opinion, and in fact all parties agreed that the political geography of Pennsylvania favors Republicans.

FF8. Analyzing the 2020 presidential election, Dr. DeFord credibly found that "there is not a part of the state where Republican voters are as heavily concentrated as Democratic voters are in the Philadelphia and Pittsburgh areas." (Dr. DeFord Report ¶104; N.T. at 291-92.) The Court finds this opinion to be credible as no other party put forth any evidence or expert opinion that refuted the veracity of his opinion.

FF9. The Court finds that Dr. Duchin's report compellingly demonstrates the partisan political geography of the Commonwealth.

FF10. In her expert report, Dr. Duchin credibly found that 100,000 randomly drawn districting plans "tend[ed] to exhibit pronounced advantage to Republicans across this full suite of recent elections." (Duchin Report at 18.) Dr. Duchin further found in metrics from the partisan symmetry family, including the mean-median score, "random plans favor Republicans," while the Governor's Plan "temper[s] that tendency." (Duchin Report at 19.)

b. Simulations

FF1. One way to evaluate partisan fairness of a map is by comparing it to a set of simulated maps that follow only traditional criteria. *See generally LWV II.*

FF2. This set of simulated districts is helpful because it provides a set of maps to which one can compare the proposed map that also accounts for the geographic distribution of voters in the state.

FF3. Because voters are not distributed evenly across Pennsylvania, one cannot evaluate the fairness of a proposed plan with an apples-to-apples comparison. In other words, if a plan is not evaluated against a non-partisan set of maps, the potential issues or red flags in the maps may not at all be due to partisan gerrymandering, but rather the geographic distribution of the voters in the state. (Barber Report at 11.)

FF4. Dr. Barber conducted a simulation analysis that compared proposed maps with a set of 50,000 simulated maps, a common practice in redistricting and redistricting litigation. (Barber Report at 11-12; N.T. at 352.)

FF5. Dr. Barber identified the methodology for the algorithmic creation of simulated maps in his reports. (N.T. at 350-52.)

FF6. The parameters of the simulation analysis conducted by Dr. Barber included only the traditional redistricting criteria, not partisan data. (N.T. at 350.)

FF7. The simulation analysis performed by Dr. Barber demonstrates that HB 2146 is predicted to result in nine Democratic-leaning seats and eight Republican-leaning seats using an index of statewide elections from 2012-2020, whereas the most likely outcome in his 50,000 simulated maps, created without using partisan data, is

eight Democratic-leaning seats and nine Republican-leaning seats.

FF8. The Court credits the opinions and methodology of Dr. Barber, an associate professor of political science at Brigham Young University and faculty fellow at the Center for the Study of Elections and Democracy in Provo, Utah, who received his PhD in political science from Princeton University in 2014 with emphasis in American politics and quantitative methods/statistical analyses.

FF9. Dr. Barber's dissertation was awarded the 2014 Carl Albert Award for best dissertation in the area of American Politics by the American Political science Association.

FF10. Dr. Barber teaches a number of undergraduate courses in American politics and quantitative research methods, including political representation, Congressional elections, statistical methods and research design.

FF11. Dr. Barber served as an expert in a number of cases relating to redistricting and election issues where he was asked to analyze and evaluate various political and elections related data and statistical methods.

FF12. Dr. Barber has conducted research on a variety of election and voting related topics, including advanced statistical methods for the analysis of quantitative data.

FF13. Dr. Barber has published nearly 20 peer-reviewed articles, including in the *American Political Science Review*.

c. Mean-Median Scores

In *LWV II*, Dr. Chen observed that the range of the mean/median gaps created in any of the Simulated Set 1 plans was between “a little over 0 percent to the vast majority of them being under 3 percent,” with a maximum of 4 percent. *Id.* at 262-63. Dr. Chen further explained that this a “normal range,” and that a 6% gap “is a statistically extreme outcome that cannot be explained by voter geography or traditional redistricting principles alone.” *LWV Trial*, 12/11/17, at 263-64, N.T.

FF1. In computing mean-median values, the experts provide varying numbers, although most are within the variation that Dr. Chen described as normal in *LWV II*. See *LWV II*, 178 A.3d at 774 (Dr. Chen noting that the normal range of the mean-median gap is 0-4%, or 0.04).

FF2. Not all of the experts state which election data they used to compute their partisan metrics, such as mean-median scores and efficiency gaps. However, even where the experts do so specify, the expert data used varies significantly from expert to expert.

FF3. Dr. Rodden (for the Carter Petitioners) used only certain years and select races identified as the 2012 Presidential, Senate, Attorney General, Auditor General, and Treasurer races; the 2014 Governor race; the 2016 Presidential, Senate, Attorney General, Auditor General, and Treasurer races; the 2018 Senate and Governor races; and the 2020 Presidential, Attorney General, 2020 Auditor General, and Treasurer races. (Rodden Report at 3-4.)

FF4. Dr. DeFord (for the Gressman Petitioners) used statewide election data from all races, including Lieutenant Governor and Supreme Court, from 20122020. However, for one of his measures that he calls majority-

responsiveness, Dr. DeFord does not include Lieutenant Governor information. (DeFord Response Report, Appendix B.)

FF5. Dr. Duchin (for the Governor) does not specify precisely what elections she used; however, it appears from the charts in her report that she potentially used the 2014 Governor race; the 2016 Presidential, Senate, Attorney General, Auditor, and Treasurer races; the 2018 Governor and Senate races; and the 2020 Presidential, Attorney General, Auditor General, and Treasurer races. (Duchin Report at 18-19.)

FF6. Dr. Barber (for the Republican Legislators) used 50,000 simulated models to compare data and used data from statewide races from 2012-2020. (Barber Report at 6.)

FF7. Dr. Caughey (for the Senate Democratic Caucus) used the partisan bias factors and data from the PlanScore website, which he describes as using the 2020 Presidential election as a baseline. (Caughey Report at 2.) Additional details concerning PlanScore's methodology may be found at <https://planscore.campaignlegal.org/models/data/2020/> (last visited February 4, 2020).

FF8. Dr. Brunell (for Congressional Intervenors) used all Presidential, Senate, and Governor races from 2012-2020. (Brunell Report at 9.)

FF9. Sean Trende states that he used data obtained from Redistricting Data Hub, but he does not specify the years or elections used. (Trende Report at 7-8.)

FF10. The following figures are taken from the expert reports of Dr. Rodden, Dr. DeFord, Dr. Duchin, Dr. Barber, Dr. Caughey, Dr. Brunell, and Sean Trende. (See Rodden Resp. Report at 11; DeFord Resp. Report at 15,

33; Duchin Resp. Report at 4; Barber Resp. Report at 21; Caughey Resp. Report at 22; Brunell Report at 9; Trende Report at 24.)

i. Carter Plan

FF11. For the Carter Plan, Dr. Barber reports a mean-median difference of -0.006 (-0.6%), favoring Republicans. Dr. DeFord reports -0.016 (1.6%), favoring Republicans. Dr. Rodden reports 0.005 (0.5%) (party advantage unspecified). Dr. Duchin reports -0.113 (-11.3%), favoring Republicans.

ii. Gressman Plan

FF12. For the Gressman Plan, Dr. Barber reports a mean-median difference of 0.014 (1.4%), favoring Democrats. Dr. DeFord reports -0.008 (-0.08%), favoring Republicans. Dr. Rodden reports 0.005 (0.5%) (party advantage unspecified). Dr. Duchin reports -0.0385 (-3.85%), favoring Republicans.

iii. Governor's Plan

FF13. For the Governor's Plan, Dr. Barber reports a mean-median difference of -0.0004 (-0.04%), favoring Republicans. Dr. DeFord reports -0.010 (1%), favoring Republicans. Dr. Rodden reports 0.006 (0.6%) (party advantage unspecified). Dr. Duchin reports -0.0077 (0.77%), favoring Republicans. Dr. Caughey reports 0.01 (1%), favoring Republicans. Mr. Trende reports -0.011 (-1.1%) based on 2020 elections, and 0.003 (0.3%) based on 2016-2020 elections (party advantage unspecified).

iv. HB 2146

FF14. For HB2146, Dr. Barber reports a mean-median difference of -0.015 (-1.5%), favoring Republicans, which he explains "is more favorable to Democrats than 85% of the plans in his simulations." See Barber Report at 21. Dr. DeFord reports -0.029 (-2.9%), favoring

Republicans. Dr. Rodden reports 0.024 (2.4%). Dr. Rodden specified that this figure favors Republicans. (Rodden Resp. Report at 10.) Dr. Duchin reports -0.2927 (-29.27%), favoring Republicans. Dr. Caughey reports 0.023% (2.3%), favoring Republicans.

v. Senate Democratic Caucus 1 Plan

FF15. For the Senate Democratic Caucus 1 Plan, Dr. Barber reports a mean-median difference of -0.005 (-0.5%), favoring Republicans. Dr. DeFord reports -0.019 (-1.9%), favoring Republicans. Dr. Rodden reports 0.007 (0.7%) (party advantage unspecified). Dr. Duchin reports -0.1382 (-13.82%), favoring Republicans. Dr. Caughey reports 0.007 (0.7%), favoring Republicans.

vi. Senate Democratic Caucus 2 Plan

FF16. For the Senate Democratic Caucus 2 Plan, Dr. Barber reports a mean-median difference of -0.0003 (-0.03%), favoring Republicans. Dr. DeFord reports -0.003 (-0.3%), favoring Republicans. Dr. Rodden reports 0.007 (0.7%) (party advantage unspecified). Dr. Duchin reports 0.0106 (1.06%), favoring Democrats.

Dr. Caughey reports 0.005 (0.5%), favoring Republicans.

vii. House Democratic Caucus Plan

FF17. For the House Democratic Caucus Plan, Dr. Barber reports a mean-median difference of 0.007 (0.7%), favoring Democrats. Dr. DeFord reports -0.009 (-0.9%), favoring Republicans. Dr. Rodden reports 0.004 (0.4%) (party advantage unspecified). Dr. Duchin reports -0.0071 (-0.71%), favoring Republicans.

viii. Resenthaler 1 Plan

FF18. For the Resenthaler 1 Plan, Dr. Barber reports a mean-median difference of -0.021 (-2.1%), favoring Republicans. Dr. DeFord reports -0.027 (-2.7%), fa-

voring Republicans. Dr. Rodden reports 0.01 (1%). Dr. Rodden specified that this figure favors Republicans. (Rodden Resp. Report at 10.) Dr. Duchin reports -0.2524 (-25.24%), favoring Republicans. Dr. Brunell reports 0.0186 (1.6%), favoring Republicans.

ix. Resenthaler 2 Plan

FF19. For the Resenthaler 2 Plan, Dr. Barber reports a mean-median difference of -0.022 (-2.2%), favoring Republicans. Dr. DeFord reports -0.026 (-2.6%), favoring Republicans. Dr. Rodden reports 0.01 (1%). Dr. Rodden specified that this figure favors Republicans. (Rodden Resp. Report at 10.) Dr. Duchin reports -0.2534 (-25.34%), favoring Republicans. Dr. Caughey reports 0.024 (2.4%), favoring Republicans. Dr. Caughey noted that he reviewed the Resenthaler 2 Plan, rather than the Resenthaler 1 Plan, because it was the only one that was provided to him. (N.T. at 897-98.) Dr. Brunell reports 0.0189 (1.89%), favoring Republicans.

x. Draw the Lines Plan

FF20. For the Draw the Lines Plan, Dr. Barber reports a mean-median difference of -0.006 (-0.6%), favoring Republicans. Dr. DeFord reports -0.012 (-1.2%), favoring Republicans. Dr. Rodden reports 0.006 (0.6%) (party advantage unspecified). Dr. Duchin reports -0.1042 (-10.42%), favoring Republicans.

xi. Ali Plan

FF21. For the Ali Plan, Dr. Barber reports a mean-median difference of -0.012 (-1.2%), favoring Republicans. Dr. DeFord reports -0.018 (-1.8%), favoring Republicans. Dr. Rodden reports 0.004 (0.4%) (party advantage unspecified). Dr. Duchin reports -0.1209 (-12.09%), favoring Republicans.

xii. Citizen-Voters Plan

FF22. For the Citizen-Voters Plan, Dr. Barber reports a mean-median difference of -0.013 (-1.3%), favoring Republicans. Dr. DeFord reports -0.02 (-2%), favoring Republicans. Dr. Rodden reports 0.014 (1.4%) (party advantage unspecified). Dr. Duchin reports -0.1847 (-18.47%), favoring Republicans.

xiii. Voters of PA Plan

FF23. For the Voters of PA Plan, Dr. Barber reports a mean-median difference of -0.012 (-1.2%), favoring Republicans. Dr. DeFord reports -0.027 (-2.7%), favoring Republicans. Dr. Rodden reports 0.026 (2.6%). Dr. Rodden specified that this figure favors Republicans. (Rodden Resp. Report at 10.) Dr. Duchin reports -0.2734 (-27.34%), favoring Republicans. Mr. Trende reports 0.020 (2%) based on all statewide 2020 elections, and 0.022 (2.2%) based on all statewide 2016-2020 elections (party advantage unspecified).

FF24. As Dr. Chen stated in *LWV II*, mean-median values should fall within 0-3% due to the political geography of the Commonwealth favoring Republicans. All of the maps do so here.

FF25. The slight deviations from map to map, all within a few percentage points is not significant to disregard any particular map because it has an overly partisan mean-median calculation.

FF26. Dr. Duchin's mean-median numbers for HB 2146, Reschenthaler Plan 1, Reschenthaler Plan 2, Citizen Voters Plan, Voters of PA Plan, and Senate Democratic Caucus Plan 1 are such extreme outliers that the Court finds them to be not credible. As such none of Dr. Duchin's numbers in the mean-median metric can be considered.

2. **Efficiency Gap**

FF1. Like the mean-median values, the experts provide a range of numbers relating to the efficiency gap for the various plans, although most likewise fall within the variation that Dr. Warshaw described as normal in *LWV II*. See *LWV II*, 178 A.3d at 777 (Dr. Warshaw noting that the range of efficiency gaps is between -20% and +20% over 96% of the time, and between -10% and +10% approximately 75% of the time).

FF2. The data sets identified above with respect to mean-median values are the same data sets the experts used in reporting efficiency gap figures.

FF3. The following figures are taken from the expert reports of Dr. DeFord, Dr. Duchin, Dr. Barber, Dr. Caughey, and Sean Trende. (See DeFord Resp. Report at 15, 34; Duchin Response Report at 4; Barber Response Report at 21; Caughey Resp. Report at 22; Trende Report at 24.)

a. **Carter Plan**

FF4. For the Carter Plan, Dr. Barber reports an efficiency gap of 0.034 (3.4%), favoring Democrats. Dr. DeFord reports -0.004 (-0.4%), favoring Republicans. Dr. Duchin reports -0.0058 (-0.58%), favoring Republicans.

b. **Gressman Plan**

FF5. For the Gressman Plan, Dr. Barber reports an efficiency gap of 0.034 (3.4%), favoring Democrats. Dr. DeFord reports 0.008 (0.8%), favoring Democrats. Dr. Duchin reports 0.1394 (13.94%), favoring Democrats.

c. **Governor Plan**

FF6. For the Governor's Plan, Dr. Barber reports an efficiency gap of 0.034 (3.4%) favoring Democrats. Dr. DeFord reports 0.006 (0.6%), favoring Democrats. Dr. Duchin reports 0.1007 (10.07%), favoring Democrats. Dr.

Caughey reports 0.035, (3.5%), favoring Republicans. Mr. Trende reports -0.035 (-3.5%) based on all statewide 2020 elections, and -0.010 (-1.0%) based on all statewide 2016-2020 elections (party advantage unspecified).

d. HB 2146

FF7. For HB 2146, Dr. Barber reports an efficiency gap of -0.025 (-2.5%), favoring Republicans. Dr. DeFord reports -0.063 (-6.3%), favoring Republicans. Dr. Duchin reports -0.8336 (-83.36%), favoring Republicans. Dr. Caughey reports 0.066 (6.6%), favoring Republicans.

e. Senate Democratic Caucus 1 Plan

FF8. For the Senate Democratic Caucus 1 Plan, Dr. Barber reports an efficiency gap of -0.025 (-2.5%), favoring Republicans. Dr. DeFord reports -0.025 (-2.5%), favoring Republicans. Dr. Duchin reports -0.2601 (-26.01%), favoring Republicans. Dr. Caughey reports 0.023 (2.3%), favoring Republicans.

f. Senate Democratic Caucus 2 Plan

FF9. For the Senate Democratic Caucus 2 Plan, Dr. Barber reports an efficiency gap of 0.034 (3.4%), favoring Democrats. Dr. DeFord reports 0.010 (1%), favoring Democrats. Dr. Duchin reports 0.1221 (12.21%), favoring Democrats. Dr. Caughey reports 0.024 (2.4%), favoring Republicans.

g. House Democratic Caucus 2 Plan

FF10. For the House Democratic Caucus Plan, Dr. Barber reports an efficiency gap of 0.093 (9.3%), favoring Democrats. Dr. DeFord reports 0.033 (3.3%), favoring Democrats. Dr. Duchin reports 0.1814 (18.14%), favoring Democrats.

h. Resenthaler 1 Plan

FF11. For the Resenthaler 1 Plan, Dr. Barber reports an efficiency gap of -0.025 (-2.5%), favoring Repub-

licans. Dr. DeFord reports -0.078 (-7.8%), favoring Republicans. Dr. Duchin reports -1.1024 (-110.24%), favoring Republicans.

i. Resenthaler 2 Plan

FF12. For the Resenthaler 2 Plan, Dr. Barber reports an efficiency gap of -0.025 (-2.5%), favoring Republicans. Dr. DeFord reports -0.078 (-7.8%), favoring Republicans. Dr. Duchin reports -1.1042 (-110.42%), favoring Republicans. Dr. Caughey reports 0.063 (6.3%), favoring Republicans. Dr. Caughey noted that he reviewed the Resenthaler 2 Plan, rather than the Resenthaler 1 Plan, because it was the only one that was provided to him. (N.T. at 897-98.)

j. Draw the Lines Plan

FF13. For the Draw the Lines Plan, Dr. Barber reports an efficiency gap of 0.034 (3.4%), favoring Democrats. Dr. DeFord reports -0.016 (-1.6%), favoring Republicans. Dr. Duchin reports -0.1678 (-16.78%), favoring Republicans.

k. Ali Plan

FF14. For the Ali Plan, Dr. Barber reports an efficiency gap of 0.034 (3.4%), favoring Democrats. Dr. DeFord reports -0.027 (-2.7%), favoring Republicans. Dr. Duchin reports -0.3166 (-31.66%), favoring Republicans.

l. Citizen-Voters Plan

FF15. For the Citizen-Voters Plan, Dr. Barber reports an efficiency gap of 0.034 (3.4%), favoring Democrats. Dr. DeFord reports -0.026 (-2.6%), favoring Republicans. Dr. Duchin reports -0.4074 (-40.74%), favoring Republicans.

m. Voters of PA Plan

FF16. For the Voters of PA Plan, Dr. Barber reports an efficiency gap of -0.025 (-2.5%), favoring Republicans.

Dr. DeFord reports -0.048 (-4.8%), favoring Republicans. Dr. Duchin reports -0.5658 (-56.58%), favoring Republicans. Mr. Trende reports 0.030 (3%) based on all statewide 2020 elections, and 0.056 (5.6%) based on all statewide 2016-2020 elections (party advantage unspecified).

FF17. Although the majority of these figures are within a relatively consistent range, the Court notes that Dr. Duchin's reported efficiency gap numbers are extreme outliers, and so far exceed the figures reported by all other experts that the Court does not find them credible and, therefore, the Court cannot consider any of the numbers she submitted in this metric.

FF18. Dr. Warshaw noted in *LWV II* that 75% of the time, efficiency gap falls between -10% and 10%. Dr. Warshaw stated that the efficiency gap should be fairly close to zero. *LWV II*, 178 A.3d at 777. No map has an efficiency gap over 10%.

FF19. Therefore, all of the maps are within a reasonable and acceptable range.

FF20. We also consider Dr. Barber's calculation in determining what is a fair map.

FF21. Dr. Barber compared his calculations in percentiles for where these maps were in relation to his 50,000 simulated maps.

FF22. All of the maps, according to Dr. Barber, are at least 54% more favorable to Democrats than the simulated maps he calculated. (Barber Report at 21.) The Court finds this opinion credible because we find he used commonly used measures of redistricting fairness.

FF23. According to Dr. Barber, the map proposed by the House Democratic Caucus has a more favorable efficiency gap outcome for Democrats than 100% of his sim-

ulated maps. (Barber Report at 21.) The Court finds this opinion credible because Dr. Barber used commonly used measures of measuring redistricting fairness.

3. Other Partisan Considerations

a. Proportionality Is Not a Requirement or Goal of Redistricting

As clearly stated by the Pennsylvania Supreme Court, in analyzing constitutional criteria for legislative redistricting, “[t]he constitutional reapportionment scheme does not impose a requirement of balancing the representation of the political parties; it does not protect the ‘integrity’ of any party’s political expectations. Rather, the construct speaks of the ‘integrity’ of political subdivisions, which bespeaks history and geography, not party affiliation or expectations.” *Holt I*, 67 A.3d at 1235-36.

Neutral criteria explicitly provided for by the Constitution cannot be subordinated to partisan concerns or considerations. *See Holt I*, 67 A.3d at 1239; *see also LWV II*, 178 A.3d at 816-17. A plan which prioritizes the neutral criteria incorporated by *LWV II* from the Pennsylvania Constitution—equal population, compactness, and avoidance of county, municipality, and ward splits unless absolutely necessary—might not result in a proportional congressional delegation due to the spatial dispersion of the political groups throughout the state. (Rodden Report at 9; Barber Report at 5-8, N.T. at 506-10, 627-28; Duchin testimony, N.T. at 441-42 (“in Pennsylvania, there is a structural advantage towards Republicans and getting to better partisan fairness does require you to overcome that”).

If a plan prioritizes proportional election outcomes, like negating a natural geographic disadvantage to achieve proportionality at the expense of traditional redistricting criteria, such map will violate the Pennsylvania Constitution's Free and Equal Elections Clause. The U.S. Supreme Court in *Vieth*, a Pennsylvania redistricting case, stated that “[t]he Constitution provides no right to proportional representation.” 541 U.S. at 268, 288 (emphasis added). “It guarantees equal protection of the law to persons, not equal representation . . . to equivalently sized groups. It nowhere says that farmers or urban dwellers, Christian fundamentalists or Jews, Republicans or Democrats, must be accorded political strength proportionate to their numbers.” *Id.* at 288 (emphasis added).

Dr. Wasserman, a renowned nonpartisan redistricting expert, noted developing a congressional map that provides proportional election outcomes, in Pennsylvania at least, “requires conscious pro-Dem[ocrat] mapping choices.” (House Republican Intervenors’ Br. at 22 (citing <https://twitter.com/redistrict/status/965719652188991488> (tweet dated 2/29/2018))).

CL1. In light of this, the Court recognizes that proportionality is not a requirement or a goal of redistricting under federal or state law.

FF1. Thus, any plan that attempts to achieve proportionality and does not comply with traditional redistricting criteria must be disregarded.

FF2 The Gressman Plan was purposefully created using an algorithm that sought to optimize on partisan fairness. *See* Gressman Pet’rs’ Br. at 14.

FF3 The Draw the Lines Plan **admittedly** split Pittsburgh into two congressional districts to maximize political competitiveness. (Villere Report at 4.)

b. Protection of Incumbents

CL1. Although it is not a constitutionally required, or necessarily dispositive consideration, among the factors that a court may consider in evaluating a redistricting plan is the extent to which it protects incumbents from competing against each other. *See LWV II*, 178 A.3d at 817 (listing “protection of incumbents” among the factors that “historically played a role in the drawing of legislative districts” which may be considered but are “wholly subordinate” to the neutral factors of compactness, contiguity, population equality, and minimization of the division of political subdivisions); *Mellow*, 607 A.2d at 207 (listing the avoidance of contests between incumbents as a legitimate objective in districting).

FF1. Notably, because Pennsylvania has lost one seat in the U.S. House of Representatives, one set of incumbents necessarily must be paired in a single district. (N.T. at 240 (testimony of Dr. DeFord), 348-49 (testimony of Dr. Duchin).)

FF2. The decision of where to create an incumbent pairing, however, can be relevant in assessing whether a proposed plan favors one political party over another. Pairing incumbents necessarily forces them to compete for a single seat. (N.T. at 348 (testimony of Dr. Duchin).)

FF3. It follows that a proposed plan may be able to favor one party by pairing incumbents from the other party, effectively eliminating one of them. (N.T. at 240 (testimony of Dr. DeFord), 349 (testimony of Dr. Duchin).)

FF4. In practice, however, an important consideration in the present proposals is that two of Pennsylvania's current Representatives are not seeking reelection. Representative Conor Lamb (D), of the current 17th District, is running for a seat in the U.S. Senate, and is therefore not running for reelection. Representative Michael Doyle (D), of the current 18th District, is retiring and not seeking reelection.

FF5. Accordingly, proposed plans that pair one of those incumbents with another, or with each other, are less indicative of any unfair distribution of the burden of incumbent pairing.

FF6. Not all of the Parties and *Amici* have discussed incumbent pairing in their submissions or supporting expert reports.

FF7. Dr. DeFord, however, compared all of the proposed plans to evaluate the number of incumbent pairings in each. (DeFord Resp. Report at 21, 39.) Thus, to the extent that a Party does not identify incumbent pairings, the Court will consider Dr. DeFord's report.

FF8. The Gressman Plan includes no significant incumbent pairings. Although its single necessary pairing places Representative Conor Lamb (D) into a district with Representative Guy Reschenthaler (R), Representative Lamb is not seeking reelection, rendering this pairing insignificant. (DeFord Resp. Report at 21.) FF9. The Carter Plan, HB 2146, the Senate Democratic Caucus 1 Plan, and the Reschenthaler 2 Plan all have one significant pairing.

FF10. The Carter Plan places Representatives Fred Keller (R) and Glenn Thompson (R) within a single district. (Rodden Report at 23.)

FF11. Although the Carter Plan also places Representatives Lamb and Doyle in the same district, neither are seeking reelection. (DeFord Resp. Report at 21.)

FF12. HB 2146 pairs Representatives Daniel Meuser (R) and Matthew Cartwright (D) into a single district.

FF13. Although HB 2146 places Representatives Lamb and Doyle in a single district, neither are seeking reelection. (DeFord Resp. Report at 21.)

FF14. The Senate Democratic Caucus 1 Plan places Representatives Meuser (R) and Keller (R) into a single district. (DeFord Resp. Report at 21.)

FF15. The Reschenthaler 2 Plan places Representatives Keller (R) and Cartwright (D) into in a single district. (DeFord Resp. Report at 21.)

FF16. The remaining plans all have two significant pairings.

FF17. However, among those plans, several stand out as pairing more incumbents from one party than another.

FF18. The Senate Democratic Caucus Plan 2 pairs Representatives Brian Fitzpatrick (R) and Brendan Boyle (D) in a single district, along with Representatives Meuser (R) and Keller (R). (DeFord Resp. Report at 21.)

FF19. Dr. DeFord cited the Senate Democratic Caucus Plan 2 as an example of one that particularly favors Democrats, as three Republican incumbents are paired with another incumbent, but only one Democrat is so paired. (N.T. at 241.)

FF20. The Reschenthaler 1 Plan pairs Representatives Keller (R) and Cartwright (D) into a single district, along with Representatives Mary Scanlon (D) and Chrissy Houlahan (D). (DeFord Resp. Report at 21.)

FF21. Dr. DeFord cited the Reschenthaler 1 Plan as an example of one that particularly favors Republicans,

as it pairs three Democratic incumbents, but only one Republican. (N.T. at 241.)

FF22. The same imbalance appears in the House Democratic Caucus's two Plans, which pair Representatives Meuser (R) and Cartwright (D), along with Representatives Scott Perry (R) and Lloyd Smucker (R). (DeFord Resp. Report at 21.)

FF23. This is another example of a plan that favors Democrats by pairing three Republican incumbents, but only one Democrat incumbent.

FF24. Likewise, the Draw the Lines Plan pairs Representatives Fitzpatrick (R) and Boyle (D), along with Representatives Meuser (R) and Keller (R). (DeFord Resp. Report at 39.)

FF25. This plan, thus, also favors Democrats by pairing three Republican incumbents but only one Democrat.

FF26. By contrast, the Citizen-Voters Plan favors Republicans by pairing Representatives Scanlon (D) and Dean (D), along with Representatives Meuser (R) and Cartwright (D)—three Democratic incumbents but only one Republican incumbent. (DeFord Response Report at 39.)

FF27. In sum, as it concerns incumbent protection, the Gressman Plan appears to have zero significant pairings, followed by HB 2146, the Reschenthaler 2 Plan, the Carter Plan, and the Senate Democratic Caucus 1 Plan, all of which include one significant pairing.

FF28. The remaining plans are largely on equal footing, but the Senate Democratic Caucus 2 Plan, the House Democratic Caucus Plan, the Draw the Lines Plan, the Reschenthaler 1 Plan, and the Citizen-Voters Plan have three incumbent pairings and as such will be given less weight in this regard.

c. VRA Considerations

FF1. Many Parties specify the number of districts in their proposed plans in which racial or language minority make up a majority of the voting-age population, so as to guard against potential liability under section 2 of the VRA.

FF2. Although not all of the Parties and *Amici* specifically identify the number of majority-minority districts created by their proposed plans, Dr. DeFord analyzed each proposal to identify the number of districts in which a majority of the voting-age population would constitute a minority. (DeFord Resp. Report at 20, 38.)

FF3. The 2018 Remedial Plan contained two majority-minority districts—one majority-Black district and one in which multiple minorities together formed a majority. (Duchin Report at 5.)

FF4. The Gressman Plan is the only plan that creates three majority-minority districts. Its proposed Districts 2, 3, and 5 have minority group populations of 52%, 57%, and 51%, respectively. (DeFord Report at 44.) In one of those districts, Latinos would be the largest minority group, which differs from previous districting plans. (DeFord Report at 56-57.)

FF5. All of the remaining proposed plans would create two majority-minority districts. (DeFord Resp. Report at 20, 38.)

FF6. All of the remaining proposed plans are therefore comparable with the 2018 Remedial Plan with respect to the creation of majority-minority districts.

CL1. As noted above, Pennsylvania is subject to section 2 of the VRA. However, the Parties have not presented evidence or expert opinions specifically directed toward the establishment of the *Gingles* requirements

with respect to any particular minority population in Pennsylvania. Moreover, this is not a situation in which a party has lodged a challenge to an existing districting plan under section 2 of the VRA.

CL2. The Court is thus unable to determine that any specific number of majority-minority districts is strictly necessary in any particular location in Pennsylvania.

CL3. The Court accordingly cannot conclude that any plan would be likely to violate section 2 of the VRA or any other requirements of federal law.

d. The Carter Plan's Least Change Approach

CL1. The preservation of prior district lines, or “least change,” is another “subordinate” factor the Court may consider in determining which plan to adopt. *LWV II*, 178 A.3d at 817.

CL2. In *LWV II*, the Pennsylvania Supreme Court held that “the preservation of prior district lines” is a consideration that is “wholly subordinate to the neutral criteria of compactness, contiguity, minimization of the division of political subdivisions, and maintenance of population equality among congressional districts. *LWV II*, 178 A.3d at 817.

FF1. In his report and testimony, Dr. Rodden, the expert witness for the Carter Petitioners, prioritized, to a remarkable extent, the preservation of the cores and boundaries of the 2018 Remedial Plan. (Rodden Report at 1; N.T. at 84.)

CL3. The Court finds that using least-change metrics here is of limited utility because an 18-district plan is being replaced by a 17-district plan.

CL4. The Court concludes that evaluating redistricting plans against the traditional criteria, instead of simi-

larity to a previous court-drawn plan, protects the integrity of the redistricting process by ensuring that the new plan is scrutinized every redistricting cycle against the applicable constitutional and statutory standards, and with reference to population and other changes.

FF2. Dr. Rodden states that the Carter Petitioners’ “Least Change” Plan deviates the least amount from the 2018 Remedial Plan adopted by the Supreme Court in *LWV III*. (Rodden Resp. Report at 2.)

FF3. According to Dr. Rodden, the Carter Plan retains 86.6% of the population share as compared to the Supreme Court-drawn 2018 Remedial Plan. He also provides calculations on the other submitted maps in Table 1 of his Response Report:

1: Retained Population Share in 14 Submitted PA Congressional Plans

Plan	Retained Population Share
Carter	86.6
CCFD	76.1
Citizen Voters	82.4
HB2146	78.5
Draw the Lines PA	78.8
GMS	72.8
Governor Wolf	81.2
Ali	81.5
PA House Dem. Caucus	73.3
Resenthaler 1	76.5
Resenthaler 2	76.5
Senate Dem. Plan 1	72.5
Senate Dem. Plan 2	72.5
<u>Voters of PA</u>	<u>80.6</u>

(Rodden Resp. Report at 2.)

FF4. Dr. Rodden calculated the average retained population share across all of the districts (in percentages) in each of the other plans, and reported a single percentage figure for each of the plans, as opposed to a breakdown by district for each plan like he did with the Carter Plan. (Rodden Resp. Report at 1-2, Table 1.)

FF5. Based on his review of the other plans' numbers, Dr. Rodden opined that the Carter Plan retained more of the districts' former population (86.6%) compared to the other 13 plans (which ranged from 72.5% to 82.4%). (Rodden Resp. Report at 2, Table 1.)

FF6. Dr. Rodden further opined that the Senate Democratic Caucus's Plans 1 and 2 (72.5% for both), the Gressman Petitioners' Plan (72.8%), and the House Democratic Caucus's Plan (73.3%) made the largest boundary changes, and thus had the lowest percentages, with respect to maintaining districts' population as compared to the 2018 Remedial Plan. (Rodden Resp. Report at 2, Table 1.)

FF7. Dr. Rodden does not explain the extent to which the percentages of retained population share is either acceptable or so disparate so as to justify the elimination of any of the other plans or conversely to prioritize the Carter Plan based on this criterion. Consequently, this Court is left with attempting to decipher enigmatic data.

CL5. The Court concludes that choosing a plan based on its similarity to a previously court-drawn redistricting plan is not constitutionally sound.

CL6. The 2018 Remedial Plan adopted by the Supreme Court in *LWV III* was based on 2010 Census data.

CL7. The Court concludes that the 2020 U.S. Census results have made the current plan, *i.e.*, the 2018 Reme-

dial Plan, unusable and violative of voters' rights due to population reductions and shifts resulting in unequal districts.

FF8. The Carter Plan's decrease along some compactness measures results from efforts to deviate the least amount from the 2018 Remedial Plan. *See* Rodden Report at 22.

FF9. The Carter Plan opted to draw less compact districts instead of disrupting the Supreme Court's 2018 Remedial Plan. *Id.* at 8.

CL8. The Court concludes that nothing in *LWV* or the Constitution states that adherence to a previous **court-drawn** plan outweighs compactness.

CL9. The "Least Change" doctrine was set forth by the U.S. Supreme Court in *Perry v. Perez*, 565 U.S. 388, 392-397 (2012), suggesting judges should use maps drawn **by legislators** as strong indicators of **legislative intent** and should strive to alter them as little as possible.

CL10. Specifically, the U.S. Supreme Court held that it was error for a district court to displace "legitimate state policy judgments with the court's own preference" by neglecting a recently enacted, but not Department of Justice-precleared, legislative redistricting plan. 565 U.S. at 396. In so holding, the U.S. Supreme Court stated that "a district court should take guidance from the state's recently enacted plan" when drafting its own plan, since the state's plan "provides important guidance that helps ensure that the district court appropriately confined itself to drawing interim maps that comply with the Constitution and the Voting Rights Act, without displacing legitimate state policy judgments with the court's own preferences." 565 U.S. at 394.

CL11. This Court concludes that the “Least Change” doctrine does not require, or sanction, a court to defer to **its own** prior redistricting map in drafting the new plan.

CL12. The U.S. Supreme Court has held that districts should reflect legislative intent to the highest degree which is statutorily and constitutionally permitted. Nothing in *Perry* suggests that a court, when drafting its own plan, should adhere to a plan **it** previously drew.

CL13. The Pennsylvania Supreme Court rejected a similar Least Change argument in legislative reapportionment litigation in *Holt I*, reiterating that “the governing ‘law’ for redistricting” is “applicable constitutional and statutory provision and on-point decisional law,” not “the specifics of a prior reapportionment plan ‘approved’ by the Court.” *Holt I*, 28 A.3d at 735.

CL14. In *Holt I*, the Pennsylvania Supreme Court again criticized arguments about the “supposed constitutionalization of prior redistricting plans” and emphasized the “limited constitutional relevance” of maintaining the outcomes of previous plans. *Holt I*, 67 A.3d at 1236.

FF10. The Court finds that the Carter Petitioners, in essence, have attempted to elevate a subordinate factor into a dominate one and therefore their plan and map violate the Free and Equal Elections Clause as a matter of law.

CL15. The Court concludes that the Carter Petitioners have misconstrued and misapplied the “Least Change” doctrine, which does not apply in this circumstance.

FF11. This Court is deeply troubled by the prospect of any court, let alone a court of this Commonwealth, applying the “Least Change” doctrine, where the existing plan was drafted by that court itself, because that court

could theoretically continuously adopt features of its prior plans, effectively rendering impossible any future challenge to the plan.

FF12. The Court concludes that any number of **the court's** choices from its prior plan would be frozen into future plans, which has nothing to do with applying constitutional redistricting principles to ever changing population changes. CL16. This Court concludes that by applying the “least change” approach in these circumstances, a court would be prioritizing the court’s own 2018 Remedial Plan, which was adopted four years ago, which was based on the 2010 U.S. Census data.

CL17. For these reasons, this Court recommends that the Supreme Court not adopt the Carter Petitioners’ “Least Change” Plan on the basis that, comparatively, it is most similar to the 2018 Remedial Plan’s boundary lines for the congressional districts in the Commonwealth.

VI. RECOMMENDATION

A. Proposed Findings of Fact, Conclusions of Law, and Adoption of Map Recommendation

To start, the Court incorporates through reference its proposed findings of fact and conclusions of law as made previously and reflected above. In an attempt to synthesize and consolidate those determinations and, in support of its proposed report and recommendation to the Supreme Court, the Court, having conducted a bench trial in which it received evidence from the parties, has rendered credibility and weight determinations with respect to and in light of its previously suggested findings of fact

and conclusions of law.⁴⁷ Based on those credibility and weight determinations, as more fully explained below, the Court recommends that the Supreme Court ultimately adopt the following findings of fact, conclusions of law, and/or mixed findings of fact and conclusions of law:⁴⁸

1. The Petitions for Review filed in this consolidated case by the Carter Petitioners and the Gressman Petitioners generally allege that the Supreme Court's 2018 Remedial Plan is unconstitutional as a result of the recent 2020 Census because the 2018 Remedial Plan was based on data collected from the 2010 Census.
2. More specifically, the Petitions for Review correctly aver that the Commonwealth of Pennsylvania is currently allotted 17 seats in the House of Representative, while

47. Generally speaking, in making credibility and weight determinations, a tribunal resolves conflicts in the evidence and may accept or reject the testimony of any witness, including an expert witness, in whole or in part, and is free to reject even uncontradicted testimony as not being credible. *See, e.g., A & J Builders, Inc. v. Workers' Compensation Appeal Board (Verdi)*, 78 A.3d 1233, 1238 (Pa. Cmwlth. 2013); *Kelly v. Unemployment Compensation Board of Review*, 776 A.2d 331, 336 (Pa. Cmwlth. 2001); *Teitell v. Unemployment Compensation Board of Review*, 546 A.2d 706, 711 (Pa. Cmwlth. 1988); *see also supra* note 25 (explaining the standard of review and the posture of this case as it pertains to the functional role that it is typically associated with a fact finder).

48. The United States Supreme Court has described a mixed question of law and fact as one in which the facts are established, the law is determined, but the issue involves whether the facts were correctly applied to the law. *Pullman-Standard v. Swint*, 456 U.S. 273, n.19 (1982).

under the 2010 Census, it was bestowed with 18 seats and, therefore, the 2018 Remedial Plan is presently unconstitutional in that it fails to reflect the Commonwealth's population loss and/or boundary lines that account for the lost seat.

3. As a matter of fact and law, the Court concludes that the 2018 Remedial Plan is constitutionally deficient and cannot be implemented to represent the congressional districts for the Commonwealth from this moment forward because it created boundary lines for 18 congressional districts and seats, and the Commonwealth now has only 17 available seats.

4. Given the procedural history and posture of this case, including interim orders from our Supreme Court, it is apparently an unremarkable and undisputed proposition that the 2018 Remedial Plan violates at least one of various constitutional provisions and, as such, the creation and adoption of a new congressional redistricting map is an absolute imperative as a matter of state law.

5. Under Pennsylvania law, and the Constitutions of the United States and Pennsylvania, it is the responsibility of the Pennsylvania legislature to duly enact a law incorporating a map that indicates the specific boundary lines for each respective congressional district that the Commonwealth has been afforded according to the most recent Census, subject to approval by the governor.

6. Here, the Governor took initiative, apart from the statutory and constitutional procedure for enacting a law. See Article IV, section 15 of the Pennsylvania Constitution, Pa. Const. art. IV, §15 ("Every bill which shall have passed both Houses shall be presented to the Governor; if he approves he shall sign it, but if he shall not approve

he shall return it with his objections to the House in which it shall have originated . . .”).

7. In September 2021, the Governor issued an Executive Order creating the Pennsylvania Redistricting Advisory Council (Advisory Council), a six-member council comprised of redistricting experts formed to provide guidance to the Governor and assist his review of any congressional redistricting plan passed by the General Assembly. (Governor Opening Brief at 4.)

8. The Governor’s Advisory Council drafted a set of so-called “Redistricting Principles.” See Pennsylvania Redistricting Advisory Council, Redistricting Principles, <https://www.governor.pa.gov/wp-content/uploads/2021/11/Redistricting-Advisory-CouncilFinal-Principles.pdf>

9. On January 15, 2022, the Governor published on his website “the Governor’s Map” proposing new congressional district boundaries, which he claimed were consistent with the United States and Pennsylvania Constitutions and with the redistricting principles recommended by the Redistricting Advisory Council. <https://www.governor.pa.gov/congressional-districts-map-proposals>

10. Although both the Pennsylvania State House of Representatives and Senate (collectively, the General Assembly), the policy-making branch of our government, devised, considered, and passed a bill, HB 2146, that accomplished this goal, the Governor vetoed it on January 26, 2022.

11. The Governor vetoed HB 2146 because, in his view, “it fundamentally fails to meet the test of fairness set forth by the Pennsylvania Supreme Court in *League of Women Voters I* and does not comply with the Redistrict-

ing Principles outlined by the Redistricting Advisory Council.” (Governor Wolf Opening Brief at 6.)

12. Upon review of the evidence of record, the Court has already concluded that HB 2146 does not contravene, and in fact sufficiently satisfies, the standards of the Free and Equal Election Clause of the Pennsylvania Constitution, the other criteria discussed by our Supreme Court in *LWV*, and further, reflects a non-partisan tilt in favor of Democrats.

13. As of the filing date of this report and recommendation, February 7, 2022, the Generally Assembly and the Governor have not agreed upon a congressional redistricting plan to replace the 2018 Remedial Plan.

14. Ergo, this Court, as part of the judicial branch of government, and pursuant to the directives of our Supreme Court, has collected evidence and held a hearing in order to recommend a plan and/or map to serve as a substitute for the breakdown in the political process.

15. In the context of this consolidated case, there were 13 maps submitted by the parties and *amici* for the Court’s review and consideration.

16. On their face, and as supported by the evidence of record, all the maps in the proposed plans contain districts that are comprised within a contiguous territory and comply with the “contiguity” requirement of the Pennsylvania Constitution.

17. Each and every proposed plan satisfies the command in the Free and Equal Elections Clause that congressional districts be created “as nearly equal in population as practicable.” Pa Const. art. II, §16.

18. However, unlike the other plans that have a maximum population deviation of one person, the Carter Plan

and the House Democratic Plan both result in districts that have a two-person deviation.

19. The Ali Plan, unlike all of the other maps submitted, and contrary to Pa. House Res. 165, relied on the LRC's Data Set #2 and, for the reasons, findings, and conclusions stated above and below, the Court must recommend that the Ali Plan is thus entitled to little or no evidentiary weight and does not proffer a map that is suitable for redistricting, or for comparison with the other submitted maps.

20. Given the credible testimony of all the experts who testified or tendered reports regarding this aspect of the Ali Plan, the Court finds that the plan most likely alters population density and raises a host of subsidiary issues that should be resolved by the federal or state legislature and hence cannot be utilized for comparison of the other parties and amici maps submitted in this case.

21. The Court notes that the Ali Plan was the only plan whose map's entire construction depended upon the population figures as set forth in Data Set #2 and seeks to alter the requirement in a resolution, Pa. House Res. 165, stating that Data Set #1 be used in any congressional redistricting legislation before the 2030 Census. All the other parties and amici utilized and relied upon LRC's Data Set #1 in accord with the commonly accepted practice in the expert field of redistricting and, in essence, Ali is asking the Court to make a determination regarding geographical breakdowns in population which is not properly before the Court.

22. Based on the credible testimony and charts provided by Governor Wolf's expert, Dr. Duchin, regarding the metrics used to evaluate compactness, as corroborated by various other experts in their testimony and submis-

sions, the Court finds that the following plans and maps fulfill the constitutional requirement that a map be composed of compact territory: the Republican Legislative Intervenors' Plan (HB-2146), both of the Congressional Intervenors' maps (Reschenthaler 1 and 2), the Carter Petitioners' Plan, the Gressman Petitioners' Plan, Governor Wolf's Plan, both of the Senate Democratic Caucus Plans (Maps 1 and 2), and the maps submitted by the Voters of PA *Amici*, Draw the Lines *Amici*, and the Citizen-Voters *Amici*.

23. Overall, the plans which divide the fewest counties, cities, incorporated towns, boroughs, townships, and wards are the Senate Democratic Caucus Map 2 (46 splits total), the Republican Legislative Intervenors' Map (HB 2146) and the Gressman Plan, (each with 49 splits total), the Reschenthaler 2 Plan (53 splits), and the Reschenthaler 1 Plan (54 splits).

24. The Reschenthaler Plans remarkably divide only 13 counties and 16 municipalities, which is the lowest numbers in both categories.

25. In reviewing the number of splits, the Court is mindful that is not simply a numbers game and that a boundary divide, first and foremost, must be done to guarantee equality in population, second (and most relatedly), should preserve the commonality of the interests of the communities and, third, should not be done to achieve an ulterior motive, such as racial discrimination or unlawful partisan gerrymandering.

26. That said, the following plans propose to split the City of Pittsburgh into two districts, apparently for the first time in history of the Commonwealth: the Governor's Plan, the Senate Democratic Caucus Plan 1 and

Plan 2, the Draw the Lines PA Plan, and the plan submitted by Khalif Ali.

27. However, upon review of the record, the Court determines that these parties have failed to present any credible evidence as to why it was “necessary” to split the second largest city in Pennsylvania in order to achieve equal population, especially considering that such an approach is seemingly a novel proposition, and experts credibly testified that there was no legitimate rationale or reason to apportion the city into two separate segments.

28. Given the weight it has afforded the evidence, the Court expresses grave concerns that the maps dividing the City of Pittsburgh do so with the objective of obtaining an impermissible partisan advantage, by effectively attempting to create *two* Democratic districts out of *one* traditionally and historically Democratic district.

29. The Court further finds, based on the credible evidence of record that, by dividing the City of Pittsburgh into two districts, the above-mentioned maps have failed to preserve the shared interest of the communities in the Pittsburgh area and the distinctive cultural fabric that has been shaped and formed within the city’s limits.

30. Therefore, the Court respectfully recommends that the above-mentioned maps are not, as a matter of comparative evidentiary weight, an appropriate choice to represent Pennsylvania’s congressional districts in upcoming elections because they divide the City of Pittsburgh.

31. The Court further respectfully recommends that any map that divides Bucks County for the first time since the 1860s, including Governor Wolf’s map, is not an appropriate choice to represent Pennsylvania’s congress-

sional districts in upcoming elections. In so determining, the Court credits and provides great weight to the unrefuted testimony of Dr. Naughton who, as explained more fully below, opined that Bucks County should not be split into two congressional districts.

32. Regarding the issue of incumbent pairings, the Court finds and places persuasive weight on the fact that, contrary to every other map submitted, the Senate Democratic Caucus 1 Plan and the Carter Plan include two Republican incumbents in one congressional district, which effectively eliminates a Republican from continued representation in the United States House of Representatives.

33. As such, although Pennsylvania has already lost one congressional seat as a result of decreased population, the Senate Democratic Caucus 1 Plan and the Carter Plan, in effect, seek to preemptively purge a Republican Congressman from the 17 seats that are remain available for office.

34. Viewing the record as a whole, the Court finds that the plan submitted by the Carter Petitioners is given less weight in that it utilizes the “least change” analysis, and the underlying methodology and methods employed by Dr. Rodden to construct the proposed maps based on the 2018 map which was based on an entirely different census population and 18 versus 17 districts, and contrary to Pennsylvania and United States Supreme Court precedent.

35. Consequently, any figures, features, or characteristics in the Carter Petitioners’ plan and map that could possibly be deemed to support the validity of that plan and map have been developed in contravention of controlling precedent.

36. Based on the current record, and caselaw and when considered alongside and constructively with the other maps, the Court simply cannot conclude that the Carter Petitioners' map is otherwise entitled to a degree of evidentiary weight such that it outweighs, by a preponderance, the evidentiary value of the other, proposed maps. As such, for this reason and those stated within, the Court must recommend that the Carter Petitioners' map be given less evidentiary weight in its global assessment of all the plans and proposals.

37. Upon review, the Court finds credible and extremely persuasive the various experts' testimonies and reports explaining that there is a strong relationship between the geographic concentration of Democratic voters and electoral bias in favor of Republicans.

38. Particularly, Dr. Duchin, Governor Wolf's expert, confirmed that the political geography of Pennsylvania is partisan by its very nature. Dr. Duchin testified, credibly, that in generating 100,000 random plans with a computer programmed that was designed only to honor Pennsylvania's minimum constitutional requirements, the random plans tended to exhibit a pronounced advantage to Republicans across the full suite of elections, throughout the Commonwealth as a whole, and that random plans must naturally and necessarily favor Republicans.

39. Indeed, in terms of the metrics used to gauge partisan fairness, the meanmedian scores provided by each and every expert with respect to each and every single district of the various maps confirms that an overwhelming supermajority of the maps possess a notable difference that favor Republicans and, thus, confirms the natural state of political voting behavior and tendencies in

the entirety of the Commonwealth with respect to congressional districting.

40. On record as presented, the Court finds that when lines are purposely drawn to negate a natural and undisputed Republican tilt that results from the objective, traditional, and historical practice whereby Democratic voters are clustered in dense and urban areas, such activity is tantamount to intentionally configuring lines to benefit one political party over another. The Court considers this to be a subspecies of unfair partisan gerrymandering and is legally obligated, pursuant to *LWV II*, to look up such a practice with suspicious eyes.

41. That said, on a comparative scale, the Court gives less weight to the maps that, due to their credited mean-median scores, yield a partisan advantage to the Democratic Party, namely the Gressman Plan and the House Democratic Caucus Plan.

42. Similarly, on a comparative scale, the Court provides less weight to the maps that, due to their credited efficiency gap scores, yield a partisan advantage to the Democratic Party, namely the Carter Plan, the Gressman Plan, the Governor's Plan, the Senate Democratic Caucus 2 Plan, the House Democratic Caucus Plan, and the Draw the Lines Plan.

43. Regardless of whether there was sufficient, credible evidence to establish that any of the other proffered plans violate the Free and Equal Elections clause because they subordinate the neutral factors pronounced in *LWV II* and place unlawful, paramount emphasis on gerrymandering for unfair partisan political advantage, the Court considers the degree of partisan fairness reflected within the maps as a substantial factor that is entitled to appreciable weight in the final calculus.

44. In so doing, the Court notes, as previously explained, one of the overriding constitutional precepts applied in redistricting cases is that any map that prioritizes proportional election outcomes, for example, by negating the natural geographic disadvantage to achieve proportionality at the expense of traditional redistricting criteria, violates the Pennsylvania Constitution's Free and Equal Elections Clause. As the United States Supreme Court stated in *Vieth v. Jubelirer*, concerning a Pennsylvania redistricting plan, "[t]he Constitution provides no right to proportional representation." 541 U.S. at 268. Instead, the Constitution "guarantees equal protection of the law to persons, not equal representation . . . to equivalently sized groups. It nowhere says that farmer or urban dwellers, Christian fundamentalists or Jews, Republicans or Democrats, must be accorded political strength proportionate to their numbers." *Id.* at 288

45. There was insufficient evidence of record to establish that any of the proposed maps violated the Voting Rights Amendment or the "one person, one vote" principle in the Equal Protection clause of the United States Constitution. While voicing no opinion as to the future prospect of such claims, the Court notes that they were not sufficiently developed or argued during the proceedings below.

46. Having received and considered the evidence in the manner of a trial court, the Court has fully vetted the plans and maps to assess their compliance with the neutral criteria of the Free and Equal Elections Clause of the Pennsylvania Constitution, as interpreted and applied in *LWV II*.

47. From this perspective, the Court discounts the plans that it already determined failed to adequately satisfy

those criteria, otherwise jeopardized the purposes and goals inherent in the “floor” standard adopted by our Supreme Court, and/or contain characteristics that render them patently not credible or comparatively deserving of lesser weight.

48. Particularly, the Court submits the following recommendations as to which plans should not be adopted by the Supreme Court and, for support, supplies the accompanying reasons for its specific recommendations:

Ali Plan

Based on all of the foregoing, the Court does not recommend adopting the Ali Plan for the congressional districts in the Commonwealth of Pennsylvania because:

- 1) it relied on the LRC’s Data Set #2, which contains population adjustments to account for the reallocation of most prisoners to their last known addresses prior to incarceration, is not based on the figures in Data set #1, and is not in accord with Pa. House Res. 165;
- 2) the Court finds that Data Set #2 should not be used at this time for congressional districting;
- 3) the Plan’s adjustments in population, relocating prisoners to their residential addresses, would result in a population deviation of 8,676 people;
- 4) it splits the City of Pittsburgh into two congressional districts for the first time without any convincing or credible expert explanation as to why this was absolutely necessary to achieve population equality or to refute

other expert opinions that the City of Pittsburgh does not need to be split in order to achieve population equality between districts;

- 5) the City of Pittsburgh in many ways constitutes a community of interest, such that its division would not be in the best interest of its residents.

Governor Wolf's Plan

Based on all of the foregoing, the Court does not recommend adopting the Governor's map for the congressional districts in the Commonwealth of Pennsylvania because:

- 1) it splits the City of Pittsburgh into two congressional districts for the first time without any convincing or credible expert explanation as to why this was absolutely necessary to achieve population equality or to refute other expert opinions that the City of Pittsburgh does not need to be split in order to achieve population equality between districts;
- 2) the Governor's map also for the first time in 150 years, splits Bucks County, and joins Philadelphia's surplus population with Bucks County. Again, the Governor has not provided any convincing or credible expert explanation as to why this is absolutely necessary to achieve population equality between districts;

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- 3) the Governor's Plan splits the City of Pittsburgh in order to create another Democratic congressional district solely for partisan gain by creating another Democratic district;
- 4) the City of Pittsburgh in many ways constitutes a community of interest, such that its division would not be in the best interest of its residents and has never before been split;
- 5) based on its credited efficiency gap score, it provides a partisan advantage to the Democratic party in contravention to the natural state of political voting behavior and bias towards Republicans in Pennsylvania.

The Draw the Lines Plan

Based on all of the foregoing, the Court does not recommend adopting the Draw the Lines Plan for the congressional districts in the Commonwealth of Pennsylvania because:

- 1) like the Governor's Plan, it splits the City of Pittsburgh across two congressional districts for the first time without any convincing or credible expert explanation as to why this was absolutely necessary to achieve population equality or to refute other expert opinions that the City of Pittsburgh does not need to be split in order to achieve population equality between districts;
- 2) the City of Pittsburgh in many ways constitutes a community of interest, such that its

division would not be in the best interest of its residents;

- 3) Draw the Lines admittedly split Pittsburgh into two to maximize political competitiveness. See Villere Report at 4;
- 4) based on its credited efficiency gap score, it provides a partisan advantage to the Democratic party in contravention to the natural state of political voting behavior and bias towards Republicans in Pennsylvania.

Senate Democratic Caucus Plans 1 or 2

Based on all of the foregoing, the Court does not recommend adopting either Senate Democratic Caucus Plan for the congressional districts in the Commonwealth of Pennsylvania because:

- 1) both Plans split the City of Pittsburgh across two congressional districts for the first time without any convincing or credible expert explanation as to why this was absolutely necessary to achieve population equality or to refute other expert opinions that the City of Pittsburgh does not need to be split in order to achieve population equality between districts;
- 2) the City of Pittsburgh in many ways constitutes a community of interest, such that its division would not be in the best interest of its residents;
- 3) the Senate Democratic Caucus' Plans split Pittsburgh in order to create another Democratic congressional district which appears to

be solely for partisan gain by creating another Democratic district;

- 4) without any explicit or apparent justification, it pairs two Republican incumbents in one congressional district and effectively eliminates a Republican from continued representation in the United States House of Representatives;
- 5) based on its credited efficiency gap score, it provides a partisan advantage to the Democratic party in contravention to the natural state of political voting behavior and bias towards Republicans in Pennsylvania

House Democratic Caucus Plan

Based on all of the foregoing, the Court does not recommend adopting the House Democratic Caucus' Plan for the congressional districts in the Commonwealth of Pennsylvania because:

- 1) it was not accompanied by an expert report or testimony consequently, the Court received no testimonial or written explanation concerning why the map drew the lines in the particular manner that it did and to demonstrate why the divides in the maps were absolutely necessary to achieve population equality as opposed to some other secondary or impermissible goal;
- 2) while keeping Pittsburgh whole, as asserted by one of the parties, it draws an oddly shaped "Freddy-Krueger like claw" district

in Allegheny County to “grab” Pittsburgh to combine it with Republican areas leaning to the North without any explanation of the reasons for doing so;

- 3) it has a two-person difference in population from the largest to their smallest districts, while the majority of other plans were able to achieve a one person deviation;
- 4) based on both its credited efficiency gap score and credited mean-median score, it provides a partisan advantage to the Democratic party in contravention to the natural state of political voting behavior and bias towards Republicans in Pennsylvania..

The Citizen Voters Plan

Based on all of the foregoing, the Court does not recommend adopting the Citizen Voters’ Plan for the congressional districts in the Commonwealth of Pennsylvania because:

- 1) it was not accompanied by an expert report or testimony consequently, the Court received no testimonial or written explanation concerning why the map drew the lines in the particular manner that it did and to demonstrate why the divides in the maps were absolutely necessary to achieve population equality as opposed to some other secondary or impermissible goal;
- 2) it has a two-person difference in population from the largest to their smallest districts,

while the majority of other plans were able to achieve a one person deviation.

The Carter Plan

Based on all of the foregoing, this Court does not recommend adopting the Carter Plan for the congressional districts in the Commonwealth of Pennsylvania because:

- 1) it has a two-person difference in population from the largest to their smallest districts, while the majority of other plans were able to achieve a one person deviation;
- 2) it utilized the “least-change” approach, and lacked any analysis of the percentage differences as discussed more fully herein;
- 3) without any explicit or apparent justification, it pairs two Republican incumbents in one congressional district and effectively eliminates a Republican from continued representation in the United States House of Representatives;
- 4) based on its credited efficiency gap score, it provides a partisan advantage to the Democratic party in contravention to the natural state of political voting behavior and bias towards Republicans in Pennsylvania.

The Gressman Plan

Based on all of the foregoing, this Court does not recommend adopting the Gressman Plan for the con-

gressional districts in the Commonwealth of Pennsylvania because:

- 1) the algorithm used to prepare the Gressman Plan was specifically looking to optimize on partisan fairness, which as explained above, is not one of the traditional neutral criteria of redistricting and because the constitutional reapportionment scheme does not impose a requirement of balancing the representation of the political parties;
- 2) the Gressman Petitioners did not adequately establish that they considered community interests when deciding to erect boundary lines across the Commonwealth;
- 3) based on both its credited efficiency gap score and credited mean-median score, it provides a partisan advantage to the Democratic party in contravention to the natural state of political voting behavior and bias towards Republicans in Pennsylvania.

49. Although the Court could conceivably find that quite a few, if not all, of the remaining maps, are entirely consistent with the Free and Equal Elections Clause, it faces the task of having to choose and recommend only one map to our Supreme Court and effectively usurp the role and function of the law-making bodies of this Commonwealth.

50. In navigating this “rough terrain” and undertaking this “unwelcomed obligation,” which is “a notoriously political endeavor,” *Carter v. Chapman* (Pa., No. 7 MM 2022, order filed Feb. 2, 2022), __ A.3d __, at __ (Dougherty, J., concurring statement at 3-5) (internal

citations omitted), the Court specifically credits the evidence of Governor Wolf’s expert, Dr. Duchin, in part, and in the following regards.

51. The Court accepts as credible Dr. Duchin’s opinion to the extent she concluded that, among other submissions, the map of the Voters of PA *Amici* and Reschenthaler 1 both evince a “first tier” standard of excellence and easily satisfy the baseline “floor” standard or neutral criteria under *LWV II*.

52. The Court accepts as credible Dr. Duchin’s opinion insofar as she opined that Reschenthaler 2 falls within a “second tier” standard of excellence and also satisfies the baseline “floor” standard or neutral criteria under *LWV II*.

53. The Court further accepts as credible Dr. Duchin’s testimony and statements in her report that HB 2146 is population balanced and contiguous, shows strong respect for political boundaries, is reasonably compact, and has better “splits” than Governor Wolf’s plan.

54. Regarding Reschenthaler 1 and Reschenthaler 2, the Court accepts as credible Dr. Duchin’s admissions and concessions that the Reschenthaler maps had the lowest “county pieces” (29) and municipal splits (16), and were tied for the lowest with respect to “municipal pieces” (33).

55. Additionally, the Court credits Dr. Rodden’s testimony explaining that his analysis of the partisan nature of the proposed maps showed that the estimated seats for Democrats and Republicans between the Carter Map, on one hand, and the Reschenthaler 1 and 2 maps, on the other hand, differed by just one seat out of 17.

56. Concerning the map submitted by the Voters of PA *Amici*, the Court credits the evidence demonstrating

that it had the best Popper-Polsby score of 0.3951 and, in this particular respect, is superior in terms of the metrics used to evaluate compactness.

57. As a result of its credibility and weight determinations, the Court finds that the map submitted by the Voters of PA *Amici*, the Congressional Intervenors' maps (especially Reschenthaler 1), and the map of the Republican Legislative Intervenors (known as HB 2146) are consistent with the Free and Equal Elections Clause of the Pennsylvania Constitution, and, also, the aspirations and ideals expressed by that constitutional provision as pronounced by the Court in *LWV II* due to their compactness, degree of partisan fairness, and specific development of congressional districts.

58. For further support of this recommendation, the Court finds that the proposed congressional districts within the map proposed by Voters of PA *Amici*, Reschenthaler 1, and HB 2146 credibly and persuasively comply with the various experts' universal recognition that the surface areas comprising the districts should be in accord with the natural, political, and structural geography of those areas.

59. The Court also finds that the proposed congressional districts within the map proposed by Voters of PA *Amici*, Reschenthaler 1, and HB 2146 credibly and persuasively create a sufficient number of competitive, "toss up" congressional districts which could go either way, depending upon the particular election and/or office at issue and the qualifications and political platforms of the individual candidates.

60. On a vis-à-vis comparison, the Court finds that Reschenthaler 1 would slightly exceed the map of Voters of PA *Amici* in that it provided a more extensive report on

the preservation of communities of interest, a precept recognized by the courts as a heavy, if not mandatory, factor in this type of assessment.

61. Although the Republican Legislative Intervenors requested the Court to provide some degree of presumptive deference to HB 2146, because the enactment had gone through the proper legislative process and was passed by the General Assembly, the Court declined to do so summarily and instead assessed HB 2146 evenly and through the same rigorous scrutiny, against all the traditional constitutional criteria and measures and on the same plane and footing as the other parties and *amici* and their respective maps.

62. The Court finds it is the General Assembly's prerogative, rather its constitutional mandate, to redraw the state's congressional districts under Article 1, section 4 of the United States Constitution and its related provisions in the Pennsylvania Constitution and state statutes.

63. Following this duty, HB 2146 was passed by the General Assembly, both the House of Representatives and Senate and, as such, constitutes a valid bill that cleared through and was enacted by Pennsylvania's bicameral, legislative branch of government.

64. The Court finds that HB 2146 originated as a plan proposed and drawn by a well-known nonpartisan citizen, Amanda Holt, and, after being made available for public comment, underwent the scrutiny and consideration necessary to reflect policy choices that are bestowed to the General Assembly as the legislative branch of government.

65. Having conducted a separate and independent review of HB 2146, in and of itself and alongside the other plans and maps, the Court credits all the evidence of record

demonstrating the statistical soundness, partisan impartiality, and overall strengths of the figures and methods supporting HB 2146, including the manner and mode through which it was devised, contemplated, and passed by the legislative bodies and branch of the Commonwealth of Pennsylvania.

66. More specifically, the Court finds the methodology and reasoning employed by Dr. Barber to be credible and persuasive. Dr. Barber, who received his Ph.D. in political science from Princeton University in 2014 with emphases in American politics and quantitative methods/statistical analyses, was one of two experts who conducted a simulation analysis that compared proposed maps with a set of 50,000 simulated maps; he sufficiently articulated and identified the variables for the algorithmic creation of simulated maps; the parameters of his simulation analysis included only the traditional redistricting criteria, and not partisan data; and, in separately considering the partisan lean of districts, Dr. Barber analyzed a set of all statewide elections from 2012 to 2020, thereby accounting for a relatively greater amount of elections during a longer timeframe than the other experts.

67. Based on the credible evidence of record, the Court finds that, in dividing 15 counties, 16 municipalities and 9 precincts, HB 2146 performs very well regarding political subdivision splits. The Court especially notes that, while the range of precinct splits in the other submitted plans varies from 9 to 38, HB 2146 splits only 9 precincts, which is the lowest of any plan by a total of 7 precincts. Further, these splits are consistent and on par with the 2018 Remedial Plan.

68. The Court notes and provides evidentiary weight to the fact that HB 2146 places only two incumbents, a Democrat and a Republican, in one district and, when considered with the other competitive proposals, does not relatively seek to obtain an unfair partisan advantage through incumbent pairings.

69. The Court notes and provides great evidentiary weight to the fact that the district compositions of HB 4126 are consistent with Dr. Naughton's credited and unrefuted testimony, in the regards that follow.

70. Dr. Naughton credibly and undisputedly testified that the residents of Bucks County share the same community interests; Bucks County has been wholly contained within a single district for decades; and, therefore, Bucks County should be located entirely within one district.

71. Consistent with Dr. Naughton's recommendation, HB2146, unlike the map proposed by Governor Wolf, does not split Bucks County.

72. Dr. Naughton credibly and undisputedly testified that, regarding whether to combine Philadelphia's surplus population with Bucks County, the communities in Bucks County are more similar to those in Montgomery County and, thus, Bucks County should add population to its district by extending the district line into Montgomery County, rather than Philadelphia County.

73. Dr. Naughton credibly and undisputedly testified and opined that Philadelphia's surplus population would be best combined with a district with maximum commonality; on comparison, Delaware County and Philadelphia County share similar communities of interest; the most sensible plan in this respect would attach surplus Philadelphia residences to Delaware County; and, hence,

Philadelphia County should extend into Delaware County to obtain additional population.

74. Consistent with Dr. Naughton's recommendation, HB 2146 does not connect Philadelphia's surplus population to Bucks County.

75. Consistent with Dr. Naughton's recommendation, HB 2146 connects Philadelphia's surplus population to Delaware County.

76. Furthermore, according to credible evidence of record, although Dr. Barber did not explicitly consider race in his analysis, he determined, as confirmed by other experts in this case, that HB 2146 maintains two minority-majority congressional districts, including 1 district where a majority of the population was comprised of African-Americans, as did the 2018 Remedial Map.

77. Having reviewed the experts' various testimonies and reports, the Court accepts and credits a 0.324 Polsby-Popper score, which is remarkably similar to the 2018 Remedial Plan's Polsby-Popper score of 0.327, to accurately reflect and indicate the compactness measure for HB 2146.

78. Given the credible evidence of record, HB 2146 is predicted to result in 9 Democratic-leaning seats and 8 Republican-leaning seats and, consequently, is more favorable to Democrats than the most likely outcome of 50,000 computer drawn simulated maps that used no partisan data, which resulted in 8 Democratic-leaning seats and 9 Republican-leaning seats.

79. Unlike other maps that leaned Democrat, here, it is the Republican majority in the General Assembly that developed and proposed a plan, HB 2146, that favors Democrats, which ultimately underscores the partisan fairness of the plan.

80. The Court finds, as a result of the credible experts' opinions, reports, and concessions made during cross-examinations, that HB 2146 falls well within the acceptable constitutional ranges and indicia used to measure partisan fairness, in the following particulars.

81. H.B. 2146, when analyzed with districts that have a Democratic vote share of .48 to .52, which is a common range for assessing competitive elections, creates 5 competitive seats, 4 of which lean Democratic, and, ultimately, has more competitive districts than any other plan.

82. H.B. 2146 possesses a mean-median of -0.015, which is very close to zero and virtually unbiased, and demonstrates that HB 2146 is more favorable to Democrats than 85% of the simulation results.

83. H.B. 2146 has an efficiency gap of -0.02, which, again, is very close to zero and virtually unbiased, and, furthermore, demonstrates that Democratic votes are not much more likely than Republican votes to be "wasted" across districts.

84. As a matter of fact, HB 2146 maintains the City of Pittsburgh within one congressional district and, unlike the plans proposed the Governor, the Senate Democratic Caucus, the Draw the Lines *Amici*, and the Ali *Amici*, preserve the shared interests of the communities located within the City.

85. Even without the testimony of Drs. Naughton and Barber, other experts agreed that HB 2146 satisfies the baseline floor for constitutionality under *LWV II*.

86. Based on all of the above, the Court finds and recommends that HB 2146 meets all the neutral, traditional redistricting criteria, as announced in *LWV II*, noting that none of the parties have meaningfully contested or otherwise disputed this fact.

87. Based on these features, facets, and characteristics detailed previously, the Court finds as fact and law that the “neutral criteria” in HB 2146 is paramount to any extraneous considerations. More specifically, the Court finds that there is no credible evidence of record to establish that the neutral criteria have been subordinated, in whole or in part, to another factor or other factors.

88. As such, the Court concludes that HB 2146 passes constitutional muster under the Free and Equal Elections Clause. *See LWV II*, 178 A.3d at 816 (“[W]e find these neutral benchmarks to be particularly suitable as a measure in assessing whether a congressional districting plan dilutes the potency of an individual’s ability to select the congressional representative of his or her choice, and thereby violates the Free and Equal Elections Clause.”).

89. As explained above, HB 2146 was subject to vigorous scrutiny and was passed by a majority of assemblypersons in both chambers of the General Assembly. In Pennsylvania, the General Assembly has 253 members, consisting of a Senate with 50 members and a House of Representatives with 203 members, and it is beyond cavil that the breadth and diversity of the assemblypersons’ uniquely defined constituency reflect and represent, on the whole, the will of the people.

90. Consequently, HB 2146 properly redistricted the Commonwealth into 17 congressional districts in accordance with the constitutional process for lawmaking as vested in the legislative branch, and the Court must find that the decisions and policy choices expressed by the legislative branch are presumptively reasonable and legitimate, absent a showing of an unconstitutional defect or deficiency. *Cf. Upham v. Seamon*, 456 U.S. 37, 41-42.

91. Although Governor Wolf vetoed HB 2146 and that bill never obtained the official status of a duly enacted statute, neither Governor Wolf nor any other party herein has advanced any cognizable legal objection to the constitutionality of the congressional districts contained therein.

92. Admittedly, due to the breakdown or stalemate in the legislative process, and the failure of the General Assembly and Governor to pass a redistricting statute to serve as the boundary lines and composition of congressional districts in the United States House of Representatives, this Court has been directed to assess the evidence and ultimately recommend a map to our Supreme Court to serve that very purpose.

93. In absence of any cognizable legal or constitutional objection to the congressional districts in HB 2146 by the Governor and, without there being any basis upon which the Court could reasonably conclude or recommend that HB 2146 contravenes a constitutional or statutory violation, it is the considered judgment of the Court that the best course of action is to recognize and place appreciable weight to the fact that, on balance, HB 2146 represents “[t]he policies and preference of the state,” *Upham*, 456 U.S. at 41; *see Perry*, 132 S. Ct. at 941, and constitutes a profound depiction of what the voters in the Commonwealth of Pennsylvania desire, through the representative model of our republic and democratic form of government, when compared to the Governor or any other of the parties or their *amici*.

94. The Court believes that in, the context of this case, where it must recommend one map of many, as a matter of necessity, the interests of the Commonwealth as a sovereign state and political entity in its own right, would

best be served by factoring in and considering that HB 2146 is functionally tantamount to the voice and will of the People, which, as a matter of American political theory since its founding, is a device of monumental import and should be honored and respected by all means necessary.

95. Therefore, with all things being relatively equal with regard to the maps that the Court has not previously discounted or recommended not be adopted, the Court respectfully recommends that our highest and most honorable institution in the judicial branch of government, our Supreme Court, recognize and revere the expressed will of the People, and the “policies and preferences of our State,” *Upham*, 456 U.S. at 41; *see Perry*, 132 S. Ct. at 941, as previously stated, and adopt HB 2146 to represent the boundary lines for the Commonwealth of Pennsylvania in its creation of geographically-unique congressional districts so that the citizens of our great Commonwealth are ensured fair and equal representation in the United States House of Representatives.

96. In so recommending, the Court notes that, in times like these, other courts throughout the nation, including the United States Supreme Court, have appeared to promote and head such an admonition. For example, as the United States Supreme Court said in *Perry*: “Experience has shown the difficulty of defining neutral legal principles in this area, for redistricting ordinarily involves criteria and standards that have been weighed and evaluated by the elected branches in the exercise of their political judgment.” 565 U.S. at 941. And, as the United States Supreme Court instructed in another case:

Just as a federal district court, in the context of legislative reapportionment, should **follow the**

policies and preferences of the State, as expressed in statutory and constitutional provisions or in the reapportionment plans proposed by the state legislature, whenever adherence to state policy does not detract from the requirements of the Federal Constitution, we hold that a district court should similarly honor state policies in the context of congressional reapportionment. In fashioning a reapportionment plan or in choosing among plans, **a district court should not pre-empt the legislative task nor intrude upon state policy any more than necessary.**

Upham v. Seamon, 456 U.S. 37, 41-42 (1982) (*per curiam*) (emphasis added). The Court believes that these underlying principles are no less applicable to a state court's examination of the policies and preferences enunciated by a state's legislative branch of government and reflect a proper exercise of judicial restraint in not preempting this otherwise legislative task.

97. For the above-stated reasons, and as its penultimate suggestion, the Court respectfully, yet firmly, **recommends that our Supreme Court adopt and implement HB 2146 as a matter of state constitutional law as it meets all of the traditional criteria of the Free and Equal Elections Clause, and does so in respects even noted by the Governor's expert, as well as the other considerations noted by the courts, it compares favorably to all of the other maps submitted herein, including the 2018 redistricting map, it was drawn by a non-partisan good government citizen, subjected to the scrutiny of the people and duly amended, it creates a Democratic leaning map which underscores its**

partisan fairness and, otherwise, is a reflection of the **“policies and preferences of the State, as expressed in statutory and constitutional provisions or in the reapportionment plans proposed by the state legislature.”** *Perry*, 132 S. Ct. at 941. (underlining added) *See also Upham*, 456 U.S. at 42 (reaffirming that a federal district court “erred when, in choosing between two possible court-ordered plans, it failed to choose that plan which most closely approximated the state-proposed plan” because “[t]he only limits on judicial deference to state apportionment policy [] were the substantive constitutional and statutory standards to which such state plans are subject”); *Donnelly*, 345 F. Supp. at 965 (adopting the legislature’s proposed plan, explaining that “[t]he legislative adoption of [redistricting plan] tips the scales in favor of the plan . . . which provides districts essentially as outlined by the legislature . . .” and observing that the plan had “the added advantage that it is basically the plan adopted by the legislature”).

B. Revised 2022 Primary Election Calendar Recommendations

2022 Pennsylvania Election Schedule

FF1. Under the current election schedule, Pennsylvania’s 2022 General Primary Election, which will include the next congressional primary election, is scheduled for May 17, 2022. See Section 603(a) of the Election Code, 25 P.S. §2753(a); <https://www.dos.pa.gov/VotingElections/CandidatesCommittees/RunningforOffice/Documents/2022%20Important%20Dates.pdf> (last visited Feb. 2, 2022).

FF2. Under the current election schedule, the first day to circulate and file nomination petitions is February 15, 2022. See Section 908 of the Election Code, 25 P.S. §2868;

<https://www.dos.pa.gov/VotingElections/CandidatesCommittees/RunningforOffice/Documents/2022%20Important%20Dates.pdf> (last visited Feb. 2, 2022).

FF3. Under the current election schedule, the last day to circulate and file nomination petitions is March 8, 2022. See Section 977 of the Election Code, 25 P.S. § 2937;

<https://www.dos.pa.gov/VotingElections/CandidatesCommittees/RunningforOffice/Documents/2022%20Important%20Dates.pdf> (last visited Feb. 2, 2022).

FF4. Under the current election schedule, the last day to file objections to nomination petitions is March 15, 2022. See Section 977 of the Election Code, 25 P.S. § 2937;

<https://www.dos.pa.gov/VotingElections/CandidatesCommittees/RunningforOffice/Documents/2022%20Important%20Dates.pdf> (last visited Feb. 2, 2022).

1. Parties' Positions on Revisions to 2022 General Primary Election Calendar

Senate Democratic Caucus Intervenors

FF5. The Senate Democratic Caucus Intervenors suggested that the 2022 General Primary Election schedule “is essentially unworkable at this point in time.” (N.T. at 1025.) They claim “[i]t will disenfranchise millions of Pennsylvania voters and severely prejudice

candidates running for public office if [the schedule] is not modified by the Pennsylvania Supreme Court.” *Id.* at 1025. They point to the fact the Legislative Reapportionment Commission has not yet approved a final legislative redistricting map, the instant litigation regarding a congressional district plan, and this Court’s decision in *McLinko v. Department of State*, __ A.3d __ (Pa. Cmwlth., No. 244, 293 M.D. 2021, filed Jan. 28, 2022), as further support that the 2022 General Primary Election schedule should be adjusted, including postponing the primary. (N.T. at 1025-26.)

House Democratic Caucus Intervenors

FF6. The House Democratic Caucus Intervenors suggested that the Court should follow Judge Craig’s decision in *Mellow*, in which he talked about “the idea of maintaining a single day for the primary as a paramount consideration in order [] to avoid confusion of potentially having a primary for congressional and a primary for everybody else on different timelines with different petitioning periods[.]” (N.T. at 1042.)

Congressional Intervenors

FF7. The Congressional Intervenors indicated their belief that “there is absolutely no reason to move the” 2022 General Primary Election calendar, with respect to the primary itself, as its “premature.” (N.T. at 1055.) However, the Congressional Intervenors do think that the dates for circulating nomination petitions, among other dates, should be moved, and have been in the past, citing the *LWV III* case from 2018. *Id.* at 1055-56.

House Republican Intervenors

FF8. The House Republican Intervenors “would prefer to [sic] a least possible change to any election

calendar[,]” and they “do not believe changing the primary date would be appropriate.” (N.T. at 1068.)

Senate Republican Intervenors

FF9. The Senate Republican Intervenors take the position that any changes to the 2022 General Primary Election calendar could be addressed by the General Assembly, if necessary. (N.T. at 1077-78.) The Senate Republican Intervenors recognized that the Court has changed the dates in the past; however, “they feel that conditions are such that they must change now because of the legal posture of this matter.” *Id.* at 1078. The Senate Republican Intervenors further believe that “changes should be limited only to what’s absolutely necessary[,]” and they do not “support a shortening of the petition circulation and signature gathering window.” *Id.* The Senate Republican Intervenors otherwise took no specific position as to this litigation’s effect on the three pertinent dates that exist on the calendar. *Id.*

Respondents

FF10. The Acting Secretary of the Commonwealth noted at the hearing that the election “calendar situation at the moment is—rather complicated[.]” (N.T. at 1092-93.) Her counsel also informed that it would not be in the people of the Commonwealth’s best interest to have two separate primaries. *Id.* at 1093. As such, the Acting Secretary thinks “it would be preferable to have three weeks between the [] time of the final map, and really by final map we mean including the resolution and the appeal is adopted and the first date in the primary calendar.” She continued, “if we had to we think we could probably do that in two weeks that in two weeks if we could transfer resources. And there are other ways in

which we could condense the existing calendar as well.” *Id.* at 1094-95.

Governor Wolf

FF11. Counsel indicated at the hearing that Governor Wolf “feels very strongly we should not divide the primary and we should end up with a primary date ultimately that will accommodate both redistricting processes that are currently still proceeding.” (N.T. at 1096.)

Gressman Petitioners

FF12. The Gressman Petitioners indicated that they do not believe moving the 2022 General Primary Election is necessary at this point. (N.T. at 1106.) Moreover, the Gressman Petitioners “would defer to the election administrators who are the professionals in that space, but [they] do recognize that there can be some compression of the preprimary schedule.” *Id.*

Carter Petitioners

FF13. The Carter Petitioners do not dispute that “the Court has the authority to change deadlines, including the primary deadline[,]” if necessary. (N.T. at 1118.) However, the Carter Petitioners did not think it was necessary at the time of the hearing. *Id.*

The Court notes and recommends for adoption by the Supreme Court the Congressional Intervenors’ proposed revisions to the 2022 General Primary Election calendar, which suggest February 22, 2022, as the deadline for adopting and implementing a congressional redistricting plan. Specifically, the Congressional Intervenors propose that the following dates be changed: (1) the first day to circulate and file nomination petitions; (2) the last day to circulate and file nomination petitions; and (3) the last day to file objections to nomination petitions. According

to the Congressional Intervenors, using February 22, 2022, as the deadline by which the state judiciary must adopt any congressional reapportionment plan, the Congressional Intervenors assert that it would still be feasible to hold the 2022 General Primary Election on its currently scheduled date of May 17, 2022, which is a similar course of action the Supreme Court followed in *LWV III*. The current and revised election dates appear below:

2. **Current 2022 General Primary Election Schedule**

- First day to circulate/file nomination petitions—Tuesday, February 15, 2022
- Last day to circulate and file nomination petitions—Tuesday, March 8, 2022
- Last day to file objections to nomination petitions—Tuesday, March 15, 2022
- 2022 General Primary Election—Tuesday, May 17, 2022

3. **Proposed REVISED 2022 General Primary Election Schedule**

- First day to circulate/file nomination petitions—Tuesday, March 1, 2022
- Last day to circulate and file nomination petitions—Tuesday, March 15, 2022
- Last day to file objections to nomination petitions—Tuesday, March 22, 2022
- 2022 General Primary Election—Tuesday, May 17, 2022

The Court notes that the first two proposed revised dates, appearing immediately above, reflect a shift of exactly two weeks from the originally scheduled

deadlines to the proposed revised deadlines. The third proposed revised date listed immediately above reflects a shift of exactly one week from the originally scheduled objection deadlines. The Court further notes that the above dates reflect the exact schedule adopted by the Supreme Court in *LWV III*, albeit two years later.

However, in light of the changed circumstances of this litigation prompted by the Supreme Court's February 2, 2022 order, granting Petitioners' Emergency Application for Extraordinary Relief and invoking its extraordinary jurisdiction, designating the undersigned as a Special Master in this matter and directing the filing of a Report and Recommendation, and further directing, *inter alia*, that oral argument on any exceptions filed to the Special Master's Report is scheduled to be held on February 18, 2022, before the Supreme Court, this Court recognizes that further and/or different changes to the election calendar than those recommended above may be necessary under the circumstances.⁴⁹

s/ Patricia A. McCullough
PATRICIA A. McCULLOUGH,
Judge of the Commonwealth
Court of Pennsylvania
Appointed as Special Master

49. *Amicus* Participants Voters of the Commonwealth's Application for Leave to File Responsive Expert Report, filed on January 26, 2022, is denied. *See* 1/14/2022 Cmwlt. Ct. Order. This Court additionally notes that it will not consider the *Amici Curiae* Brief of NAACP Philadelphia Branch and Black Clergy of Philadelphia & Vicinity in Support of Senate Democratic Caucus' Proposed Redistricting Plan 2, filed on January 31, 2022, which was after the evidentiary hearing in this matter.

IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

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Lee Cassanelli, Lynn
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Petitioners,

v.

**Lehigh M. Chapman, in
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Pennsylvania Bureau of
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Notaries,**

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No. 7 MM 2022

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Respondents

No. 7 MM 2022

**EMERGENCY APPLICATION FOR INTERVENTION
OF PROPOSED INTERVENOR TEDDY DANIELS**

Proposed intervenor, Teddy Daniels, files this emergency application to intervene as a petitioner in this ac-

tion and, if the Court grants his application to intervene, requests that he be granted leave to file the attached petition for review (Exhibit A) and application for reconsideration of this Court's order of February 9, 2022 (Exhibit B) and states as follows:

1. Proposed intervenor, Teddy Daniels, is a Republican candidate for Lieutenant Governor of Pennsylvania and a registered Republican voter from Wayne County.

2. On February 9, 2022, this Court entered an order that suspended the General Primary Election Calendar for the Commonwealth of Pennsylvania.

3. Mr. Daniels has a substantial, direct, and immediate interest in the outcome of this litigation as a candidate and a voter.

4. A candidate who wishes to appear on the primary ballot in Pennsylvania must file a nomination petition signed by members of his party who are registered voters. 25 P.S. § 2867.

5. The Election Code provides that the first day that candidates may begin circulating nominating petitions is February 15, 2022. The final day to obtain signatures is March 8, 2022. 25 P.S. § 2868.

6. The Elections Code requires the Commonwealth's primary elections to be held on May 17, 2022. 25 P.S. § 2753.

7. As a candidate for Lieutenant Governor, Mr. Daniels must obtain at least 1,000 signatures from registered Republican voters, with at least 100 signatures coming from each of at least five counties. 25 P.S. § 2872.1(4).

8. A registered voter may sign only one petition per candidate per office. 25 P.S. § 2868.

9. There are no fewer than 9 declared Republican candidates for Lieutenant Governor, all of whom will be

competing with Mr. Daniels to obtain the minimum number of valid signatures to appear on the Republican primary ballot.

10. To accomplish the task of obtaining the minimum number of valid signatures to appear on the May 2022 primary ballot, Mr. Daniels's campaign had prepared and trained several hundred volunteers to assist his campaign in gathering signatures from registered Republican voters beginning promptly on February 15, 2022.

11. But this Court's February 9, 2022 order suspending the General Primary Election Calendar throws that plan into disarray.

12. Mr. Daniels does not know when he can start circulating nomination petitions or how long he will have to circulate the petitions to obtain the necessary number of signatures.

13. He, therefore, does not know how many volunteers he needs, how long he will need them, or where to deploy them to efficiently gather the necessary number of signatures.

14. Moreover, Mr. Daniels will be fighting with other candidates to obtain signatures from registered Republican voters.

15. The Order also affects Mr. Daniels because it will compress the time for him to campaign as an official candidate.

16. Before the Court's order of February 9, 2022, if Mr. Daniels obtained the necessary signatures to appear on the primary ballot as a candidate for Lieutenant Governor, he would have at least nine weeks to campaign, solicit votes from Republican voters, and raise funds.

17. Depending on when this Court's temporary suspension is lifted, it could leave Mr. Daniels with only a handful of weeks, if not mere days, to campaign.

18. Even a modestly truncated campaign schedule will adversely affect Mr. Daniels because in a competitive primary, such as that for the 2022 Republican Lieutenant Governor nomination, each day counts.

19. In sum, Mr. Daniels cannot effectively plan for the primary election, whenever that may occur.

20. This action and this Court's order of February 9, 2022, also has a substantial, direct, and immediate effect on Mr. Daniels's interests as a voter in several ways.

21. Under 2 U.S.C. § 2a(c)(5), Mr. Daniels is entitled to cast a ballot for all 17 of the state's representatives in the U.S. House if the General Assembly fails to enact a new congressional map in time for the 2022 elections. If the Court grants the petitioners' requested relief, it will deprive Mr. Daniels of his entitlement to vote in all 17 congressional races by refusing to hold at-large elections as required by 2 U.S.C. § 2a(c)(5). This injury is casually related to the petitioners' requested relief in this case.

22. Under Pa. R. Civ. P. 2327:

At any time during the pendency of an action, a person not a party thereto ***shall be permitted*** to intervene therein, subject to these rules if . . .

(4) the determination of such action may affect any legally enforceable interest of such person whether or not such person may be bound by a judgment in the action.

Pa. R. Civ. P. 2327(4) (emphasis added).

23. “[A]n application for intervention may be refused, if (1) the claim or defense of the petitioner is not in subordination to and in recognition of the propriety of the action; or (2) the interest of the petitioner is already adequately represented; or (3) the petitioner has unduly delayed in making application for intervention or the intervention will unduly delay, embarrass or prejudice the trial or the adjudication of the rights of the parties.” Pa. R. Civ. P. 2329.

24. “Considering Rules 2327 and 2329 together, the effect of Rule 2329 is that if the petitioner is a person within one of the classes described in Rule 2327, the allowance of intervention is mandatory, not discretionary, unless one of the grounds for refusal under Rule 2329 is present.” *Larock v. Sugarloaf Twp. Zoning Board*, 740 A.2d 308, 313 (Pa. Commonwealth, 1999).

25. Mr. Daniels has a legally recognized interest in this matter and his rights as a candidate are affected by the Court’s order of February 9, 2022.

26. Mr. Daniels has a legally recognized right as a voter to a statewide Congressional election under 2 U.S.C. § 2a(c)(5) that will be affected if this Court grants petitioners’ relief and draws or selects a Congressional map of its own.

27. Mr. Daniels also has a legally recognized right as a voter under Art. I, § 4, cl. 1 of the United States Constitution to have the Commonwealth’s congressional map determined by the General Assembly.

28. Mr. Daniels’s interests are not adequately represented by any current party or intervenor to the action.

29. No current party or intervenor is a candidate for office that is affected by the Court’s order of February 9,

2022, which suspends the General Primary Election calendar.

30. No current party or intervenor is a candidate for the Republican nomination for Lieutenant Governor and, therefore, is not required to collect 1,000 signatures with at least 100 each coming from five or more counties.

31. No current party or intervenor has asked or is asking this Court to reconsider its order of February 9, 2022, which purports to suspend the General Primary Election calendar. Nor is any current party or intervenor arguing that the Court's order of February 9, 2022, violates the Elections Clause, which vests "the Legislature" of Pennsylvania with the sole authority for prescribing the "times, places, and manner" of electing Senators and Representatives. *See* U.S. Const. art. I, § 4, cl. 1 ("The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations.").

32. No current party or intervenor is asking this Court to enforce Article I, § 4, clause 1 of the United States Constitution and 2 U.S.C. § 2a(c)(5) by ordering state officials to hold at-large elections for Pennsylvania's congressional delegation unless and until the General Assembly enacts a new congressional map.

33. Mr. Daniels has not unduly delayed in seeking intervention.

34. It is true that a previous order from the Commonwealth Court required all petitions for intervention to be filed by December 31, 2021. *See* Commonwealth Court Order, 12/20/21.

35. But Mr. Daniels had no legally cognizable interest that was affected by this action on or before December 31, 2021.

36. First, Mr. Daniels’s legal interests as a candidate were not affected until February 9, 2022, when this Court entered an order suspending the General Primary Election Calendar.

37. Second, Mr. Daniels’s legal interest as a voter did not arise until January 26, 2021, when Governor Wolf vetoed HB 2541, which was a proposed new Congressional map passed by the General Assembly.

38. Finally, Mr. Daniels’s legal interest in ensuring that state officials hold at-large elections, as required by 2 U.S.C. § 2a(c)(5), did not arise until this Court determined that it would be necessary to suspend the General Primary Election Calendar to allow for the imposition of a court-drawn map. *See Branch v. Smith*, 538 U.S. 254, 273–76 (2003) (plurality opinion of Scalia, J.) (holding that 2 U.S.C. § 2a(c) is not triggered until “the election is so imminent that no entity competent to complete redistricting pursuant to state law . . . is able to do so without disrupting the election process”).

WHEREFORE, proposed intervenor, Teddy Daniels, respectfully requests that the Court permit him to intervene as a petitioner in this action and file the attached petition for review and application for reconsideration of this Court’s order of February 9, 2022.

405a

Respectfully submitted.

WALTER S. ZIMOLONG III	<u>/s/ Jonathan F. Mitchell</u>
Pennsylvania Bar No. 89151	JONATHAN F. MITCHELL
Zimolong LLC	Pennsylvania Bar No. 91505
Post Office Box 552	Mitchell Law PLLC
Villanova, Pennsylvania 19085	111 Congress Avenue,
(215) 665-0842	Suite 400
wally@zimolonglaw.com	Austin, Texas 78701
	(512) 686-3940 (phone)
	(512) 686-3941 (fax)
	jonathan@mitchell.law

Dated: February 11, 2022

Counsel for Intervenor
Teddy Daniels

VERIFICATION

I, Teddy Daniels, verify that that the facts contained in the foregoing are true and correct based upon my knowledge, information, and belief. However, while the facts are true and correct based upon my knowledge, information, and belief, the words contained in the foregoing are those of counsel and not mine. I understand that statements herein are made subject to the penalties set forth in 18 Pa. C.S.A. § 4904 relating to unsworn falsification to authorities.

Dated: May 23, 2022

/s/ Teddy Daniels
TEDDY DANIELS

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[PROPOSED] ORDER

AND NOW, this _____ day of February 2022, upon consideration of the Application to Intervene of Teddy Daniels and any response in opposition, it is hereby **ORDERED** that the Application is **GRANTED** and Teddy Daniels is permitted to intervene as a petitioner in this action.

IT IS FURTHER ORDERED that Mr. Daniels is granted leave to file the Petition for Review, attached at Exhibit A to his Application, and Application for Reconsideration of this Court's Order dated February 9, 2022.

BY THE COURT:

IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

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Roseanne Milazzo, Burt
Siegel, Susan Cassanelli,
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Guttman, Maya Fonkeu,
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Balchunis, Tom DeWall,
Stephanie McNulty, and
Janet Temin,**

Petitioners,

v.

**Lehigh M. Chapman, in
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capacity as Director for the
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Respondents

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NOTICE TO PLEAD

To: Commonwealth of Pennsylvania, Department of State, Leigh M. Chapman, Acting Secretary of the Commonwealth of Pennsylvania, and Jessica Mathis, Director for the Pennsylvania Bureau of Election Services and Notaries

You are hereby notified to file a written response to the enclosed amended petition for review within thirty (30) days from service hereof or a judgment may be entered against you.

Respectfully submitted.

February 11, 2022

/s/ Walter S. Zimolong III, Esquire

Walter S. Zimolong III, Esq.

Pennsylvania Bar No. 89151

Zimolong LLC

Post Office Box 552

Villanova, Pennsylvania 19085

(215) 665-0842

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IN THE SUPREME COURT OF PENNSYLVANIA
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**INTERVENOR TEDDY DANIELS'S PETITION FOR
REVIEW**

The state of Pennsylvania lost a congressional seat in
the most recent decennial census. The Pennsylvania leg-

islature must therefore draw a new congressional map for the 2022 elections. Under the U.S. Constitution, “the Legislature” of each state is charged with prescribing the “times, places, and manner” of electing Senators and Representatives, although Congress may enact laws to “make or alter such regulations.” *See* U.S. Const. art. I, § 4, cl. 1 (“The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations.”). That means the state legislature must either enact a new congressional map or delegate its map-creation authority to another institution. *See, e.g., Arizona State Legislature v. Arizona Independent Redistricting Commission*, 576 U.S. 787 (2015).

The Pennsylvania legislature, however, has not yet enacted a congressional map for the 2022 elections. Although the General Assembly passed a new congressional map earlier this year, it was vetoed by Governor Wolf. *See Smiley v. Holm*, 285 U.S. 355 (1932) (redistricting legislation that is vetoed by the governor is not “prescribed . . . by the Legislature” within the meaning of the Elections Clause). In the meantime, the petitioners in these cases have repaired to state court in the hopes of inducing the state judiciary to impose a congressional map for the 2022 elections. But any congressional map imposed by the state judiciary would violate the Elections Clause, which allows only “the Legislature”—and not the judiciary—to “prescribe” the manner of electing representatives. The state judiciary must therefore wait for the General Assembly to act.

If the General Assembly fails to enact a new congressional map in time for the 2022 elections, then the reme-

dy is set forth in 2 U.S.C. § 2a(c): The state’s congressional delegation shall be elected at-large:

Until a State is redistricted in the manner provided by the law thereof after any apportionment, the Representatives to which such State is entitled under such apportionment shall be elected in the following manner: . . . (5) if there is a decrease in the number of Representatives and the number of districts in such State exceeds such decreased number of Representatives, they shall be elected from the State at large.

2 U.S.C. § 2a(c). The Elections Clause requires the state judiciary to implement this congressional instruction if the General Assembly fails to enact a new congressional map in time for the 2022 elections. Congress, in enacting 2 U.S.C. § 2a(c)(5), has “ma[de] . . . Regulations” that govern the election of representatives pursuant to its authority under the Elections Clause, and the state judiciary is constitutionally obligated to follow this congressional command rather than impose a map of its own creation.

On February 9, 2022, the Supreme Court of Pennsylvania issued an order that purports to “suspend” the General Primary Election calendar codified in the Pennsylvania election statutes. This order is flatly unconstitutional, because the Elections Clause provides that “the Legislature”—and not the judiciary—shall prescribe the “times, places, and manner” of electing Senators and Representatives. And if the state supreme court has determined that there is no longer time for to draw a congressional map given the deadlines in the General Primary Election calendar, then it *must* order at-large elec-

tions, as required by 2 U.S.C. § 2a(c)(5). *See Branch v. Smith*, 538 U.S. 254, 273–76 (2003) (plurality opinion of Scalia, J.) (holding that 2 U.S.C. § 2a(c) is triggered when “the election is so imminent that no entity competent to complete redistricting pursuant to state law . . . is able to do so without disrupting the election process”). A state court cannot “suspend” a primary election that the legislature has scheduled, and it cannot remedy the legislature’s failure to enact a new congressional map by disrupting the election process rather than ordering at-large elections under 2 U.S.C. § 2a(c)(5).

JURISDICTION AND VENUE

1. The Supreme Court has original jurisdiction over the petition by its order of February 2, 2022, where it exercised extraordinary jurisdiction under 42 Pa.C.S. § 726.

PARTIES

2. Each of the petitioners in the two consolidated cases is a registered voter in the Commonwealth of Pennsylvania.

3. Respondent Leigh M. Chapman is Acting Secretary of the Commonwealth of Pennsylvania. She may be served at 302 North Office Building, 401 North Street Harrisburg, Pennsylvania 17120. Acting Secretary Chapman is sued in her official capacity.

4. Respondent Jessica Mathis is Director for the Pennsylvania Bureau of Election Services and Notaries. She may be served at 210 North Office Building, 401 North Street Harrisburg, Pennsylvania 17120. Director Mathis is sued in her official capacity.

5. Intervenor Teddy Daniels is a resident of Wayne County. He is a registered voter in Pennsylvania and a

Republican candidate for Lieutenant Governor of Pennsylvania.

FACTS

6. Before the 2020 census, the state of Pennsylvania had 18 seats in the U.S. House of Representatives.

7. The results of the 2020 census left Pennsylvania with 17 seats in the U.S. House of Representatives, one less than before. *See* U.S. Dept. of Commerce, Table 1. Apportionment Population and Number of Representatives by State: 2020 Census.

8. Under the Elections Clause of the U.S. Constitution, “the Legislature” of Pennsylvania must prescribe the “manner” by which its representatives are elected, while Congress “may at any time by Law make or alter such Regulations.” U.S. Const. art. I, § 4, cl. 1; *see also id.* (“The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations.”). The powers conferred by the Elections Clause include the prerogative to draw a new congressional map in response to the decennial census.

9. On August 20, 2021, the census-block results of the 2020 Census were delivered to Governor Wolf and the leaders of the General Assembly, which allowed the legislature to begin the process of drawing a new congressional map.

10. On December 15, 2021, the House State Government Committee approved a new congressional map (HB 2541), in a 14-11 vote. The General Assembly eventually passed HB 2541, but it was vetoed by Governor Wolf on January 26, 2022.

11. On December 17, 2021, eighteen voters filed a lawsuit in the Commonwealth Court of Pennsylvania, asking the state judiciary to impose a map for the 2022 congressional elections. Later that day, a separate group of twelve voters filed a similar lawsuit in the Commonwealth Court.

12. The Commonwealth Court consolidated the two redistricting cases on December 20, 2021, and the cases were assigned to Judge Patricia McCullough.

13. On December 21, 2021, the petitioners in these redistricting cases filed an application for extraordinary relief in the Supreme Court of Pennsylvania, asking the state supreme court to exercise extraordinary jurisdiction over the case.

14. On January 10, 2022, the state supreme court declined to invoke its extraordinary jurisdiction and denied the petitioners' application for extraordinary relief without prejudice.

15. On January 14, 2022, Judge McCullough ordered all parties and intervenors to submit proposed maps and expert reports by January 24, 2022. Judge McCullough also scheduled an evidentiary hearing for January 27 and 28, 2022, and announced that if the General Assembly "has not produced a new congressional map by January 30, 2022, the Court shall proceed to issue an opinion based on the hearing and evidence presented by the Parties."

16. On January 26, 2022, Governor Wolf vetoed HB 2541, a congressional map that had been approved by the General Assembly.

17. On January 27 and 28, 2022, Judge McCullough presided over the evidentiary hearings that had been scheduled in her order of January 14, 2022.

18. On January 29, 2022, the petitioners in these cases filed a new “emergency application” with the Supreme Court of Pennsylvania, asking the state supreme court to immediately exercise “extraordinary jurisdiction” and take over the redistricting litigation from Judge McCullough.

19. On February 1, 2022, Judge McCullough announced that her ruling in these redistricting cases will issue no later than February 4, 2022.

20. On February 2, 2022, before Judge McCullough had issued her ruling, the Pennsylvania Supreme Court granted the application to exercise extraordinary jurisdiction in a 5-2 vote.

21. The state supreme court’s order designated Judge McCullough to serve as a “Special Master,” and instructed her to file with the Supreme Court of Pennsylvania, on or before February 7, 2022, “a report containing proposed findings of fact and conclusions of law supporting her recommendation of a redistricting plan from those submitted to the Special Master, along with a proposed revision to the 2022 election schedule/calendar.”

22. Justice Mundy and Justice Brobson dissented from the state supreme court’s order granting extraordinary relief and exercising extraordinary jurisdiction.

23. On February 7, 2022, Judge McCullough issued her findings and recommended that the map approved by the General Assembly (HB 2541) be used as the congressional map.

24. The state supreme court has allowed any party or intervenor to file exceptions to Judge McCullough’s findings by February 14, 2022, and the state supreme

court has scheduled oral argument for February 18, 2022.

25. On February 9, 2022, the state supreme court issued an order *sua sponte* that purports to “suspend” the General Primary Election calendar codified in 25 Pa. Stat. §§ 2868 and 2873. No litigant had asked the state supreme court to suspend the primary-election calendar or issue an order purporting to do so.

**FACTS REGARDING PROPOSED INTERVENOR
TEDDY DANIELS**

26. Proposed intervenor Teddy Daniels is a Republican candidate for Lieutenant Governor of Pennsylvania and a registered Republican voter from Wayne County.

27. A candidate who wishes to appear on the primary ballot in Pennsylvania must file a nomination petition signed by members of his party who are registered voters. *See* 25 Pa. Stat. § 2867.

28. The Pennsylvania Election Code provides that the first day that candidates may begin circulating nominating petitions is February 15, 2022. The final day to obtain signatures is March 8, 2022. 25 Pa. Stat. § 2868.

29. The Pennsylvania Election Code requires the state’s primary elections to be held on May 17, 2022.

30. As a candidate for Lieutenant Governor, Mr. Daniels must obtain at least 1,000 signatures from registered Republican voters, with at least 100 signatures coming from each of at least five counties. 25 Pa. Stat. § 2872.1(4).

31. A registered voter may sign only one petition per candidate per office. 25 Pa. Stat. § 2868.

32. There are no fewer than 9 declared Republican candidates for Lieutenant Governor, all of whom will be competing with Mr. Daniels to obtain the minimum num-

ber of valid signatures to appear on the Republican primary ballot.

33. To accomplish the task of obtaining the minimum number of valid signatures to appear on the May 2022 primary ballot, Mr. Daniels's campaign had prepared and trained several hundred volunteers to gather signatures from registered Republican voters beginning promptly on February 15, 2022.

34. But the state supreme court's order of February 9, 2022, which purports to suspend the General Primary Election Calendar, has thrown that plan into disarray.

35. Mr. Daniels does not know when he can start circulating nomination petitions or how long he will have to circulate the petitions to obtain the necessary number of signatures.

36. He, therefore, does not know how many volunteers he needs, how long he will need them, or where to deploy them to efficiently gather the necessary number of signatures.

37. Moreover, Mr. Daniels will be competing with other candidates to obtain signatures from registered Republican voters.

38. The Court's order of February 9, 2022, also affects Mr. Daniels because it will compress the time for him to campaign as an official candidate.

39. Before this Court's order of February 9, 2022, if Mr. Daniels obtained the necessary signatures to appear on the primary ballot as a candidate for Lieutenant Governor, he would have at least nine weeks to campaign, solicit votes from Republican voters, and raise funds.

40. Depending on when the "suspension" imposed by this Court is lifted, it could leave Mr. Daniels with only a handful of weeks, if not mere days, to campaign.

41. Even a modestly truncated campaign schedule will adversely affect Mr. Daniels because in a competitive primary, such as that for the 2022 Republican Lieutenant Governor nomination, each day counts.

42. In sum, Mr. Daniels cannot effectively plan for the primary election, whenever that may occur.

43. The petitioners' lawsuit and the state supreme court's order of February 9, 2022, also have a substantial, direct, and immediate effect on Mr. Daniels's interests as a voter.

44. Under 2 U.S.C. § 2a(c)(5), Mr. Daniels is entitled to cast a ballot for all 17 of the state's representatives in the U.S. House if the General Assembly fails to enact a new congressional map in time for the 2022 elections. If the state judiciary grants the petitioners' requested relief, it will deprive Mr. Daniels of his entitlement to vote in all 17 congressional races by refusing to hold at-large elections as required by 2 U.S.C. § 2a(c)(5). This injury is casually related to the petitioners' requested relief in this case.

CLAIM FOR RELIEF

45. The Elections Clause provides:

The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State *by the Legislature thereof*; but the Congress may at any time by Law make or alter such Regulations, except as to the Places of choosing Senators.

U.S. Const. art. 1, § 4, cl. 1 (emphasis added).

46. The Elections Clause forbids the judiciary of this state to create or impose a congressional map, because the state judiciary is not part of "the Legislature," and

the General Assembly has not delegated any of its map-drawing powers to the state judiciary or authorized the state courts to involve themselves in the redistricting process.

47. The Elections Clause also forbids the state judiciary to defy the requirements of 2 U.S.C. § 2a(c)(5), which requires Pennsylvania to hold at-large elections if the General Assembly fails to enact a new congressional map in time for the 2022 primary election. *See* U.S. Const. art. 1, § 4, cl. 1 (allowing Congress to “make or alter” regulations for electing representatives).

48. The Court should enter declaratory and injunctive relief that requires the respondents to hold at-large elections for the Pennsylvania congressional delegation, unless and until the General Assembly enacts a new congressional map.

49. The Court should also vacate its order of February 9, 2022, which purports to “suspend” the General Primary Election Calendar established by the legislature of Pennsylvania. The Court’s order of February 9, 2022, is a violation of the Elections Clause.

50. Finally, the courts should reject all of the claims asserted by the petitioners, as the relief that they request from the state judiciary violates both the Elections Clause and 2 U.S.C. § 2a(c)(5).

DEMAND FOR RELIEF

51. Mr. Daniels respectfully requests that the court:
- a. declare that the Elections Clause and 2 U.S.C. § 2a(c)(5) require the respondents to hold at-large elections for the Pennsylvania congressional delegation, unless and until the General Assembly enacts a new congressional map;

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- b. enter an injunction that compels the respondents to hold at-large elections for the Pennsylvania congressional delegation, unless and until the General Assembly enacts a new congressional map;
- c. vacate the order of February 9, 2022, which purports to “suspend” the General Primary Election Calendar established by the legislature of Pennsylvania;
- d. grant all other relief that the Court may deem just, proper, or equitable.

Respectfully submitted.

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Dated: February 11, 2022

*Counsel for Intervenor
Teddy Daniels*

IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

**Carol Ann Carter, Monica
Parrilla, Rebecca
Poyourow, William Tung,
Roseanne Milazzo, Burt
Siegel, Susan Cassanelli,
Lee Cassanelli, Lynn
Wachman, Michael
Guttman, Maya Fonkeu,
Brady Hill, Mary Ellen
Balchunis, Tom DeWall,
Stephanie McNulty, and
Janet Temin,**

Petitioners,

v.

Lehigh M. Chapman, in
her official capacity as
Acting Secretary of the
Commonwealth; **Jessica
Mathis**, in her official
capacity as Director for the
Pennsylvania Bureau of
Election Services and
Notaries,

Respondents

No. 7 MM 2022

**Philip T. Gressman;
Ron Y. Donagi;
Kristopher R. Tapp;
Pamela Gorkin; David
P. Marsh; James L.
Rosenberger; Amy
Myers; Eugene Boman;
Gary Gordon; Liz
McMahon; Timothy G.
Feeman; and Garth
Isaak,**

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No. 7 MM 2022

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**APPLICATION TO RECONSIDER AND VACATE
ORDER OF FEBRUARY 9, 2022**

On February 9, 2022, this Court issued an order that purports to “suspend” the General Primary Election calendar codified in the Pennsylvania election statutes. The Court issued this order *sua sponte* without asking for briefing or argument on whether it has the authority to issue an order of this sort.

Intervenor Teddy Daniels respectfully asks the Court to reconsider and rescind its order of February 9, 2022. Reconsideration is appropriate to correct a clear error and prevent a manifest injustice from occurring. *See Ellenbogen v. PNC Bank N.A.*, 731 A.2d 175 (Pa. Super. 1999); *Scartelli Gen. Contractors Inc. v. Selective Way Ins. Co.*, No. 2006 CV 4193, 2008 WL 5575968 (Pa. Com. Pl. Sept. 9, 2008); *Bada v. Comcast Corp.*, 2015 WL 6675399 (Pa. Super. Ct. Aug. 21, 2015) (unreported opinion). The Court’s order of February 9, 2022, is a clear error because it violates the Elections Clause of the U.S. Constitution, which allows only “the Legislature” of this State to “prescribe” the manner of electing representatives. *See* U.S. Const. art. I, § 4, cl. 1 (“The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof; but the Congress may at any time by Law make or alter such Regulations.”). The Court’s order of February 9, 2022, also violates 2 U.S.C. § 2a(c), which requires Pennsylvania to elect its congressional delegation at large if there is insufficient time to draw a congressional map given the deadlines in the General Primary Election calendar. *See* 2 U.S.C. § 2a(c)(5); *Branch v. Smith*, 538 U.S. 254, 273–76 (2003) (plurality opinion of Scalia, J.). The Court’s order further creates

an injustice to Mr. Daniels and other candidates for office because their campaigns remain in limbo during the suspension and they may only have days to campaign once the suspension is lifted.

I. The Court’s Attempt To “Suspend” The General Primary Election Calendar Violates The Elections Clause

The Elections Clause provides:

The Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State *by the Legislature thereof*; but the Congress may at any time by Law make or alter such Regulations, except as to the Places of chusing Senators.

U.S. Const. art. 1, § 4, cl. 1 (emphasis added). The state judiciary is not part of “the Legislature,” so it cannot “suspend” the congressional primary election calendar that the legislature has “prescribed”—and it cannot replace the legislatively enacted primary calendar with a calendar of its own choosing. Nor is there any statute that purports to delegate the General Assembly’s power to prescribe the deadlines for congressional primary elections to the state judiciary or any other institution of government. *See, e.g., Arizona State Legislature v. Arizona Independent Redistricting Commission*, 576 U.S. 787 (2015). The Court should immediately rescind its unconstitutional order of February 9, 2022, and enforce the General Primary Election calendar that “the Legislature” has “prescribed.” U.S. Const. art. 1, § 4, cl. 1.

II. 2 U.S.C. § 2a(C) Requires This Court To Order At-Large Elections, Rather Than “Suspend” The General Primary Election Calendar, If There Is Insufficient Time To Draw A Congressional Map In Time For Primary Elections

If there is insufficient time to create a new congressional map in time for the 2022 primary elections, then the remedy is set forth in 2 U.S.C. § 2a(c): The state’s congressional delegation shall be elected at-large. 2 U.S.C. § 2a(c) provides:

Until a State is redistricted in the manner provided by the law thereof after any apportionment, the Representatives to which such State is entitled under such apportionment shall be elected in the following manner: . . . (5) if there is a decrease in the number of Representatives and the number of districts in such State exceeds such decreased number of Representatives, they shall be elected from the State at large.

2 U.S.C. § 2a(c). The State has not yet been “redistricted in the manner provided by the law thereof,” because the General Assembly has not enacted a new congressional map and no court has imposed one. And if this Court determines that there is no longer time to draw a new congressional map given the deadlines in the General Primary Election calendar, then it must order at-large elections, as required by 2 U.S.C. § 2a(c)(5), rather than suspend or delay the primary-election process. *See Branch v. Smith*, 538 U.S. 254, 273–76 (2003) (plurality opinion of Scalia, J.) (holding that 2 U.S.C. § 2a(c) is triggered when “the election is so imminent that no entity compe-

tent to complete redistricting pursuant to state law . . . is able to do so without disrupting the election process”).

The Elections Clause also requires the state judiciary to implement the requirements of 2 U.S.C. § 2a(c)(5) if there is insufficient time to draw a new congressional map while accommodating the deadlines prescribed in the General Primary Election calendar. Congress, in enacting 2 U.S.C. § 2a(c)(5), has “ma[de] . . . Regulations” that govern the election of representatives pursuant to its authority under the Elections Clause, and the state judiciary is constitutionally obligated to follow this congressional command rather than “suspend” the legislatively prescribed primary calendar. This Court cannot “suspend” or alter a congressional primary calendar that the legislature has enacted, and it cannot remedy the failure to enact a new congressional map by disrupting the election process rather than ordering at-large elections under 2 U.S.C. § 2a(c)(5).

CONCLUSION

The Court should reconsider and rescind its unconstitutional order of February 9, 2022.

Respectfully submitted.

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*Counsel for Intervenor
Teddy Daniels*

Dated: February 11, 2022

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[PROPOSED] ORDER

AND NOW, this ___ day of February 2022, upon
considering the application for reconsideration of this

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Court's Order dated February 9, 2022, and any responses, it is ORDERED that the application is GRANTED and the Court's Order dated February 9, 2022, is VACATED.

BY THE COURT:
