IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF PENNSYLVANIA

JACOB CORMAN, in his official capacity as Majority Leader of the Pennsylvania Senate, MICHAEL FOLMER, in his official capacity as Chairman of the Pennsylvania Senate State Government Committee, LOU BARLETTA, RYAN COSTELLO, MIKE KELLY, TOM MARINO, SCOTT PERRY, KEITH ROTHFUS, LLOYD SMUCKER, and GLENN THOMPSON, Plaintiffs, v. ROBERT TORRES, in his official capacity as Acting Secretary of the Commonwealth, and JONATHAN M. MARKS, in his official capacity as Commissioner of the Bureau of Commissions, Elections, and Legislation, Defendants, and LEAGUE OF WOMEN VOTERS OF PENNSYLVANIA; CARMEN FEBO SAN MIGUEL; JAMES SOLOMON; JOHN GREINER; JOHN CAPOWSKI; GRETCHEN BRANDT; THOMAS RENTSCHLER; MARY ELIZABETH LAWN; LISA ISAACS; DON LANCASTER; JORDI COMAS; ROBERT SMITH; WILLIAM MARX; RICHARD MANTELL; PRISCILLA MCNULTY; THOMAS ULRICH; ROBERT MCKINSTRY; MARK LICHTY; and LORRAINE PETROSKY, (Proposed) Intervenor-Defendants.	Civil Action No. 1:18-cv-00443 Judge Jordan Chief Judge Conner Judge Simandle ELECTRONICALLY FILED

PROPOSED INTERVENORS' REPLY BRIEF IN SUPPORT OF
MOTION TO INTERVENE AS DEFENDANTS

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Proposed Intervenors the League of Women Voters of Pennsylvania and 18 individual Pennsylvania voters, who were plaintiffs in the Pennsylvania state court action challenged here, respectfully submit this reply brief in support of their motion to intervene as defendants under Federal Rule of Civil Procedure 24.[1]

I. Proposed Intervenors Are Entitled To Intervene as of Right

Plaintiffs do not dispute that Proposed Intervenors satisfy the first requirement for intervention as of right under Rule 24(a)(2): their motion to intervene was timely filed. Nor do Plaintiffs contend that intervention will cause any delay here. Instead, Plaintiffs remarkably contend that Proposed Intervenors lack a cognizable interest in this action, that the relief Plaintiffs request would not impact Proposed Intervenors, and that Proposed Intervenors' interests are adequately represented by the named defendants. Wrong on each score.

A. Proposed Intervenors' Interest in this Action Is Overwhelming and the Requested Relief Would Directly Impact Their Rights

Plaintiffs' argument that Proposed Intervenors lack any "cognizable unique legal interest involved in this litigation" is wrong. ECF No. 31 at 8. Proposed Intervenors brought the underlying state court action and obtained a judgment and

[1] In a footnote, Plaintiffs point out that the League of Women Voters of Pennsylvania was dismissed from the state court action, ECF No. 31 at 8 n.8, but that dismissal was based on Pennsylvania law of organizational standing, which is far more restrictive than federal law of organizational standing. In any event, the 18 individual Pennsylvania voters who also seek to intervene as defendants here were named plaintiffs throughout the entirety of the state court action.

remedy from the state court. Now, Plaintiffs seek to undo all of that by means of this federal court collateral attack on the state court's judgment and remedy. Proposed Intervenors could not have a greater legal interest in this case.

Plaintiffs assert that "the relief sought in this action is distinct from the relief sought in the [state court] action, wherein [Proposed Intervenors] sought the invalidation of the 2011 Plan." *Id.* at 4. But that is a distinction without a difference, as Plaintiffs expressly ask this Court to grant injunctive relief *reinstituting* the very same 2011 Plan that the Pennsylvania Supreme Court struck down and enjoined for 2018 primary and general elections. Compl. ¶ 40 & Prayer for Relief No. 2, ECF No. 1. To grant the requested relief, this Court would need to *undo* the judgment and remedy Proposed Intervenors obtained in the state court action. Proposed Intervenors would be forced to vote in congressional elections under a districting plan that the state high court held violates their rights under the state constitution. By contrast, other Pennsylvanians did not bring the state court action—and some, like Plaintiffs, are adverse to protecting the state court's judgment and remedy.

B. Proposed Intervenors' Interests Are Not Adequately Represented

Proposed Intervenors not only brought the state court action, they took the lead in litigating the action at all times. The state election officials named as defendants here did not bring the state court lawsuit, but instead were forced to

participate because they were sued. And although the election officials eventually expressed agreement with Proposed Intervenors' legal arguments to the state court, that came very late in the case. Proposed Intervenors have unique expertise and perspective in defending the state court's judgment and remedy, and the election officials cannot adequately represent Proposed Intervenors' interests.

At trial in the state court action, it was Proposed Intervenors who called the only witnesses about the subordination of traditional districting criteria, and who developed the legal arguments for this position. By way of example, while Plaintiffs attach to their intervention opposition the 13-page post-trial brief that the election officials filed in the Commonwealth Court, Proposed Intervenors on the same day filed a 179-page post-trial brief. *See* Ex. A. That brief meticulously detailed how the 2011 plan diluted Proposed Intervenors' voting power and violated their rights under the Pennsylvania Constitution.

Further, Proposed Intervenors and the election-official defendants here have diverging interests that may cause them to take different legal positions on key issues before this Court. Proposed Intervenors maintain that, were this Court to enjoin the state court's remedial plan, a federal statute would require at-large elections for all 18 of Pennsylvania's congressional seats in 2018. Under 2 U.S.C. § 2a(c), Congress "set[] forth congressional-redistricting procedures . . . if the State, 'after any apportionment,' ha[s] not redistricted 'in the manner provided by

state law.'" *Ariz. State Legislature v. Ariz. Independent Redistricting Comm'n*, 135 S. Ct. 2652, 2670 (2015). In particular, § 2a(c)(5) prescribes mandatory procedures where (i) a state lost a congressional seat from the prior decade's reapportionment (as occurred in Pennsylvania); (ii) the state does not have a congressional plan enacted "in the manner provided by [state] law"; and (iii) "there is no time for either the State's legislature or the courts to develop one." *Branch v. Smith*, 538 U.S. 254, 275 (2003) (plurality op.). In those circumstances, § 2a(c)(5) requires at-large elections for a state's entire congressional delegation. Thus, if this Court were to enjoin the state court's remedial plan (and it should not), then federal law would require at-large elections—not elections under a congressional plan enacted contrary to "the manner provided by [state] law." 2 U.S.C. § 2a(c).

By contrast, the election-official defendants, who are sued in their official capacities and whose interest is the administration of elections, may not have the same interest in presenting this argument. Indeed, in opposing the (first) stay application that Speaker Turzai and Senator Scarnati filed with the U.S. Supreme Court, Proposed Intervenors presented this argument but the election officials did not. Ex. B at 34-35. It is crucial that some party in this case advocate the position that this federal statute precludes the relief Plaintiffs seek—*i.e.*, a return to a congressional plan that violates state law—and thus the consequences if this Court enjoins the remedial plan.

In addition, Proposed Intervenors are uniquely situated to defend the state court's judgment and remedy against Plaintiffs' baseless attacks. Plaintiffs assert that they "do not as a general proposition challenge the Pennsylvania Supreme Court's ability to declare the 2011 Plan unconstitutional under Pennsylvania's constitution." ECF No. 31 at 3. Rather, their claim is that the state high court violated the Elections Clause by "apply[ing] criteria found nowhere within Pennsylvania's Constitution or statutory framework for Congressional districting." *Id.* at 4. If permitted to intervene, Proposed Intervenors will establish that foundational principles of federalism forbid federal courts from interceding to decide whether a state supreme court has properly or legitimately interpreted the state's own constitution. And key to this motion, it was Proposed Intervenors who emphasized in the state court proceedings the central importance of the "criteria" the Pennsylvania Supreme Court applied—*i.e.*, population equality, contiguity, compactness, and minimizing splitting of political subdivision—and argued that the Pennsylvania Supreme Court had long applied these criteria in congressional redistricting. *See, e.g.*, Pet'rs' Opening Brief at 57-58 (attached as Ex. C); Ex. A.

Proposed Intervenors are likewise well-situated to refute Plaintiffs' alternative theory that the Pennsylvania Supreme Court did not "afford the Pennsylvania Legislature an 'adequate opportunity' to enact a remedial plan." ECF No. 31 at 4. Proposed Intervenors detailed in the state court action how, in

late 2011, the General Assembly passed the 2011 Plan in *just eight days*. Ex. C at 6-7; Ex. A at 5-11. And Proposed Intervenors requested in their opening brief to the Pennsylvania Supreme Court that the General Assembly be given just two weeks to develop a remedial plan—a request to which neither the General Assembly, Speaker Turzai, nor Senator Scarnati objected in their opposition briefs—providing critical context for the claim now before this Court. Ex. C at 74. Proposed Intervenors pressed their request for a two-week opportunity at oral argument before the Pennsylvania Supreme Court. At the same oral argument, Speaker Turzai and Senator Scarnati's counsel (who represents Plaintiffs here) told the state high court that they would like "at least three weeks" to pass a new plan. Oral Argument Video at 1:45:53-1:46:13. Proposed Intervenors were also deeply involved in the remedial process following the Pennsylvania Supreme Court's January 22 order, during which neither the General Assembly, Speaker Turzai, nor Senator Scarnati ever requested more time. Contrary to Plaintiffs' claims, the "record" from the state court proceedings is clearly "germane to the legal questions advanced in this action," ECF No. 31 at 8, and Proposed Intervenors have deep knowledge of those proceedings.

What's more, as the prevailing party in state court, Proposed Intervenors have an especially compelling interest in enforcing the many jurisdictional and procedural bars that prevent Plaintiffs from collaterally attacking the state court

judgment in federal court. If allowed to intervene, Proposed Intervenors will demonstrate that this Court must abstain or dismiss this action under:

- *Colorado River Water Conservation Dist. v. United States*, 424 U.S. 800 (1976), because identical issues involving functionally identical parties are pending in parallel state court proceedings (now in the U.S. Supreme Court);

- *Pennzoil Co. v. Texaco, Inc.*, 481 U.S. 1 (1987), which precludes federal courts from "interfer[ing] with the execution of state judgments" based on federal constitutional challenges to state court procedures that could have been raised with the state court;

- Issue preclusion, as the Pennsylvania Supreme Court repeatedly rejected the Elections Clause arguments Plaintiffs raise here, Ex. D at 137 n.79; Ex. E;

- The *Rooker*/*Feldman* doctrine, which bars losing parties in state court from collaterally attacking—or directing their proxies to collaterally attack—the state court's judgment in federal court, *see, e.g.*, *Hoblock v. Albany Cty. Bd. of Elections*, 422 F.3d 77, 91 (2d Cir. 2005).

Proposed Intervenors also will show that Plaintiffs lack Article III standing, *see, e.g.*, *Lance v. Coffman*, 549 U.S. 437 (2007); *Raines v. Byrd*, 521 U.S. 811 (1997), and that Plaintiffs are judicially estopped from arguing that the Pennsylvania Supreme Court lacked power to enter its judgment and remedy, because Speaker Turzai and Senator Scarnati successfully argued the opposite to a different federal court in asking that court to defer to the state proceedings, *see Diamond v. Torres*, No. 5:17-cv-05054-MMB, ECF No. 26-4 (E.D. Pa. 2017).

The named defendants here might not make all these arguments. Intervention is warranted so that Proposed Intervenors may do so as parties to this case.

II. Alternatively, the Court Should Grant Permissive Intervention

If this Court does not grant intervention as of right, Proposed Intervenors are entitled to permissive intervention under Rule 24(b). Plaintiffs do not contend that Proposed Intervenors' involvement will "delay or prejudice" this case, Fed. R. Civ. P. 24(b)(3), and given the factual and legal history of the state court action as described above, there can be little dispute that Proposed Intervenors "will add [something] to the litigation," *Am. Farm Bureau Fed'n v. U.S. EPA*, 278 F.R.D. 98, 111 (M.D. Pa. 2011) (internal quotation marks and citation omitted). If ever there were a case where permissive intervention was warranted, it is here, where Plaintiffs make the unprecedented request to have this federal court effectively overrule not only the state high court on a question of state law, but also the U.S. Supreme Court, which has thus far declined to grant the exact relief Plaintiffs seek. Proposed Intervenors should be afforded the opportunity to defend the judgment and remedy they obtained in the Pennsylvania Supreme Court.

CONCLUSION

The Court should grant intervention as of right under Rule 24(a), or alternatively permit Proposed Intervenors to intervene under Rule 24(b).

Dated: February 28, 2018

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Thomas B. Schmitt, III, hereby certify that on this date I caused a true and correct copy of Proposed Defendant Intervenors the League of Women Voters of Pennsylvania, Carmen Febo San Miguel, James Solomon, John Greiner, John Capowski, Gretchen Brandt, Thomas Rentschler, Mary Elizabeth Lawn, Lisa Isaacs, Don Lancaster, Jordi Comas, Robert Smith, William Marx, Richard Mantell, Priscilla McNulty, Thomas Ulrich, Robert McKinstry, Mark Lichty, and Lorraine Petrosky's Reply in Support of Motion to Intervene to be served via electronic mail with hard copy to follow upon the following counsel in this matter:

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Exhibit A

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

League of Women Voters of Pennsylvania, *et al.*, *Petitioners*, v. The Commonwealth of Pennsylvania, *et al.*, *Respondents*.	**No. 261 MD 2017**

PETITIONERS' POST-TRIAL PROPOSED
FINDINGS OF FACT AND CONCLUSIONS OF LAW

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INTRODUCTION

Partisan gerrymandering is undemocratic and unconstitutional, and Pennsylvania's current congressional districting map is among the most extreme partisan gerrymanders in the nation's history. Following the 2010 census, the Republican-controlled General Assembly drew a map designed—with surgical precision—to maximize the political advantage of Republican voters and minimize the representational rights of Democratic voters. They deliberately manipulated district boundaries to discriminate against Democratic voters on the basis of their political views, their votes, and their association with the Democratic Party. They sought to predetermine the outcome of congressional elections for a decade.

The evidence at trial proved that Legislative Respondents' partisan gerrymander was intentional, obvious, and incredibly effective.

To accomplish the gerrymander, the 2011 map "packed" Democratic voters into five overwhelmingly Democratic districts. It "cracked" the remaining Democratic voters, spreading them across the other 13 districts while ensuring a reliable majority of Republican voters in each. And it worked: Without fail, the 2011 map has given Republicans 13 of 18 seats—the same 13 seats—in all three congressional elections in which the map has been used. Republicans won those 13 seats irrespective of swings in the vote—even when Democratic candidates won a majority of the votes statewide. The map is impervious to the will of voters.

Petitioners' experts established that, by a host of mathematical and statistical measures, the 2011 map is an extreme partisan gerrymander that could only be the product of partisan intent. Not one of Dr. Jowei Chen's simulated non-partisan maps produces the 13-5 Republican advantage that has persisted under the 2011 map. Dr. Wesley Pegden proved that, upon making tiny changes to the map's district boundaries, the extreme Republican bias dissipates, demonstrating that the map was carefully calibrated to maximize partisan advantage. And Dr. Christopher Warshaw demonstrated the extent to which the 2011 map wastes Democratic votes, yielding historically extreme pro-Republican Efficiency Gaps.

But it doesn't take an expert to see this map for what it really is. The districts are ridiculous. The 12th District resembles the Boot of Italy. The 6th District could be mistaken for the State of Florida with a longer and more jagged Panhandle. The 7th District—which has gained national notoriety as the epitome of naked gerrymandering—has been dubbed "Goofy kicking Donald Duck." As a result, many Pennsylvanians now live in areas of the Commonwealth known as "Goofy's finger" and "Goofy's armpit." It's a mockery of representative government in plain view for all the nation to see.

And it's worse than just the Rorschach inkblot district shapes. The map's packing and cracking of Democratic voters rips apart Pennsylvania's communities of interest to an unprecedented degree. As Petitioners' expert Dr. John Kennedy

explained, there is no legitimate reason to carve the Democratic stronghold of Reading out of Berks County, where it serves as the county seat, and append it via a narrow land bridge to the reliably Republican 16th District. Likewise, the map cracks Erie and Harrisburg by shoving their Democratic voters into overwhelmingly Republican areas with which they share no common interest. And the map packs Democratic voters into the 14th District by extending a tentacle up the Allegheny River to remove those voters from the 12th District.

Laying bare the mapmakers' utter disregard for traditional districting principles are the points at which several districts are barely even contiguous. At one point in King of Prussia, the 7th District holds itself together only by Creed's Seafood & Steaks. Its east and west sections are joined by a medical center. And the borough of Kennett Square is connected to the 16th District by a cemetery.

Legislative Respondents made no effort to defend the 2011 map at trial. They offered zero non-partisan explanation for the bizarre district shapes, the decisions to split particular communities, or the uniform 13-5 Republican victories in 2012, 2014, and 2016. Legislative Respondents' experts conducted no affirmative analysis and offered no positive conclusions about the map, instead merely criticizing the work of Petitioners' experts. Those criticisms were makeweight, unreliable, and not credible.

And though Legislative Respondents fought tooth and nail to conceal the reality of how the 2011 map was drawn, the truth came to light. As Dr. Chen's analysis of files produced by Speaker Turzai in the federal case showed, Republican mapmakers assigned detailed partisanship scores to each and every precinct, municipality, and county across Pennsylvania. It's no mystery why.

The 2011 map violates the Pennsylvania Constitution. Under the Free Expression and Free Association Clauses, the government cannot burden or retaliate against protected political expression and association. That is exactly what the map does. It targets Pennsylvania citizens likely to vote for Democratic congressional candidates in order to minimize their electoral and therefore political influence. And under the Pennsylvania Constitution's equal protection guarantees, the map intentionally and impermissibly discriminates against Democratic voters, materially disadvantaging them in electing candidates of their choice.

This partisan gerrymandering needs to stop. It's discriminatory and unfair, and it's undermining people's trust and confidence in the integrity of government. It matters so much that people have faith in the electoral process by which we select our representatives in Washington. It matters to young people like the students in petitioner Bill Marx's high school civics class, who grow disillusioned simply upon seeing the 2011 map's ridiculous district shapes. It matters to petitioner Beth Lawn, a chaplain, who worries about her disabled son's access to

healthcare. It matters to petitioner Tom Rentschler and his neighbors in Reading and Berks County, who lack a congressperson focused on their community's needs. It matters to every single Pennsylvanian.

The law does not tolerate discrimination, and there is no exception for discrimination on the basis of Pennsylvania citizens' political views. Quite the opposite. Even before the federal Bill of Rights, the framers of the Pennsylvania Constitution enshrined robust protections for the political expression and association of all Commonwealth residents. Those Pennsylvania protections must and do extend to voting, one of the highest acts of self-expression there can be in a representative democracy.

This Court should declare that the 2011 map violates the Pennsylvania Constitution and enjoin its further use. It's time Pennsylvania voters got to choose their elected officials—not the other way around.

PROPOSED FINDINGS OF FACT

A. Pennsylvania's 2011 Congressional Districting Map Was Created in Secret and Enacted in a Highly Unusual and Partisan Manner

1. As a result of the reapportionment process following the 2010 U.S. Census, Pennsylvania lost a congressional seat. *See* Joint Stipulation of Facts ("JSF") ¶¶ 1-3. In Pennsylvania, responsibility for redrawing congressional districts following each census lies with the Pennsylvania General Assembly, which is composed of the Pennsylvania Senate and House of Representatives. JSF

¶ 6. Both chambers of the General Assembly must pass a redistricting bill, and it must be signed into law by the Governor. JSF ¶ 6.

2. Heading into the November 2010 election, Democrats held the Pennsylvania House by a slim margin. The governor of Pennsylvania in 2010, Ed Rendell, was also a Democrat. But in the 2010 elections, Republicans picked up 11 seats in the Pennsylvania House, taking control of that chamber. Republicans also retained control of the Senate, and Republican Tom Corbett won the governorship. Thus, after the 2010 election, Republicans held exclusive control over Pennsylvania's congressional redistricting. JSF ¶¶ 7-9, 153-54.

3. Having gained control over the redistricting process, Republicans in the General Assembly set to work redrawing the congressional map in a way that would entrench Republican dominance in Pennsylvania's delegation to the U.S. House of Representatives for the next decade. On September 14, 2011, Republicans introduced their congressional redistricting bill, Senate Bill 1249. JSF ¶ 39. The bill's primary sponsors were all Republicans: Majority Floor Leader Dominic F. Pileggi, President Pro Tempore Joseph B. Scarnati III, and Senator Charles T. McIlhenney Jr. JSF ¶ 40.

4. The Republican leadership in the General Assembly went to extraordinary lengths to conceal their intent to draw district boundaries that would burden the representational rights of Democratic voters. SB 1249 started as an

empty shell—it contained no map showing the proposed congressional districts. *See* JSF ¶ 42; Joint Ex. 1; Petrs. Ex. 178 (Dinniman *Agre* Tr.) 19:6-8; Petrs. Ex. 179 (Vitali Dep.) 64:10-11. Instead, the bill described each congressional district as follows: "The [Number] District is composed of a portion of this Commonwealth." JSF ¶ 42; Joint Ex. 1. The same was true at the second reading of the bill, almost three months later, on December 12, 2011. JSF ¶¶ 43-44.

5. The Republicans' efforts to keep the contents of the bill secret were highly unusual, especially for a bill of such public importance. Petrs. Ex. 178 (Dinniman *Agre* Tr.) 20:4-12, 16-18. Democratic representatives were shut out of the process of drawing the map, which was done in secret. Petrs. Ex. 179 (Vitali Dep.) 59:11-15. Republican Senators suspended the ordinary rules of procedure to rush the bill through the Senate to avoid scrutiny from Democrats and the general public. Petrs. Ex. 178 (Dinniman *Agre* Tr.) 23:16-25; *id.* at 25:4-7, 27:3-8.

6. Then, on the morning of December 14, 2011, Republicans amended the bill to add—for the first time—the actual descriptions of the new congressional districts. JSF ¶¶ 45-47; Joint Exs. 2-3.

7. As soon as the plan was revealed, Democratic Senators decried its partisan bent and the Republicans' lack of transparency. Senator Anthony Williams stated: "[M]aybe if we had . . . transparency, openness, and most importantly, inclusion, we could have shared the responsibility of coming up with

[a] . . . much more representative map. That is not what happened . . . . [W]e have a map that not one Democrat had anything to do with on this side of the aisle." 2011 Senate Legislative Journal 1361, 1409-10 (Dec. 14, 2011).[1] Senator Jay Costa introduced an amendment that he believed would create eight districts favorable to Republicans, four districts favorable to Democrats, and six swing districts. *Id.* at 1404; JSF ¶ 49; Petrs. Ex. 178 (Dinniman *Agre* Tr.) 24: 10-13. It failed on a party-line vote. JSF ¶ 49; Petrs. Ex. 178 (Dinniman *Agre* Tr.) 24:15.

8. Later the same day, just hours after first revealing the proposed district boundaries, the Senate passed SB 1249 by a vote of 26-24. JSF ¶ 50. Not one Democratic Senator voted for it. JSF ¶ 51.

9. Just days later, on December 15 and December 19-20, 2011, the Pennsylvania House of Representatives considered SB 1249. JSF ¶¶ 53-56. As in the Senate, Democratic representatives denounced the plan's partisan substance and non-transparent process. For example, Representative Dan Frankel decried Republicans' "very cynical attempt to institutionalize a Republican majority of congressional seats in Pennsylvania." 2011 House Legislative Journal 2726, 2733

[1] The parties stipulated and agreed that the Court may consider and take judicial notice of the legislative history of Act 131, including the Legislative Journals available at http://www.legis.state.pa.us/cfdocs/billinfo/bill_history.cfm?syear=2011&sind=0&body=S&type=B&bn=1249 (select "Senate Journal Page 1398" under the heading "PN 1869"). JSF 48.

(Dec. 20, 2011). He urged the Senate to "reject this. This is not good government; this is a very cynical way to do government." *Id.*

10. Representative Frank Dermody added: "[T]he way our system is supposed to work is that the voters are supposed to pick the politicians. With this map, the politicians pick the voters. This map sets up districts that are gerrymandered beyond recognition." *Id.* at 2732. Representative Robert Freeman similarly stated: "SB 1249 contains the worst case of gerrymandering in Pennsylvania in living memory. . . . A look at the configuration of the congressional district map of 1249 reveals twisted and distorted districts that were drawn purely for political advantage, with no consideration for compactness of districts or communities of interest." *Id.* at 2730.

11. Representative Steve Samuelson protested the lack of transparency: "When this bill had first reading, the Senate had no plan [*i.e.*, the bill had no substantive content]. When this bill had second reading, the Senate had no plan. The map was not revealed until December 13. The details . . . were not available until 9 a.m. on December 14. . . . [T]he public had about 14 hours to see the details. Now, since the Senate came out with their plan on Wednesday, the public has had a grand total of 5 days." 2011 House Legislative Journal 2675, 2699-2700 (Dec. 19, 2011). Representative Babette Josephs similarly protested the extraordinary lack of transparency in what she called a "dreadful" plan, noting that

she had never before "seen a hearing in this legislature on a blank bill." *Id.* at 2731. "You could not tell looking at the bill or looking for a map, what . . . the Republicans had in mind." *Id.*

12. Representative Michael Hanna offered an amendment to "create a fair redistricting map . . . [that] will minimize district splits in counties and municipalities and ensure equality of representation across the 18 congressional districts." *Id.* at 2691. The amendment failed. *Id.*

13. On December 20, 2011—just six days after Republicans had first revealed the proposed districts—the House passed SB 1249 by a vote of 136-61. JSF ¶ 57. Of the 36 House Democrats who voted for SB 1249, at least 33 (approximately 92%) represented state legislative districts that were part of at least one of the following congressional districts under SB 1249: the 1st, 2nd, 13th, 14th, or 17th. JSF ¶ 59. Under SB 1249, all of these districts were "packed," JSF ¶ 73, meaning the Democrats who represented them would enjoy "safe" seats for the next decade. Petrs. Ex. 178 (Dinniman *Agre* Tr.) 62:12-14 (discussing how some Democrats voted for the plan to ensure that Congressmen Brady and Fattah would represent safe districts); Petrs. Ex. 179 (Vitali Dep.) 47:19-24 ("Congressman Brady wanted . . . his district . . . to be a safe Democratic district."); *id.* at 49:4-12.

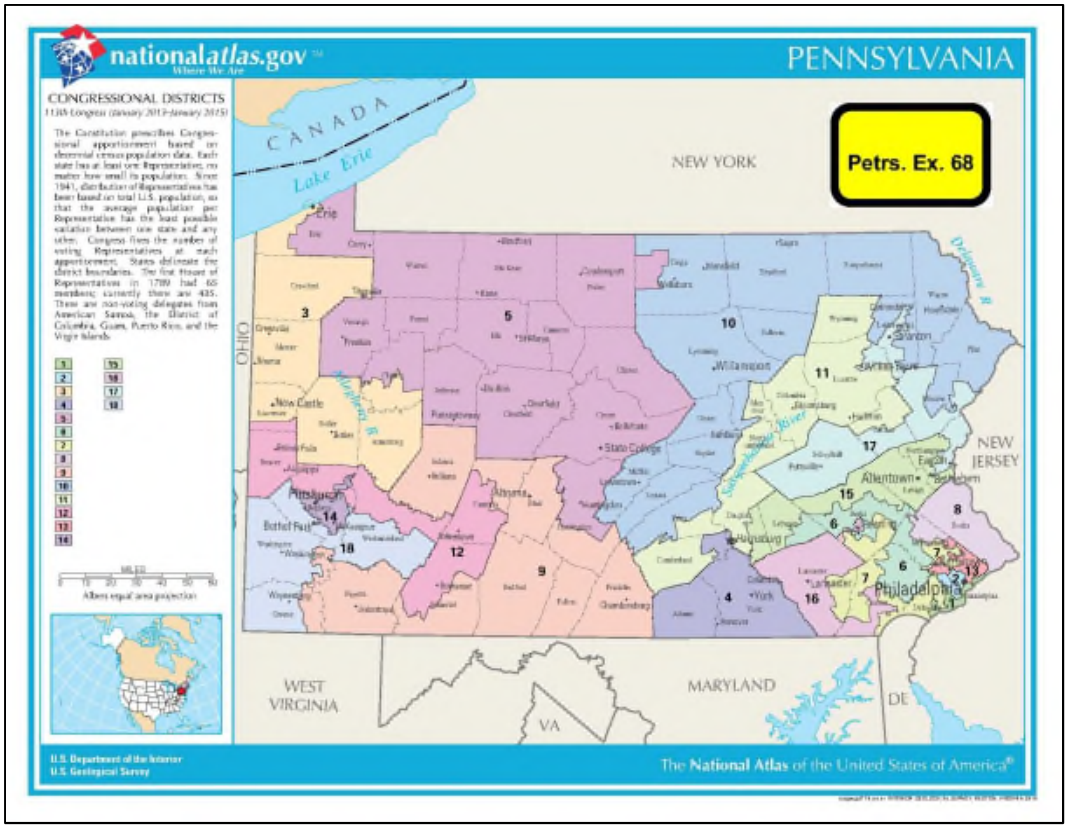
14. Republican Governor Tom Corbett signed the bill into law two days later, as Act 131 of 2011. The 2011 map remains in effect today. JSF ¶¶ 60-62.

B. The 2011 Map Packs and Cracks Democratic Voters, Creating Absurdly Contorted Districts and Dividing Communities

15. The 2011 map contains a series of non-compact, bizarrely shaped districts that slice and dice Pennsylvania's significant communities of interest. John J. Kennedy, Ph.D., a Pennsylvania native and Professor of Political Science at West Chester University, testified as an expert in political science, with a specialty in Pennsylvania political history and political geography. Dr. Kennedy analyzed the 2011 map's unprecedented division of Pennsylvania's communities of interest and concluded that these divisions "pack" and "crack" Democratic voters to dilute their electoral influence. Tr. 579:13-644:15; Petrs. Ex. 53 (Kennedy Report).

16. In a partisan gerrymander, "packing" involves concentrating one party's backers in a few districts so that the party wins by overwhelming margins in those districts, but the party's votes are minimized elsewhere. "Cracking" involves spreading a party's supporters across multiple districts so that they fall reliably short of a majority in each. Petrs. Ex. 53 at 2-3.

17. Petitioners' Exhibit 68 is an image of the 2011 enacted map:



18. Prior to the 2011 map, the margin between the number of congressional seats held by Democrats and Republicans was small, within one seat in over half of all election cycles from 1966-2010 (13 of 23 cycles). Petrs. Ex. 53 at 3-4. In 2012, however, even though Democratic candidates won a majority of the vote statewide (50.8%), Democrats won only 5 of 18 seats. JSF ¶¶ 71-72. In 2014 and 2016, Democratic candidates won 44.5% and 45.9% of the two-party vote share respectively, and Republicans continued to win 13 of 18 seats. JSF ¶¶ 74-75, 80-81. Thus, not a single congressional seat has changed party hands in three elections under the 2011 map:

Table A: Partisan Distribution of Seats in Pennsylvania's Congressional Delegation, 2012-2016

Year	Districts	Democratic Seats	Republican Seats	Democratic Vote Percentage[1]	Republican Vote Percentage
2012	18	5	13	50.8%	49.2%
2014	18	5	13	44.5%	55.5%
2016	18	5	13	45.9%	54.1%

Source: The Pennsylvania Manual

Petrs. Ex. 53 at 3-4.

19. To engineer this outcome, the 2011 map flagrantly disregarded the traditional districting principle of protecting communities of interest, instead ripping apart counties, municipalities, and other local communities. Tr. 579:18-580:1, 583:13-17, 586:18-587:17.

20. First, the number of split local jurisdictions is the highest of any map in Pennsylvania's history.[2] Petrs. Ex. 56. Pennsylvania's 67 counties play a "central and historical role . . . as building blocks" of the Commonwealth. *Holt v. 2011 Legislative Reapportionment Comm'n*, 614 38 A.3d 711, 745 (Pa. 2012). Yet the 2011 plan splits 28 of these counties between one or more congressional

[2] The sole exception is the map in use from 2004 to 2010, which the General Assembly cobbled together in ten days operating under a court order in *Vieth v. Pennsylvania*, 195 F. Supp. 2d 672 (M.D. Pa. 2002), to equalize population by tweaking certain precincts. Petrs. Ex. 53 at 4 n.3.

districts. *Id*. It also splits 68 municipalities between separate districts. *Id*. The number of split counties and municipalities in the 2011 enacted map is a marked increase from Pennsylvania's recent history. The map in effect during the 1992-2000 election cycles split 19 counties and 14 municipalities. *Id*. The 2011 map almost doubles the number of split counties from that 1990s map and more than quadruples the number of split municipalities. *Id.*

21. The 2011 map splits some counties across so many different congressional districts that the prospect of effective representation evaporates. Petrs. Ex. 53 at 5-6, 16-19. For instance, Pennsylvania's third largest county, Montgomery County, is sliced between five different districts (the 2nd, 6th, 7th, 8th, and 13th)—and none of those five congressmen resides in Montgomery County. Tr. 643:20-25; Petrs. Ex. 53 at 17. Berks County and Westmoreland County are each split across four different districts, despite having populations of just 411,442 and 365,169, respectively. Petrs. Ex. 53 at 17.

22. Petitioners' Exhibit 56 summarizes the number of counties and municipalities split in Pennsylvania congressional districting maps since 1966:

Table B: Split Counties and Municipalities by Decade[2]

Year	Split Counties	Split Municipalities
1966-1972	7	2
1970s	9	4
1980s	16	3
1990s	19	14
2000s	25	67
2010s	28	68

Source: The Pennsylvania Manual

[2] Details of these figures are provided in the Appendix

Petrs. Ex. 56.

23. The 2011 map also significantly increased the number of municipalities that are divided at the census-block level. Tr. 642:8-19. Splitting municipalities by census blocks, which range from only 600 to 3,000 residents, is "highly granular." Tr. 642:21. Until the 1992 map, there were no congressional districts that divided municipalities at the census-block level. Petrs. Ex. 53 at 5. In the 1990s and 2000s, there were only three and six census-block divisions, respectively. *Id.* But in the 2011 map, there are an unprecedented 19 such splits, more than triple the amount of the 2002 map:

Table C: Number of Municipalities Split at the Block Level by Decade

1970s	1980s	1990s	2000s	2010s
0	0	3	6	19

Source: The Pennsylvania Manual

Petrs. Ex. 57.

24. Pennsylvania's local communities share historical attachments, affiliations, and common interests. Petrs. Ex. 53 at 19. As Dr. Kennedy testified, Pennsylvanians identify strongly with their local communities at the municipal, county, and regional levels:

> [F]or Pennsylvanians, community is very important. Noted Pennsylvania historian Philip [Klein] once remarked that if you ask a Texan where they're from, they'll undoubtedly say they are a Texan. If you ask a Pennsylvanian where they're from, they're much more likely to respond as their hometown. Pennsylvanians identify with their own hometown, with their community. I often ask my students, particularly in my Pennsylvania class . . . when you're traveling out of state, if you're on vacation, and someone asks you, "Where are you from?", almost always someone will say relating to their hometown; rarely will they say they're from Pennsylvania. Pennsylvanians identify with their community, with their hometown, whether it's the Lehigh Valley; whether it's the Mon Valley; whether it's Easton, or Harrisburg, Erie, Reading; or they might be from Delco or Montco. . . . So the point is, communities are important to our identity as Pennsylvanians. Residents of Delco have a different identity than residents of Amish Country. Those who reside in . . . Johnstown have a

> different identity than those who live in Aliquippa. Those that live in Allentown have a different identity than those who live in Hershey.

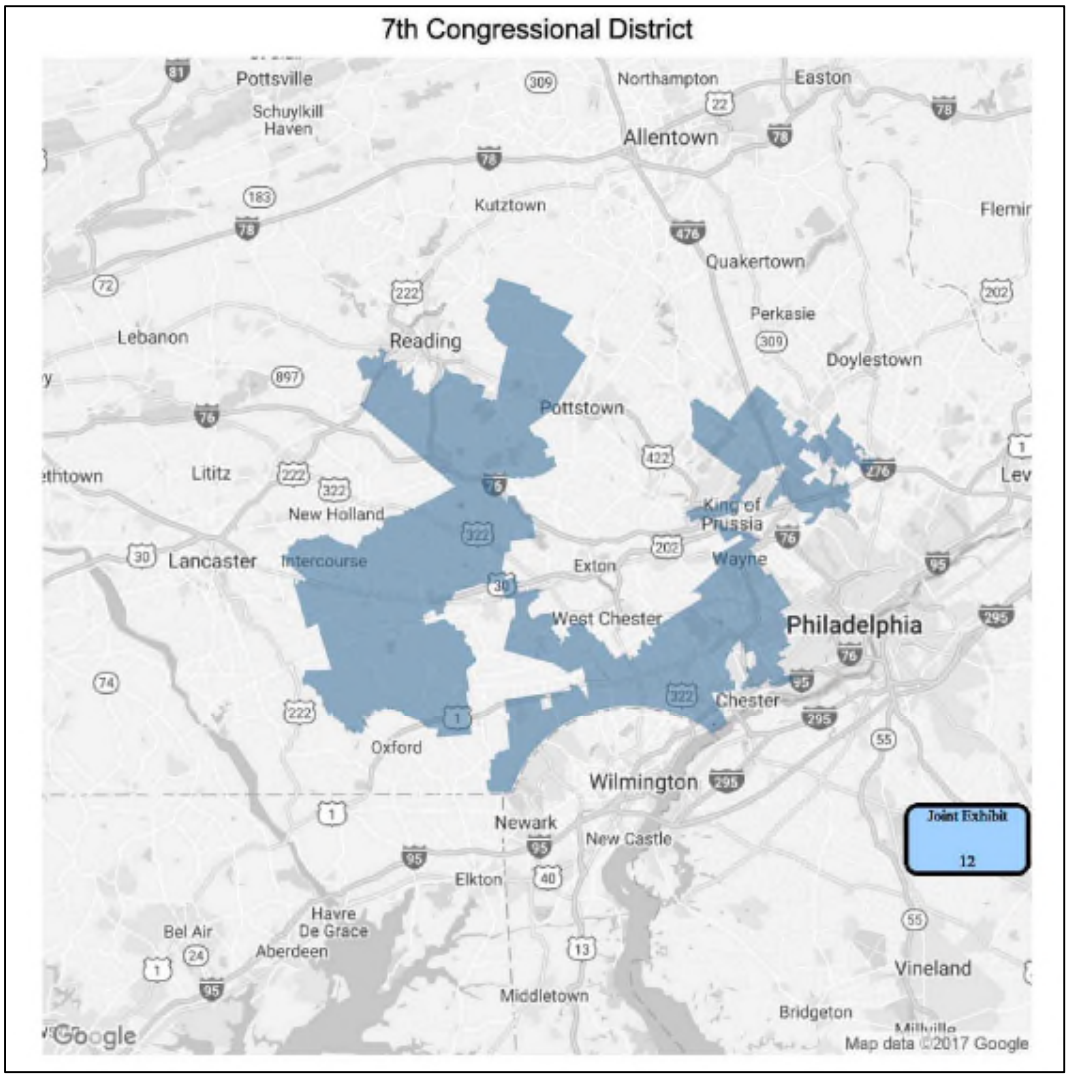
Tr. 583:21-585:5.

25. The 2011 map disregards these communities. Pennsylvanians in Delaware County have been pushed into the same congressional district with Amish County. Joint Ex. 12. Pennsylvanians from Johnstown have been pushed into the same district as Aliquippa. Joint Ex. 17. The Lehigh Valley has been substantially divided for the first time in recent memory; what was once the Lehigh Valley district no longer exists. Tr. 623:13-626:11; Petrs. Ex. 53 at 48. As Dr. Kennedy noted, "the minor legal baseball team is called the Lehigh Valley Iron Pigs," not "the Allentown/Hershey Iron Pigs." Tr. 626:9-11. The 2011 map disregarded these common bonds. And, as Dr. Kennedy explained in his unrebutted testimony, the map did so solely for partisan reasons. Tr. 624:23-625:9, 625:16-626:7; Petrs. Ex. 53 at 6, 47-48.

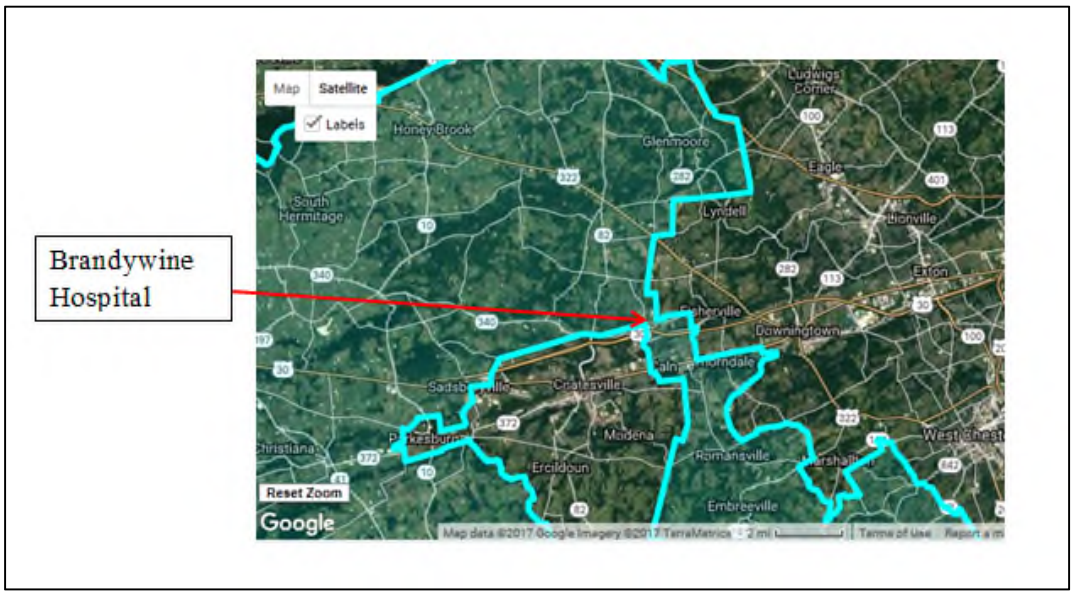
26. A district-by-district analysis of the 2011 map shows how Democratic voters have been cracked and packed to the detriment of Pennsylvania's communities of interest. Tr. 588:24-636:14; Petrs. Ex. 53 at 19-57.

27. Pennsylvania's 7th District is widely known as "one of the most gerrymandered districts in the country." Tr. 598:25-599:3. Historically based in Delaware County in southeastern Pennsylvania, the 7th District now extends in

two divided branches, snaking through Montgomery County to the northeast and through Berks County and Lancaster County to the northwest. Tr. 599:11-25; Joint Ex. 12. Ultimately, this sprawling district splits five counties and 26 municipalities. Petrs. Ex. 53 at 30; Tr. 615:12-15. Its notoriously non-compact boundaries have earned it the moniker "Goofy Kicking Donald Duck," Tr. 599:19-22, with Goofy to the east, kicking Donald Duck to the West:



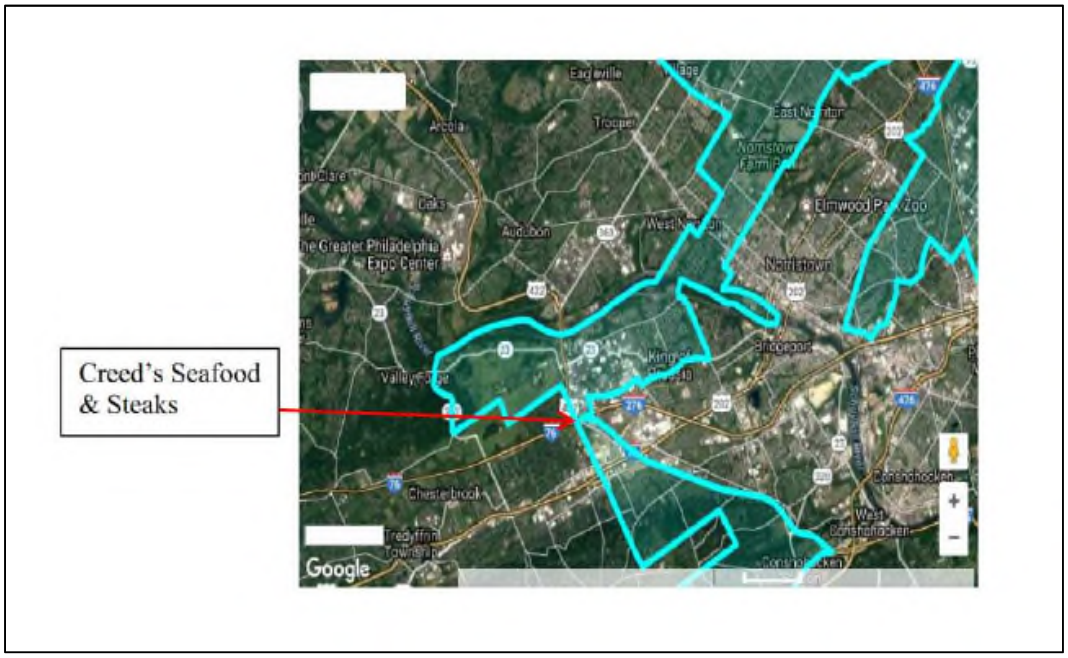
28. The 7th District is barely contiguous. At the point where its eastern and western halves are joined—referred to at trial as "Goofy's toe," Tr. 601:14-16—the 7th District is only the width of a single medical facility:



Petrs. Ex. 53 at 32. This narrow land-bridge manages to avoid the Democratic-leaning municipalities of Downingtown and Exton to the north and Coatesville to the south, splitting the Democratic voters there from their larger communities and moving them into the 16th and 6th Districts, where they are heavily outnumbered by Republican voters. Petrs. Ex. 53 at 32; Petrs. Ex. 78; Petrs. Ex. 97.

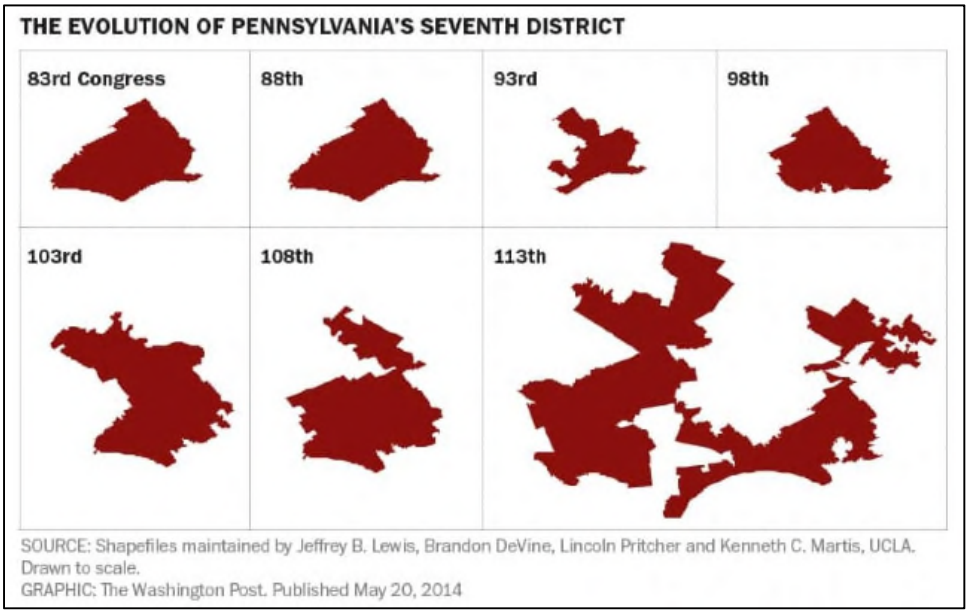
29. In the northeast half of the 7th District—"Goofy's Adam's apple," Tr. 602:6-8—the only point of contiguity is a piece of land that houses the restaurant Creed's Seafood & Steaks. Petrs. Ex. 81; Tr. 602:16-20. The Democratic-leaning

areas of Upper Merion to the northeast of this point have been split away from the 7th District and placed in the 13th District:



Petrs. Ex. 81.

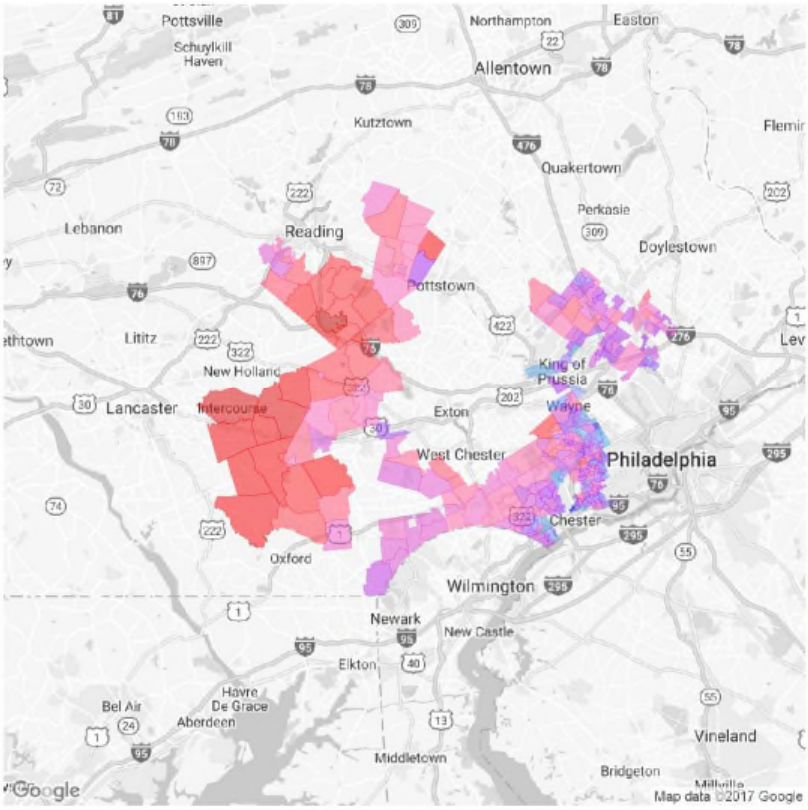
30. The evolution of the 7th District over time tells the tale:



Joint Ex. 24; *see* Tr. 614:13-615:9.

31. The 7th District cracks Democratic voters into neighboring districts, reducing their electoral influence in both districts. For example, the gap in the 7th District's southeastern portion splits the City of Chester in Delaware County and cuts out the Democrat-heavy pocket of Swarthmore to the north ("Goofy's armpit"), packing those strongly Democratic municipalities into the already overwhelmingly Democratic 1st District. Tr. 605:19-606:3; Petrs. Exs. 83-84. This cracking and packing is illustrated by overlaying the results of Pennsylvania's 2010 U.S. Senate election on the 7th and 1st Districts, with Republican precincts shaded red and Democratic precincts shaded blue:

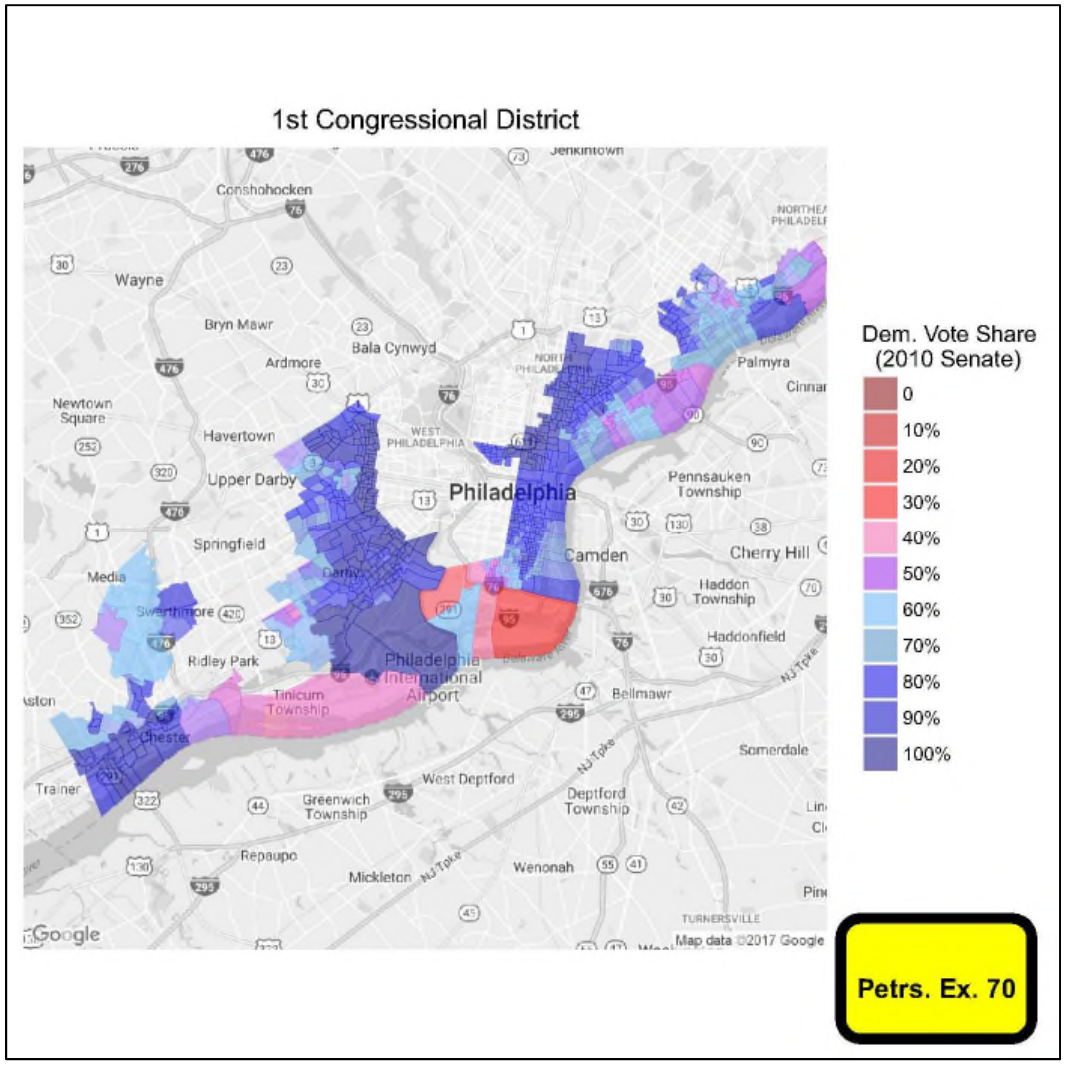
7th Congressional District



Dem. Vote Share (2010 Senate)

- 0
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%

Petrs. Ex. 83



32. As illustrated above, the appendage encapsulating Swarthmore in the southwestern portion of the 1st District is like a puzzle piece that would otherwise fit into the southeastern gap of the 7th District. Tr. 607:23-608:15; Petrs. Ex. 53 at 20-21. The 2011 map thus divides Delaware County north of the City of Chester to remove Democratic voters from the 7th District. Tr. 605:19-606:3; Petrs. Ex. 53 at 19-20. The consequence of all these changes was to turn a district that was

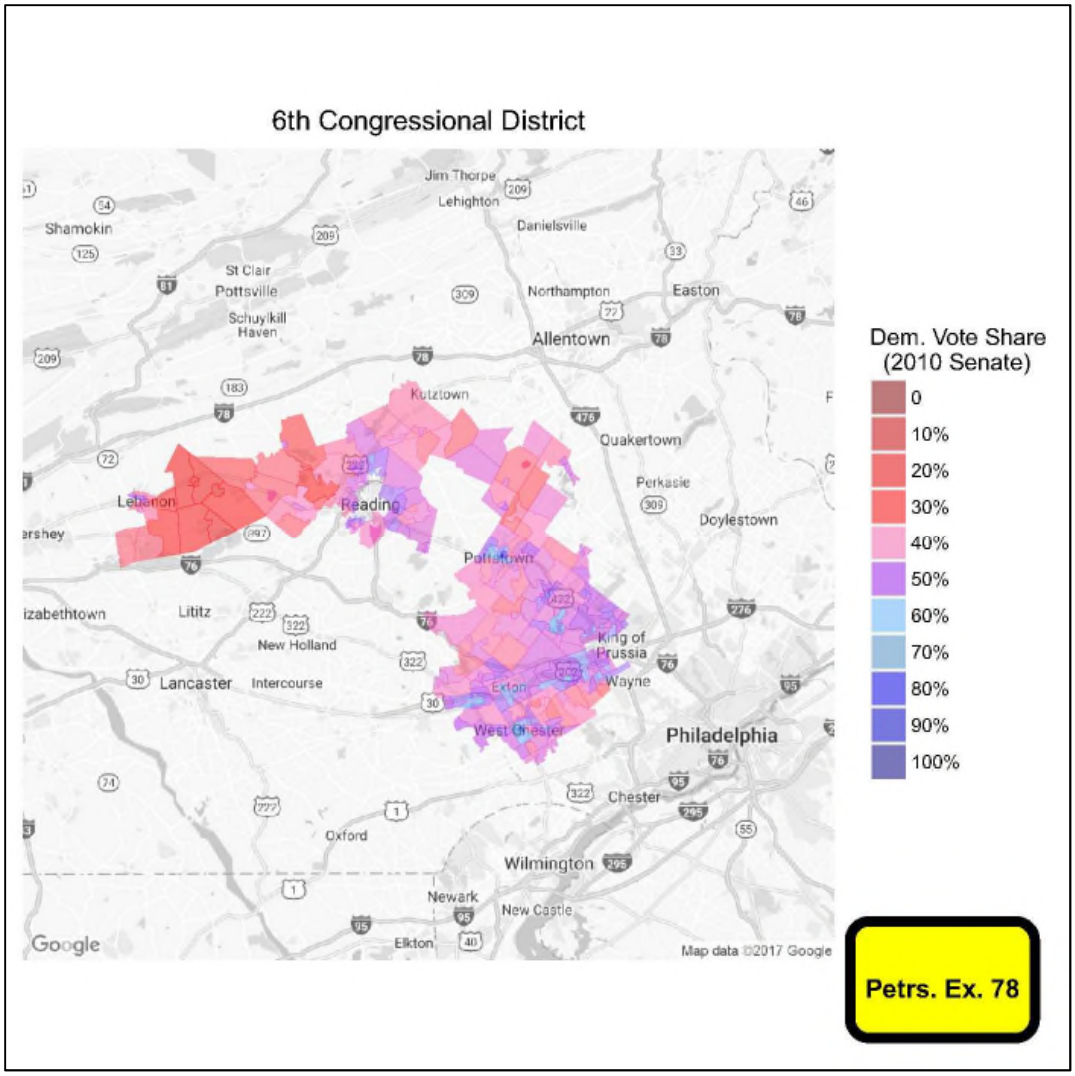
competitive under the prior map into an uncompetitive district where Democratic candidates were dissuaded from running. Petrs. Ex. 179 (Vitali Dep.) 34:23-35:9.

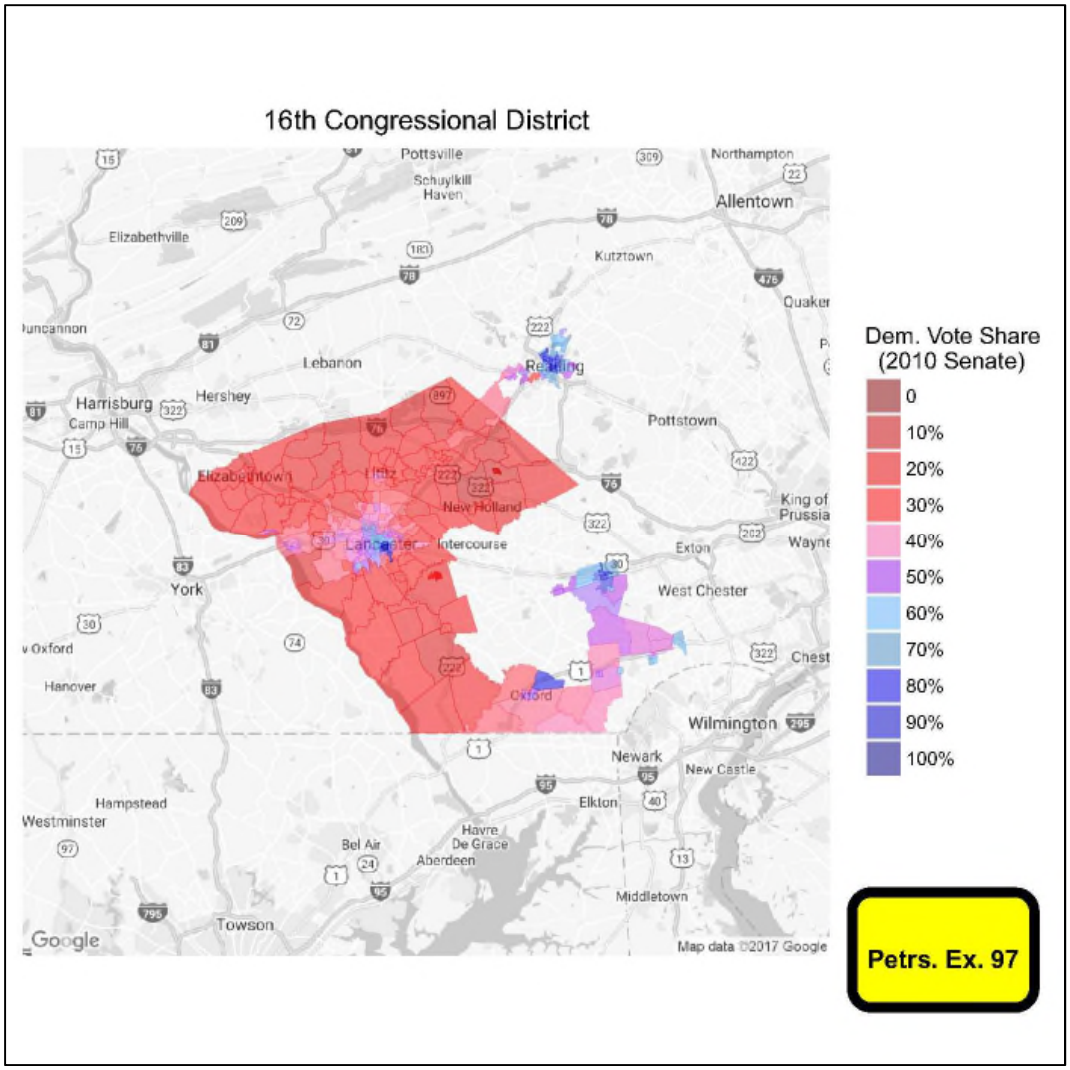
33. Legislative Respondents have offered no non-partisan explanation for the 7th District's bizarre shape, narrow stretches of land, or passing over of Democratic areas such as the City of Chester, Swarthmore, Downington, and Coatesville.

34. Intertwined with the 7th District's meandering boundaries lies the 6th District, which begins in Chester County but extends northward into Montgomery County, before jetting west to include parts of Berks and Lebanon Counties. Joint Ex. 11; Tr. 616:2-8; Petrs. Ex. 53 at 28. It spans multiple communities of interest, containing only pieces of each, Tr. 617:9-17, and results in a shape that resembles the state of Florida "with a more jagged and elongated panhandle." Tr. 616:9-12.

35. Legislative Respondents have offered no non-partisan explanation for the 6th District's bizarre shape.

36. A small incision into the 6th District's northwestern portion carves out the City of Reading, thereby splitting Reading from the rest of Berks County, even though Reading is the county seat. Tr. 616:13-17; Petrs. Ex. 53 at 29. The partisan makeup of Reading makes plain the motivation for this decision—it is blue:


6th Congressional District
Jim Thorpe
Lehighton
Danielsville
Shamokin
St Clair
Pottsville
Schuylkill Haven
Northampton
Easton
Allentown
Kutztown
Quakertown
Perkasie
Doylestown
Lebanon
Reading
Pottstown
Lititz
New Holland
Lancaster
Intercourse
King of Prussia
Wayne
Exton
West Chester
Philadelphia
Chester
Oxford
Wilmington
Newark
New Castle
Elkton
Google
Map data ©2017 Google
Dem. Vote Share (2010 Senate)
0
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Petrs. Ex. 78



37. The 16th District, which has historically been a district based in Lancaster County in Amish country, serves as the repository for Reading's cracked Democratic voters. Petrs. Ex. 53 at 50; Tr. 618:12-17. The 16th District is a Republican-dominated district but has corralled in Democrat-heavy areas on two of its borders, cracking those Democratic voters away from the 6th and 7th Districts. The 16th District now includes the City of Reading, which is joined by a narrow isthmus that at one point is only the width of a mulch store and a service center:

Petrs. Ex. 53 at 52; *see* Tr. 618:18-619:15, 620:2-6.

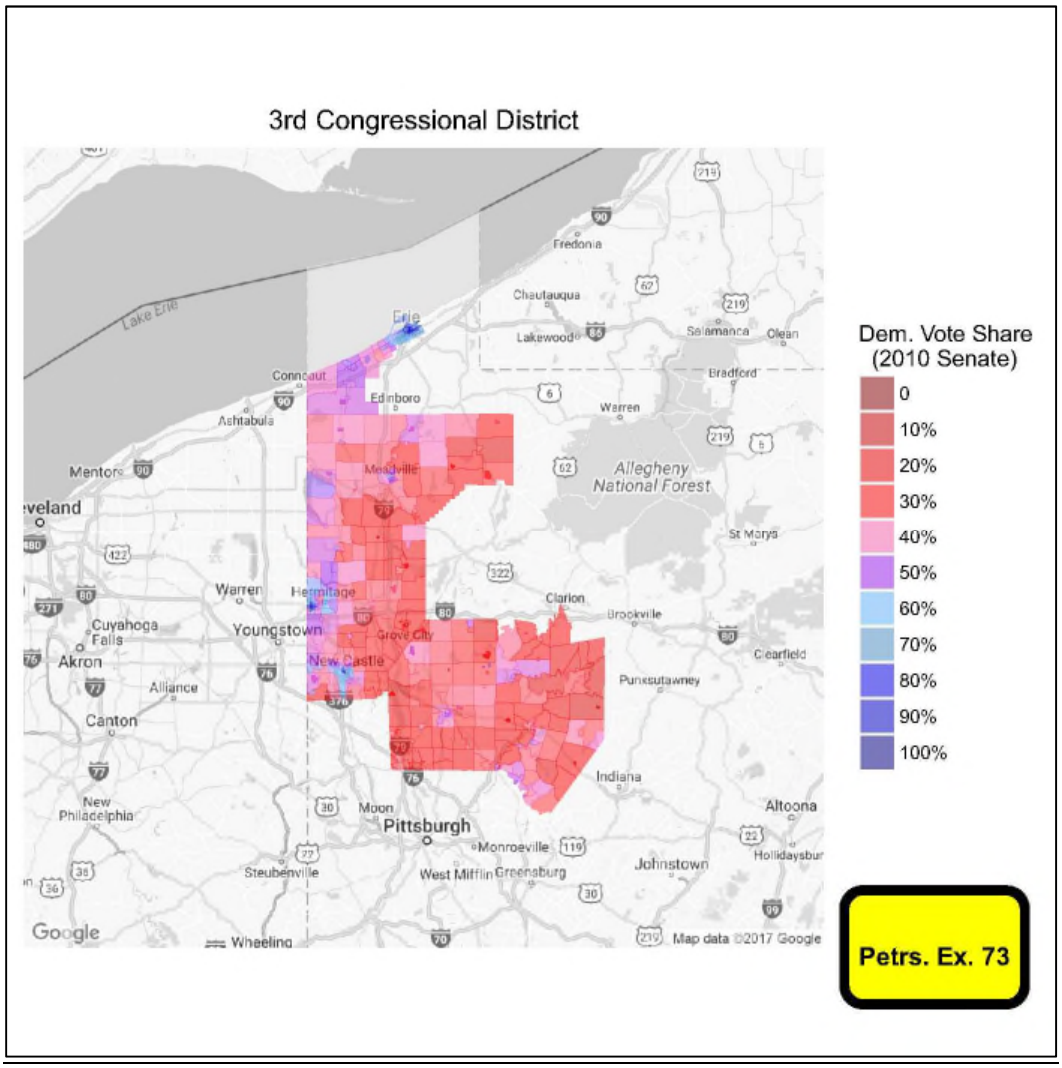
38. The 16th District also cracks the predominantly Democratic voters in the Coatesville area out of the 7th District (the blue "boot" on the 16th District's southeastern appendage).

39. Legislative Respondents have offered no non-partisan explanation for the decisions to place Reading and Coatesville into the 16th District. The intent and effect of this cracking is to place Democratic voters into a ruby red district that they have little chance of influencing. Tr. 621:15-622:10; Petrs. Ex. 97.

40. The 3rd District is another example of how the 2011 map divides counties and communities of interest to disadvantage Democratic voters. Although Erie County had remained undivided and within a single congressional district throughout Pennsylvania's history, the 2011 map bisects it, with the border between the 3rd and 5th Districts running through the Democratic voters residing in the Erie metropolitan area. Tr. 591:12-20.

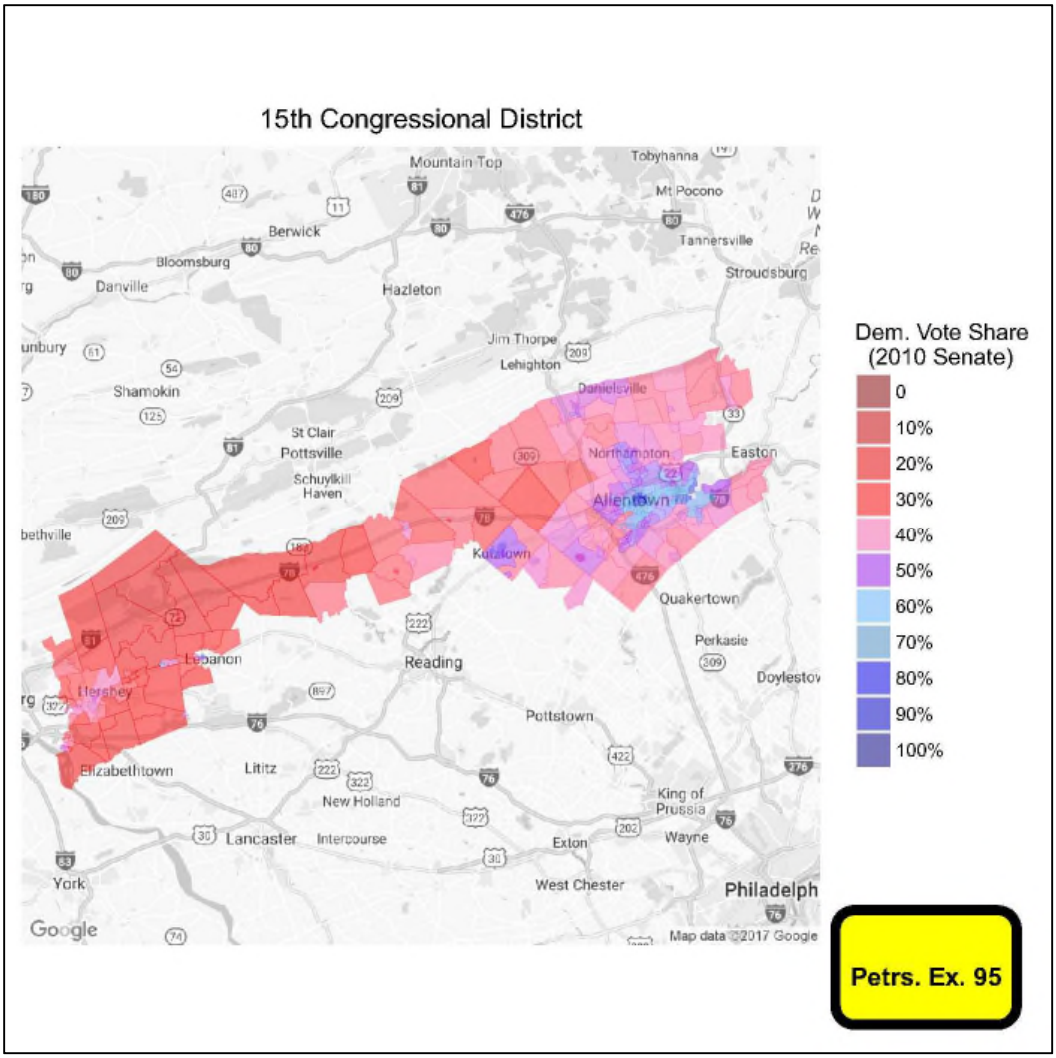
41. Leaving Erie County intact historically not only preserved it as a distinct community of interest, but also made sense given Erie County's location in the northwestern corner of the state, bordering Ohio to its west, New York to its east, and Lake Erie to its north. Tr. 597:10-23; Petrs. Ex. 68. With Erie County split in half, Erie County's strongly Democratic voters are cracked and diluted across two different districts. Petrs. Ex. 53 at 24, 27. The 3rd District extends from Erie southward to encompass Republican-leaning areas in Butler County,

shifting the partisan make-up of this district in favor of Republicans. Petrs. Ex. 53 at 24. Likewise, the 5th District to the east, where Republican voters have always held a significant advantage, remains a safe Republican seat despite the addition of the cracked off Democratic voters from the eastern portion of the Erie metropolitan area. Tr. 597:17-598:5; Petrs. Ex. 53 at 27.



42. Legislative Respondents have offered no non-partisan explanation for the decision to split Erie County.

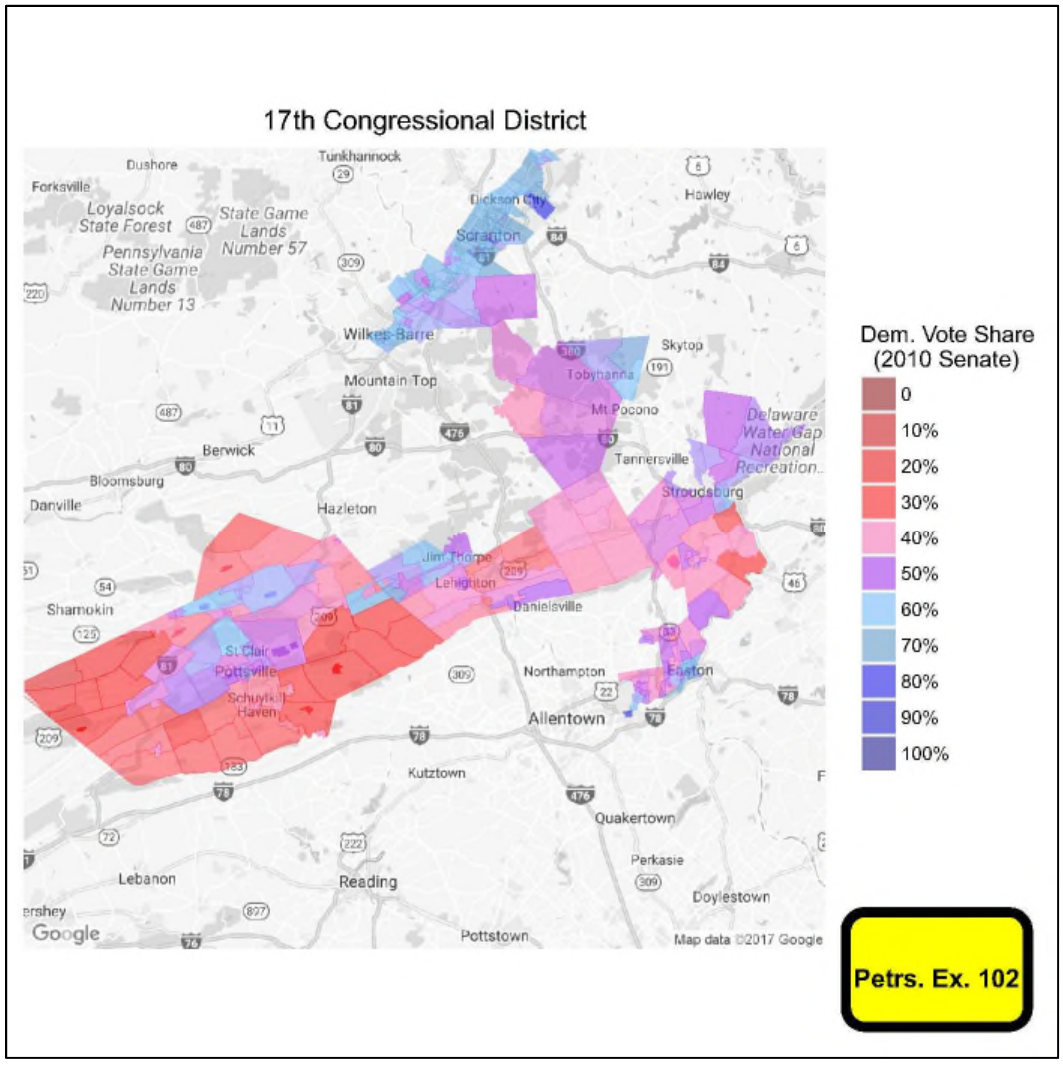
43. The 15th District had historically been a Lehigh Valley-based district, with the maps from 1971 until 2011 always containing Northampton and Lehigh Counties together and undivided (with the exception of one division of one township split from the remainder of Lehigh County in the court-ordered 2002 map). Tr. 623:15-22; Petrs. Ex. 53 at 48. But the 2011 map moves the mostly Democratic voters residing in the seat of Northampton County (Easton) and its largest city (Bethlehem) from the remainder of the 15th District. Tr. 624:25-625:9. These Democratic voters from the Lehigh Valley are now packed into the 17th District. The distinctive community of the Lehigh Valley—home of the "Lehigh Valley Chamber of Commerce," the "Lehigh Valley International Airport," and the "Lehigh Valley Iron Pigs" minor league baseball team—has been carved up for the map's partisan purpose of diluting Democratic voters. Tr. 624:9-18, 626:8-11.



44. Legislative Respondents have offered no non-partisan explanation for the decision to divide the Lehigh Valley.

45. The packing of Democratic voters from Easton and Bethlehem into the 17th District results in a district shape that resembles a "Transformer." Tr. 628:3-17. The Democratic voters from Easton and Bethlehem are lumped together with other Democratic voters in Wilkes-Barre, Scranton, and East Stroudsburg, even though they are an entirely separate communities of interest. Tr. 628:11-17;

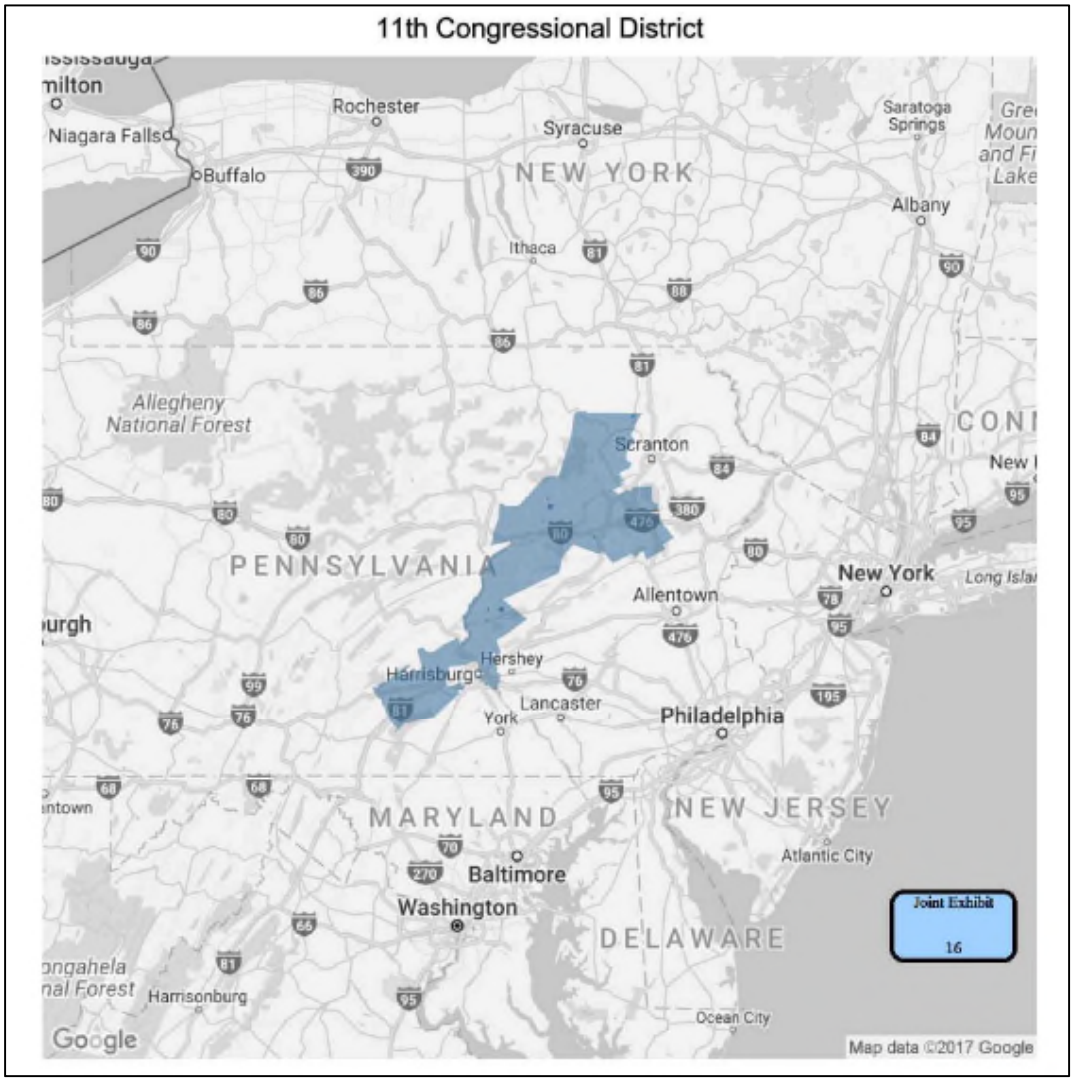
Petrs. Ex. 102. The combined effect is to pack and waste Democratic votes in one of Pennsylvania's few Democratic districts. Petrs. Ex. 53 at 54.



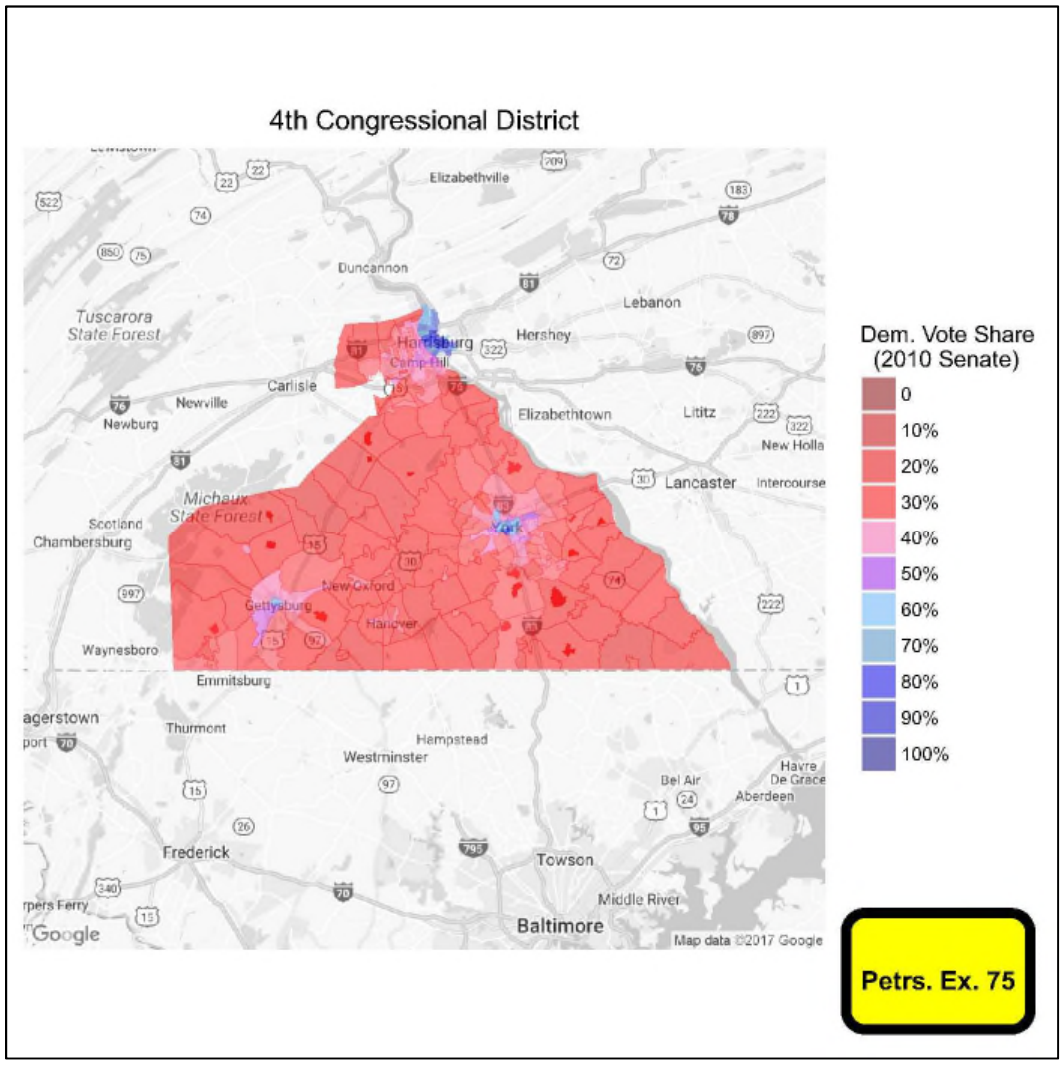
46. Legislative Respondents have offered no non-partisan explanation for grouping these far-flung Democratic communities into the 17th District.

47. The packing of the Scranton/Wilkes-Barre area into the 17th District splits off these two Democratic-leaning seats of Lackawanna and Luzerne Counties from the remainder of those Counties. Tr. 630:1-17. As a result, the southern

portion of Luzerne County is now in the 11th District, which constitutes a 200-mile long district that runs vertically from northeast Pennsylvania all the way to the south central portion of the Commonwealth, splitting Dauphin County and ending in Cumberland County. Tr. 630:1-17; Petrs. Ex. 53 at 40-41. A resident of the 11th District in Nicholson, Wyoming County, would need to travel 80 miles just to get to the nearest district office in Hazelton. Tr. 630:18-23; Petrs. Ex. 53 at 40-41.



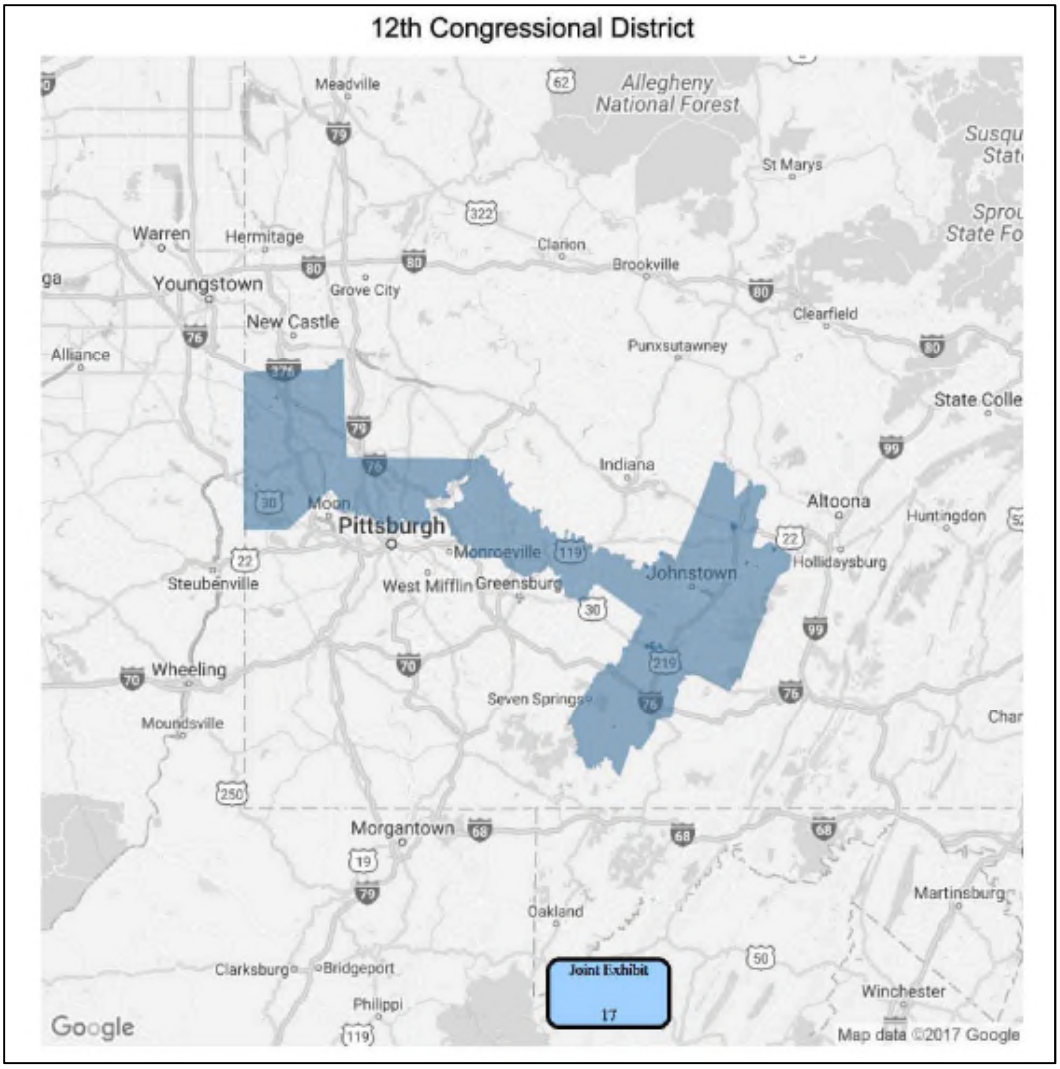
48. The 2011 map splits Harrisburg, a Democratic stronghold, between the 4th and 11th Districts. Petrs. Ex. 53 at 25. The southern tip of the 11th District grabs a piece of Harrisburg, while the remainder of Harrisburg is placed into the 4th District. Tr. 631:1-8. Harrisburg's Democratic voters thus are cracked into two different overwhelmingly Republican districts. Petrs. Ex. 53 at 25.



49. Legislative Respondents have offered no non-partisan explanation for the splitting of Harrisburg between the 4th and 11th Districts.

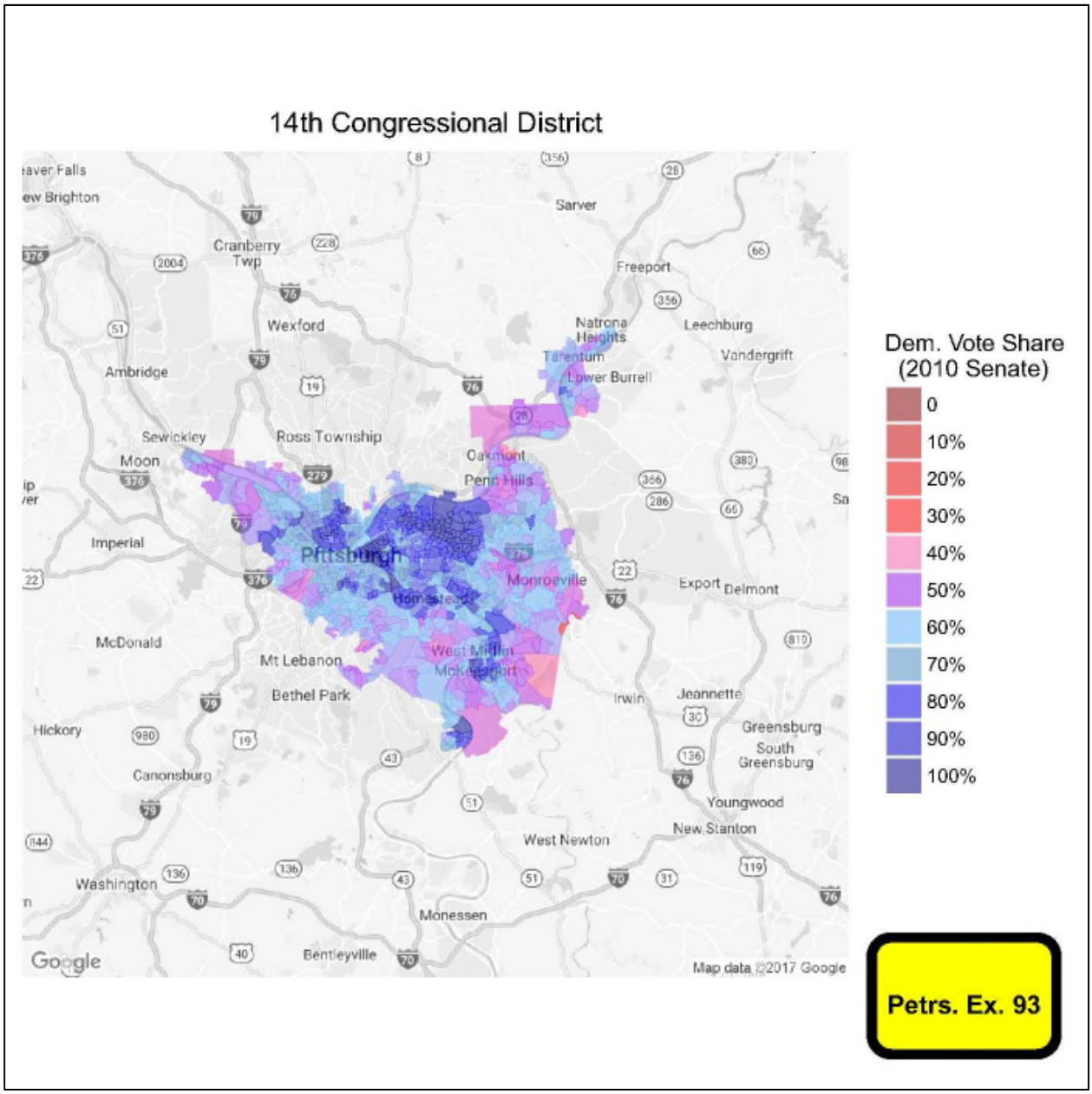
50. The 2011 map also engages in another form of partisan gerrymander known as "hijacking." Tr. 634:9-12. It merged the previous 4th and 12th districts to create the current 12th District, which stretches from the Ohio and West Virginia border across Lawrence, Beaver, Allegheny, and Westmoreland counties before jetting outward in Cambria and Somerset Counties on its eastern side. Tr. 633:15-25, 634:6-8. The 12th District bypasses four other districts along the way from the Ohio border to Johnstown. Its clear purpose was to pit two incumbent Democratic congressmen, Jason Altmire and Mark Critz, against each other. Tr. 634:8-25, 634:13-24. As a result, Critz defeated Altmire in the Democratic primary, before losing to the Republican candidate in the general election—a two-seat swing of Pennsylvania's congressional delegation in favor of Republicans. Tr. 634:13-635:5; Petr. Ex. 53 at 42.

51. Legislative Respondents have offered no non-partisan explanation for why Altmire and Critz were paired together rather than two incumbents who lived closer to one another.



52. Critz's loss was made more probable by the anomalous gap in the 12th District that runs northeast of Pittsburgh along the Allegheny River. Tr. 633:18-22, 636:5-14. That "tentacle" stretching to the north of the 14th District ensnares the Democratic river communities, cracking those voters out of the 12th District. Joint Ex. 17; Petrs. Ex. 93. This feature packs the Democratic voters in the tentacle into the Democratic-dominated 14th District that contains Pittsburgh,

eliminating any influence these voters would otherwise have on the redrawn 12th District and diluting their overall impact. Tr. 636:5-14.



53. Legislative Respondents have offered no non-partisan explanation for the decision to place the Democratic voters in these river communities in the 14th District rather than the 12th District.

54. As Dr. Kennedy testified, "This is a gerrymandered map." Tr. 644:15.

C. The 2011 Map Deliberately Discriminates Against Democratic Voters Based on Their Prior Votes and Projected Future Votes

1. Legislative Respondents Analyzed and Considered Partisan Voting Preferences in Drawing the 2011 Map

55. On November 9, 2017, the federal court in *Agre v. Wolf* ordered Speaker Turzai to produce the "facts and data considered in creating the 2011 Plan." Order, *Agre*, No. 2:17-cv-4392, ECF No. 76 ¶ 2 (E.D. Pa. Nov. 9, 2017). Petitioners' counsel in the instant case provided their expert, Dr. Jowei Chen, with 13 GIS shapefiles that Petitioners' counsel told Dr. Chen had been produced by Speaker Turzai in response to the federal court's order. Tr. 294:16-295:6; Petrs. Ex. 1 at 38 (Chen Report). Dr. Chen—an Associate Professor in the Department of Political Science at the University of Michigan, Ann Arbor, with extensive experience in redistricting matters—was able to readily determine what these files represented and the purposes for which they were used. Petrs. Ex. 1 at 38.

56. Dr. Chen explained that one of the files, titled "Turzai - 01674," contained election results for every precinct in Pennsylvania for every statewide election, legislative election, and congressional election between 2004 and 2010. Petrs. Ex. 1 at 38; Tr. 299:10-301:1. Dr. Chen determined that, within the file, these elections results were used to calculate ten different partisan indices that

measured the partisan performance of each precinct. Petrs. Ex. 1 at 38-39; Tr. 301:10-302:19.

57. Dr. Chen explained that one of the partisan indices, titled "INDEX08," appeared to be very strongly correlated with the precinct-level Republican vote margin across a range of recent elections at the time of the 2011 redistricting. Petrs. Ex. 1 at 38-39; Tr. 304:3-21. According to Dr. Chen, the index contained values ranging from -1376 to +2957 for each precinct, assigning positive, higher values to precincts with heavier support for Republican candidates. *Id.* Based on his experience and expertise in redistricting matters, Dr. Chen concluded that this was a partisan index that measured the support within each precinct for Republican or Democratic candidates in Pennsylvania elections preceding the 2011 redistricting. *Id.*

58. Dr. Chen testified that another of the indices, titled "INDEX04," contained values ranging from -930 to +1050, again with precincts voting more heavily in favor of Republican candidates having positive, higher values. Petrs. Ex. 1 at 39; Tr. 303:4-304:2. Dr. Chen found that INDEX04 exhibited a near-perfect correlation with the partisan results of the 2004 Presidential and US Senate elections in Pennsylvania, suggesting that INDEX04 was a partisan index crafted using the results of various 2004 statewide elections. *Id.*

59. Dr. Chen determined that seven of the eight remaining partisan indices assigned partisan scores to each precinct based on the results of individual elections. Petrs. Ex. 1 at 39-40. Namely, there were separate partisan indices based on the results in each precinct in the 2008 Presidential election, the 2010 U.S. Senate election, the 2010 U.S. House elections, the 2010 state house elections, the 2010 gubernatorial election, the 2008 Attorney General election, and the 2004 Presidential election. Again, each of these indices assigned a score for each precinct, with higher, positive values representing a precinct with better Republican performance and lower, negative value representing a precinct with better Democratic performance. Petrs. Ex. 1 at 39-40; Tr. 305:5-307:5. Dr. Chen explained that the final of the 10 indices assigned partisanship scores based on voter registration statistics. Petrs. Ex. 1 at 40; Tr. 307:12-19.

60. Dr. Chen testified that two of the other files, named "Turzai - 01653.DBF" and "Turzai - 01644.DBF," contained the same ten partisan indices, but calculated at the county- and municipality-level rather than the precinct-level. Petrs. Ex. 1 at 41; Tr. 308:22-309:5. Dr. Chen thus testified that the files assigned partisanship scores to each county and municipality in Pennsylvania. Tr. 308:22-309:5. Dr. Chen testified that a fourth file, titled "Turzai - 01641," contained elections results at the census-block level. Petrs. Ex. 1 at 41; Tr. 309:6-15.

61. Dr. Chen explained that the partisan indices contained in these files are not publicly available. Petrs. Ex. 1 at 41. He concluded that these indices represented a significant effort at measuring and comparing the partisan performance of Pennsylvania voters in elections preceding the 2011 plan. *Id.*

62. There was no genuine dispute at trial as to the files' authenticity. Indeed, the Court invited Legislative Respondents' counsel to cross-examine Dr. Chen regarding any authenticity questions, but they never did. Tr. 297:14-20.

63. Based on Dr. Chen's analysis of these files, the Court finds that the creators of the 2011 map assigned partisanship scores to every precinct, municipality, and county across Pennsylvania in order to draw congressional district boundaries that would maximize Republican advantage.

2. Dr. Chen's Expert Testimony Established That Partisan Intent Was the Predominant Factor in Drawing the Map

64. Independently of the Turzai files, Dr. Chen analyzed the question of whether partisan intent was the predominant factor in the drawing of the 2011 plan. Tr. 165:7-10; Petrs. Ex. 1 at 2. Dr. Chen concluded that partisan intent predominated over traditional districting criteria, and that the Republican advantage under the 2011 plan cannot be explained by Pennsylvania's geography, by a hypothetical non-partisan effort to protect incumbents, or by a hypothetical effort to create a district with a particular African-American voting age population.

Tr. 166:10-17; Petrs. Ex. 1 at 3-4, 21, 29, 35. The Court adopts Dr. Chen's conclusion that partisan intent predominated in the creation of the 2011 plan.

65. To reach his conclusions, Dr. Chen used a computer algorithm to create a large number of random, simulated congressional districting plans for Pennsylvania that adhere to traditional districting criteria. Tr. 166:81-8. Dr. Chen has employed a similar simulation approach in his academic work and in expert testimony in other cases. Tr. 158:2-164:1. The Court finds that Dr. Chen's simulated plans provide a reliable and statistically accurate baseline against which to compare the 2011 enacted plan. Petrs. Ex. 1 at 5. By comparing Dr. Chen's simulated plans to the enacted plan, the Court can reliably assess whether the characteristics and partisan outcomes under the enacted plan could plausibly have resulted from a non-partisan process or be explained by Pennsylvania's political geography. *Id.* at 5-6. Such "alternative plan[s]" are "powerful evidence." *Holt v. 2011 Legislative Reapportionment Comm'n*, 38 A.3d 711, 756-57 (Pa. 2012).

66. Dr. Chen created a total of 1,000 simulated plans, comprised of two different sets of 500 plans. In the first set, which Dr. Chen describes as "Simulation Set 1," Dr. Chen's algorithm generated 500 simulated plans that follow the traditional districting principles of equal population, contiguity, minimizing county splits, minimizing municipality splits, and compactness. Tr. 166:25-167:20. Dr. Chen explained that these are the traditional districting

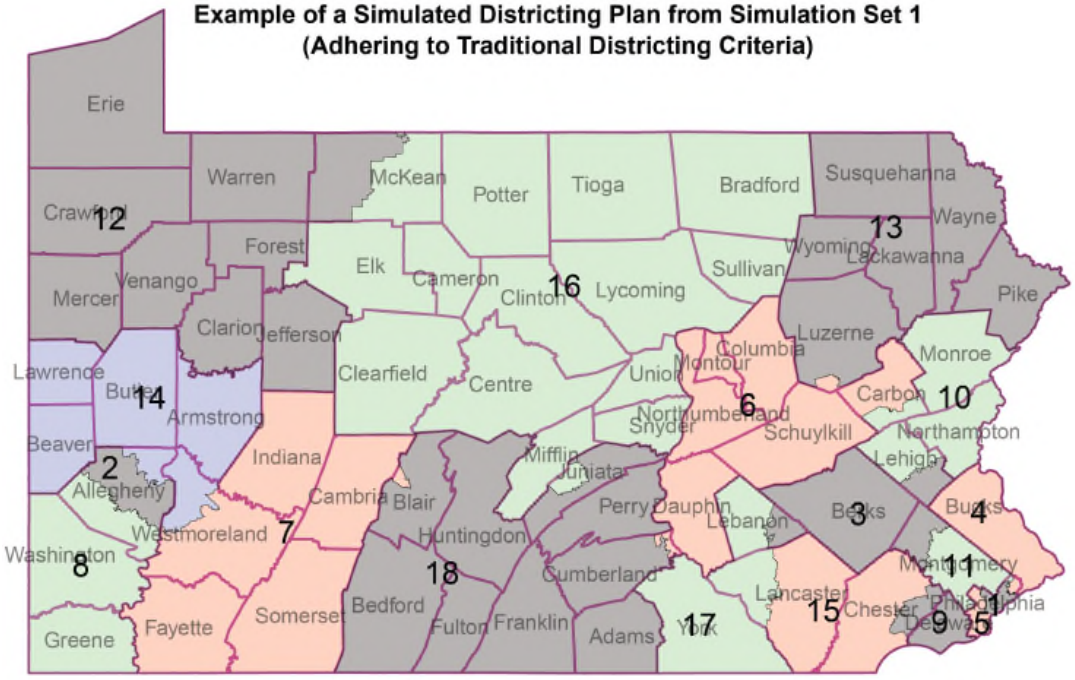
principles applied to congressional districting plans across the country, and that the Pennsylvania Constitution enshrines for state legislative districts. Tr. 167:23-168:23; Petrs. Ex. 1 at 7-8. These traditional principles "have deep roots in Pennsylvania constitutional law" and "represent important principles of representative government." *Holt*, 38 A.3d at 745.

67. Dr. Chen could have incorporated into his simulations any additional non-partisan criteria that the General Assembly used in creating the 2011 plan, but he could not do so because Legislative Respondents refused to provide any information about the criteria they used. Tr. 169:8-170:5.

68. Petitioners' Exhibit 3 provides an example of one of Dr. Chen's 500 simulated maps in Simulation Set 1:

Chen Figure 1:

Example of a Simulated Districting Plan from Simulation Set 1
(Adhering to Traditional Districting Criteria)



	Simulated Map:	Enacted Map:
Expected Republican Seats:	9	13
Counties Split:	14	28
Average Reock Compactness Score:	0.442	0.278
Average Popper-Polsby Compactness Score:	0.310	0.164

Petrs. Ex. 3

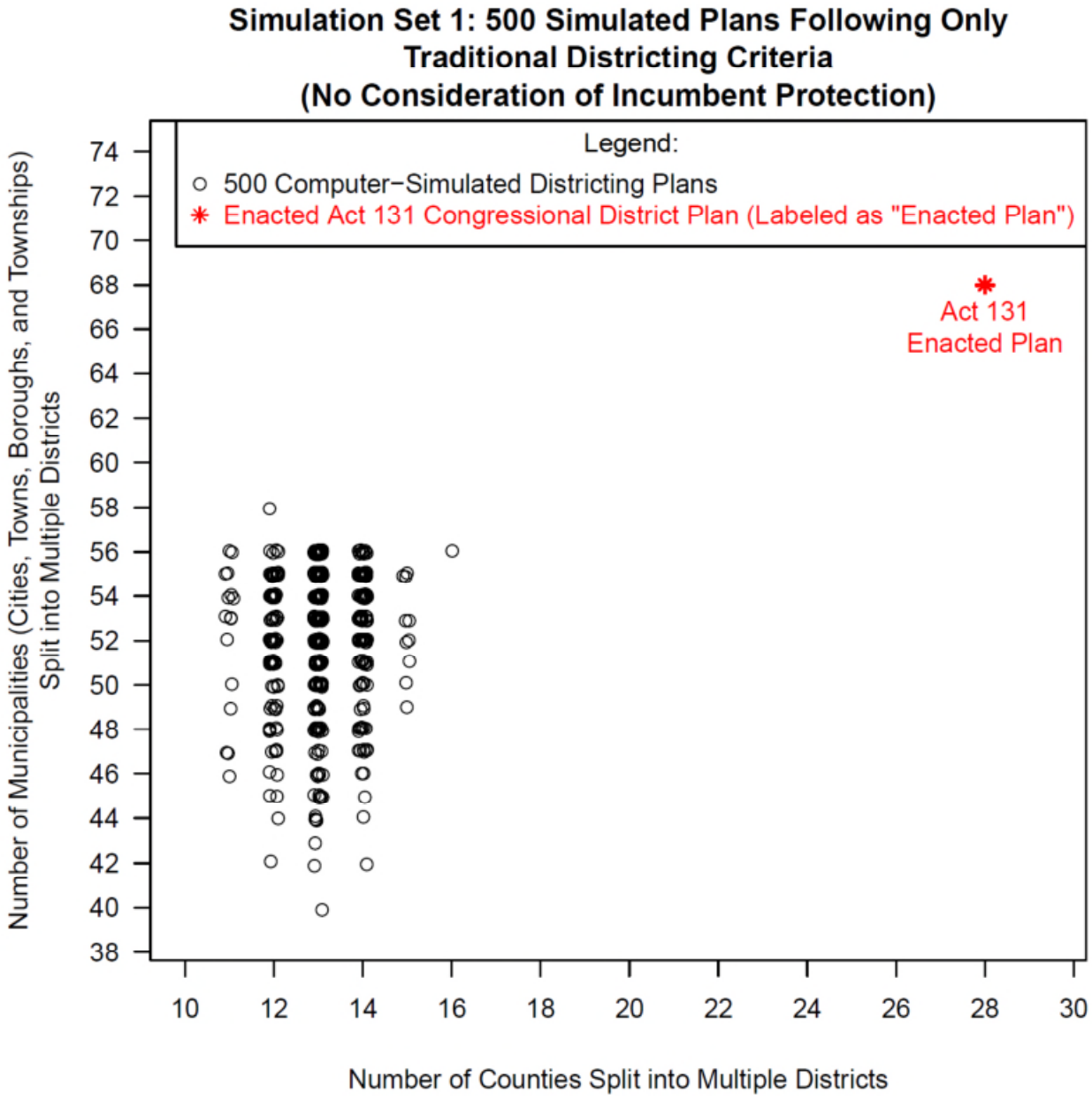
See also Tr. 172:3-177:18.

69. Dr. Chen compared the 500 simulated plans in Simulation Set 1 to the 2011 enacted plan along a number of measures. First, Dr. Chen compared the number of counties that the simulated and enacted plans split. The enacted plan splits 28 of Pennsylvania's 67 counties. Petrs. Ex. 4; Tr. 179:20-25. The 500 plans in Simulation Set 1 split a range of only 11 to 16 counties, with most splitting just 12 to 14 counties. From this, Dr. Chen concluded with over 99.9% statistical certainty that the enacted plan's splitting of 28 counties was not an outcome that

plausibly could have emerged from a districting process that prioritized traditional districting criteria rather than partisan intent. Petrs. Ex. 1 at 17.

70. The enacted plan also splits significantly more municipalities than do Dr. Chen's simulated plans. Tr. 180:18-23. While the enacted plan splits 68 municipalities, the simulated plans in Simulation Set 1 split a range of only 40 to 58 municipalities. Petrs. Ex. 4; Tr. 180:3-23.

71. Petitioners' Exhibit 4 depicts the number of counties and municipalities split under the enacted plan and the 500 simulated plans in Simulation Set 1:



Petrs. Ex. 4; *see* Tr. 179:9-19.

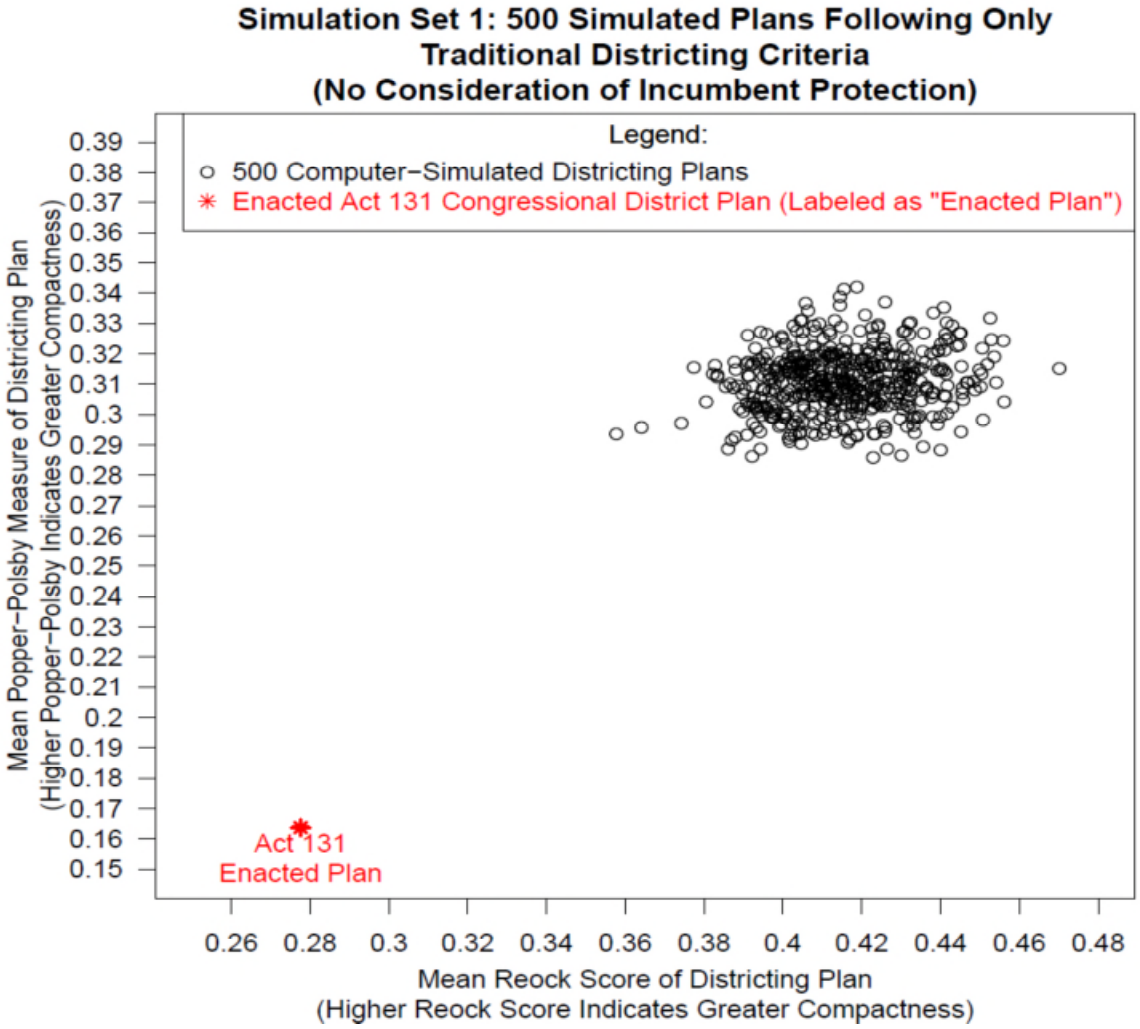
72. The Court finds that the enacted plan failed to follow the traditional districting criterion of avoiding the unnecessary splitting of counties. *Id.*

73. The Court finds that the enacted plan splits more municipalities than necessary. Petrs. Ex. 1 at 18; *see Holt*, 38 A.3d at 756-57 (alternative plans that

split fewer political subdivisions render it "inconceivable . . . that the magnitude of the subdivision splits [in the enacted plan] was unavoidable").

74. Dr. Chen also compared the compactness of the simulated plans to the 2011 enacted plan. Dr. Chen employed two widely used measures of compactness known as Reock and Popper-Polsby scores. Tr. 174:7-175:4, 176:1-8. For both, a higher score indicates that a plan's districts are more compact. *Id.* Dr. Chen found that the districts in all 500 simulated plans in Simulation Set 1 are more compact than the 2011 plan. Petrs. Ex. 1 at 19. As measured by both the Reock score and the Popper-Polsby score, the compactness of the 2011 plan is far outside the range of scores produced by the 500 simulated plans. Petrs. Ex. 5; Tr. 182:2-184:9.

75. Petitioners' Exhibit 5 depicts the compactness of the enacted plan and the 500 simulated plans in Simulation Set 1:



Petrs. Ex. 5.

76. The Court finds that the 2011 plan did not attempt to draw districts that were compact while adhering to other traditional districting criteria. Petrs. Ex. 1 at 19; Tr. 184:4-9.

77. To measure the partisanship of each hypothetical district in his simulated plans, Dr. Chen used precinct-level voting data from recent elections in Pennsylvania. Tr. 184:22-189:15. Dr. Chen overlaid this precinct-level voting data onto the boundaries of the hypothetical districts in his simulated plans to

determine whether those districts lean Democratic or Republican. Petrs. Ex. 1 at 6, 12. In other words, Dr. Chen looked at the set of precincts that would comprise a particular district in a simulation, and calculated whether that simulated district would be won by a Republican or Democrat based on prior elections results in that set of precincts. *Id.*

78. In his primary analysis, Dr. Chen measured the partisanship of each precinct using results from the six statewide elections in Pennsylvania in 2008 and 2010. Tr. 186:19-21; Petrs. Ex. 1. Those elections were the Presidential, Attorney General, Auditor General, and State Treasurer elections in 2008 and the U.S. Senate and gubernatorial elections in 2010. Tr. 187:1-9. Dr. Chen used the precinct-level votes from these elections to measure the partisanship of each precinct because they were the most recent statewide elections available to the General Assembly at the time of the 2011 redistricting and because all six elections were reasonably closely contested. Petrs. Ex. 1 at 13-14.

79. Dr. Chen estimated the partisan outcome in a simulated district as follows: He determined the set of precincts that would comprise that simulated district, and then he aggregated the total votes for Republican candidates in those precincts in the six statewide elections in 2008 and 2010, and the total votes for Democratic candidates in those same precincts in the same elections. Tr. 194:23-197:4-198:22; Petrs. Ex. 1 at 14. If there were more aggregate Republican votes

than Democratic voters, Dr. Chen classified the simulated district as Republican, and vice versa. *Id.*

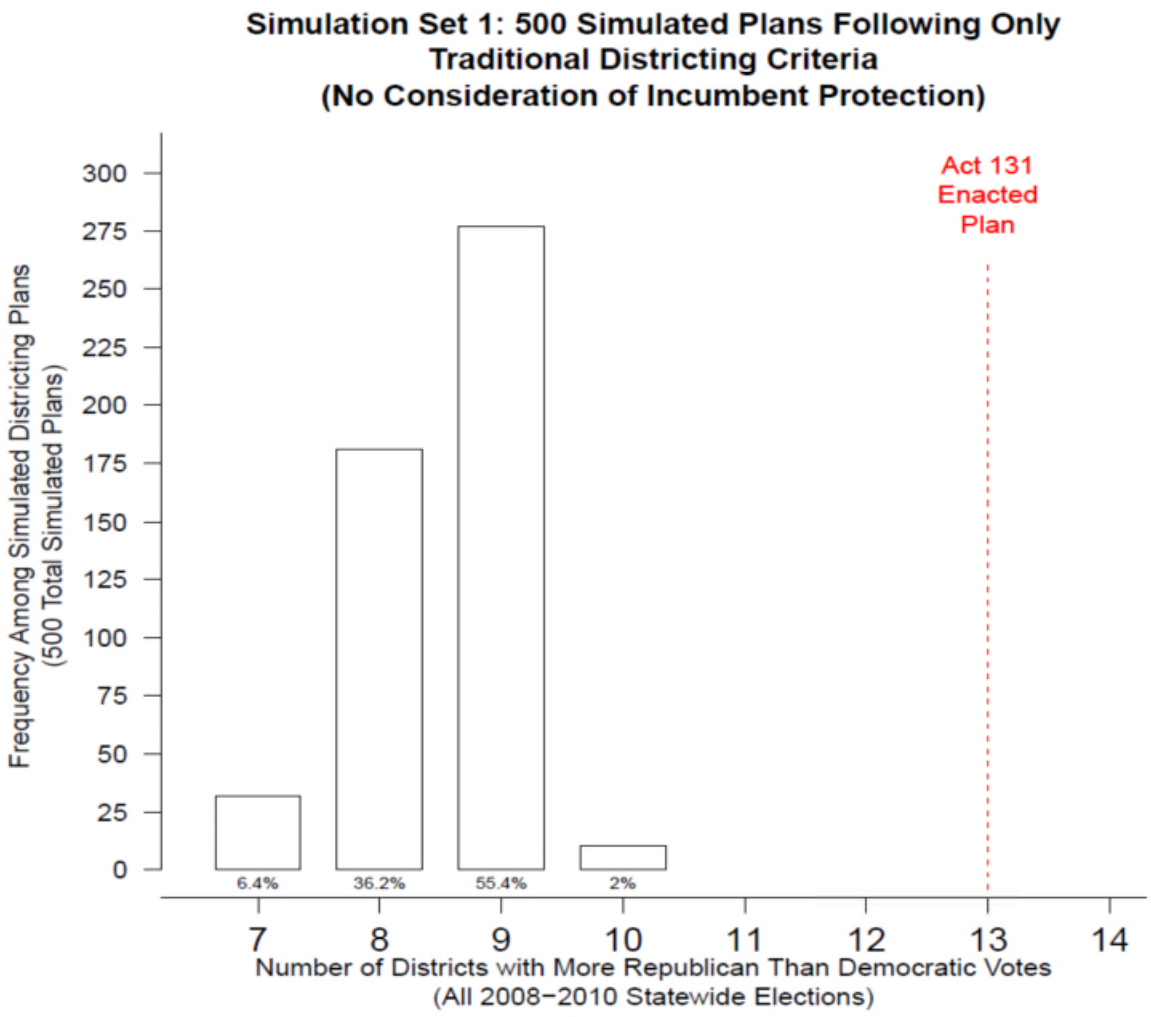
80. The Court finds that Dr. Chen's use of 2008 and 2010 statewide elections to measure the partisanship of the simulated plans is a reliable methodology. Most notably, this methodology perfectly predicts the partisan outcome of the actual congressional elections that have occurred under the 2011 enacted plan. When overlaying the precinct-level votes from these six statewide elections onto the district boundaries of the 2011 enacted plan, there are more Republican votes in 13 of 18 districts—the same 13 districts that Republicans have won in each of the three congressional elections under the 2011 plan. Tr. 201:4-202:5. That indicates that the 2008 and 2010 statewide elections are an accurate predictor of congressional elections in Pennsylvania, and that using these statewide elections allows for a direct, apples-to-apples comparison of the partisanship of the 2011 plan and of the simulated plans. Tr. 202:6-203:6.

81. Indeed, partisan legislators drawing congressional districts commonly use recent statewide elections to predict expected partisanship. Tr. 190:9-191:9; Petrs. Ex. 1 at 12-13. As is commonly accepted among political scientists, competitive statewide elections are the most reliable method of predicting and comparing the partisanship of different legislative districts within a state. Tr.

190:3-6; Petrs. Ex. 1 at 12. The Court finds that Dr. Chen's predictions of partisan outcomes—under both the enacted plan and the simulated plans—are reliable.

82. With this measure of partisanship, Dr. Chen analyzed the partisan outcomes under his 500 simulated plans in Simulation Set 1. A majority of the simulated plans (277 of 500) produce nine Republican districts—*i.e.*, a 9-9 split between the parties among the 18 total districts. Petrs. Ex. 1 at 15-16; *see* Tr. 199:2-200:24. Most of the remaining plans produce eight Republican districts—a 10-8 Democratic advantage. *Id.* None of the 500 simulations produce the 13 Republican districts that exist under the 2011 plan; in fact, none of the simulated plans lead to even 11 or 12 Republican districts. *Id.*

83. Petitioners' Exhibit 6 depicts the distribution of seats that Republican are expected to win under the enacted plan and under the simulated plans in Simulation Set 1:



Petrs. Ex. 6.

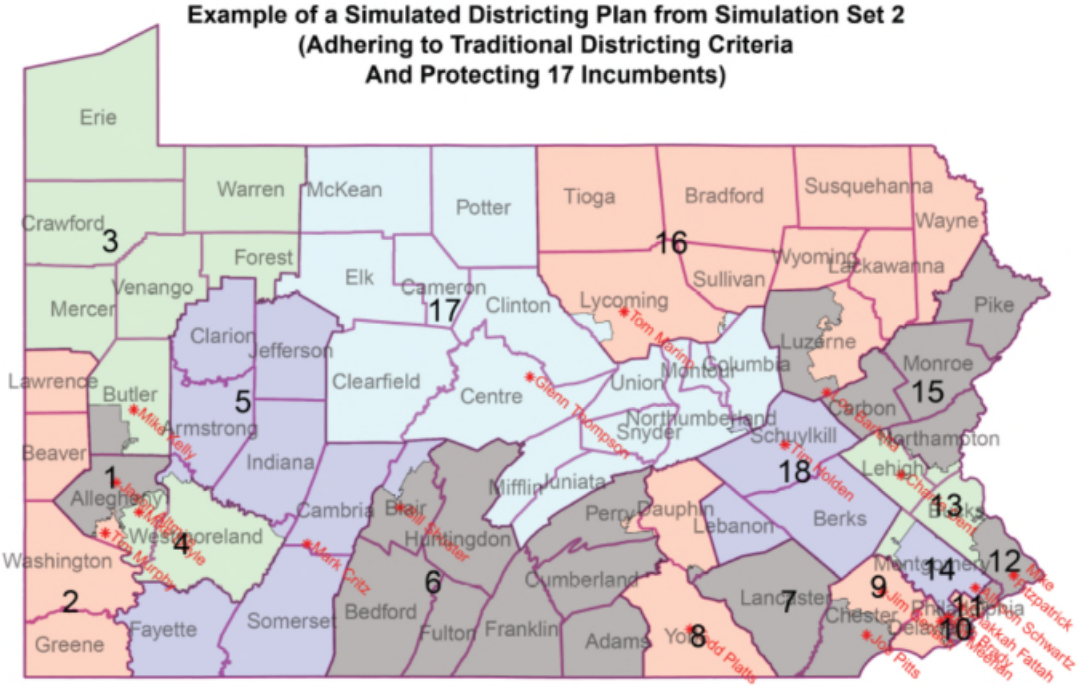
84. Dr. Chen concluded with over 99.9% statistical certainty that the 2011 plan's creation of a 13-5 Republican advantage would never have emerged from a districting process adhering to traditional districting principles. Tr. 203:14-204:2. Based on the collective results of Simulation Set 1, Dr. Chen concluded that extreme partisan intent predominated over traditional districting principles in the creation of the 2011 plan. Tr. 204:8-15. The Court agrees with that conclusion.

85. In his second set of simulations, which Dr. Chen describes as Simulation Set 2, Dr. Chen added to his simulations the additional criterion of avoiding the pairing of incumbents. Tr. 205:20-207:8; Petrs. Ex. 1 at 23-24. Dr. Chen does not consider incumbency protection to be a traditional districting principle, but he ran these simulations to evaluate whether a hypothetical goal of protecting incumbents in a non-partisan manner could explain the partisan bias of the 2011 plan. *Id.* Dr. Chen programmed his algorithm to avoid pairing 17 of 19 incumbents in place at the time of the 2011 redistricting. Tr. 207:9-309:14. (The 2011 plan had to pair at least two incumbents because Pennsylvania lost a seat after the 2010 Census. *Id.*) Simulation Set 2 use the same traditional districting criteria as Simulation Set 1, plus this incumbency protection measure. *Id.*

86. Petitioners' Exhibit 7 depicts one of the 500 simulated plans in Simulated Set 2. The red stars in the map represent the home addresses of the 19 incumbents in office at the time of the 2011 redistricting:

Chen Figure 1A:

Example of a Simulated Districting Plan from Simulation Set 2 (Adhering to Traditional Districting Criteria And Protecting 17 Incumbents)

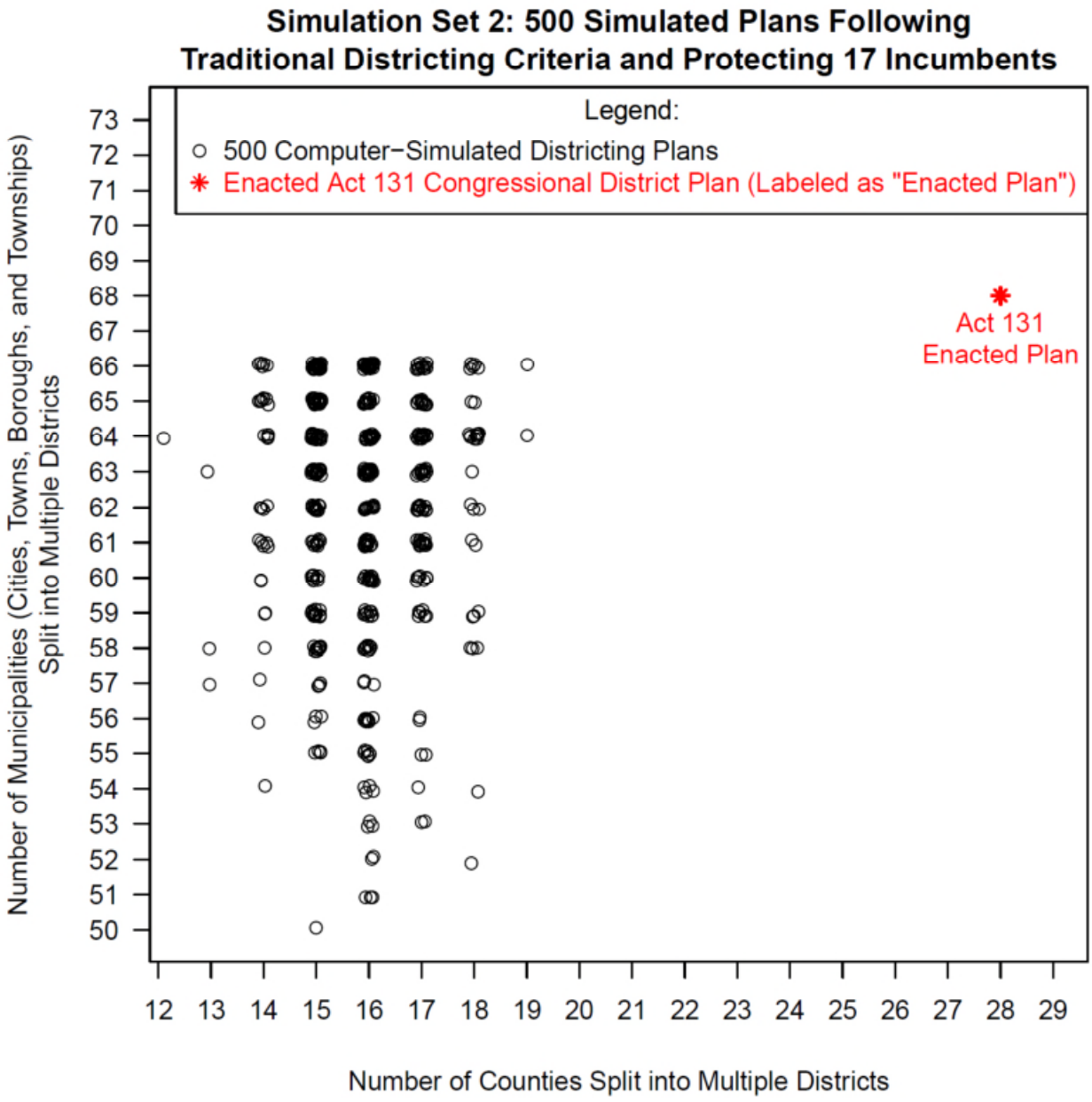


	Simulated Map:	Enacted Map:
Expected Republican Seats:	9	13
Counties Split:	15	28
Average Reock Compactness Score:	0.396	0.278
Average Popper-Polsby Compactness Score:	0.273	0.164
Incumbents Paired:	Jim Gerlach & Pat Meehan	Jason Altmire & Mark Critz

Petrs. Ex. 7

87. As with Simulation Set 1, the differences between the 2011 plan and the 500 simulated plans in Simulation Set 2 are stark. The simulated plans split from 12 to 19 counties, compared to the 28 counties split in the 2011 plan. Tr. 215:7-216:18; Petrs. Ex. 1 at 24-25. All 500 simulated plans split fewer municipalities than the enacted plan. Tr. 216:19-217:7; Petrs. Ex. 1 at 24-25.

88. Petitioners' Exhibit 8 depicts the number of counties and municipalities split under the enacted plan and the 500 simulated plans in Simulation Set 2:

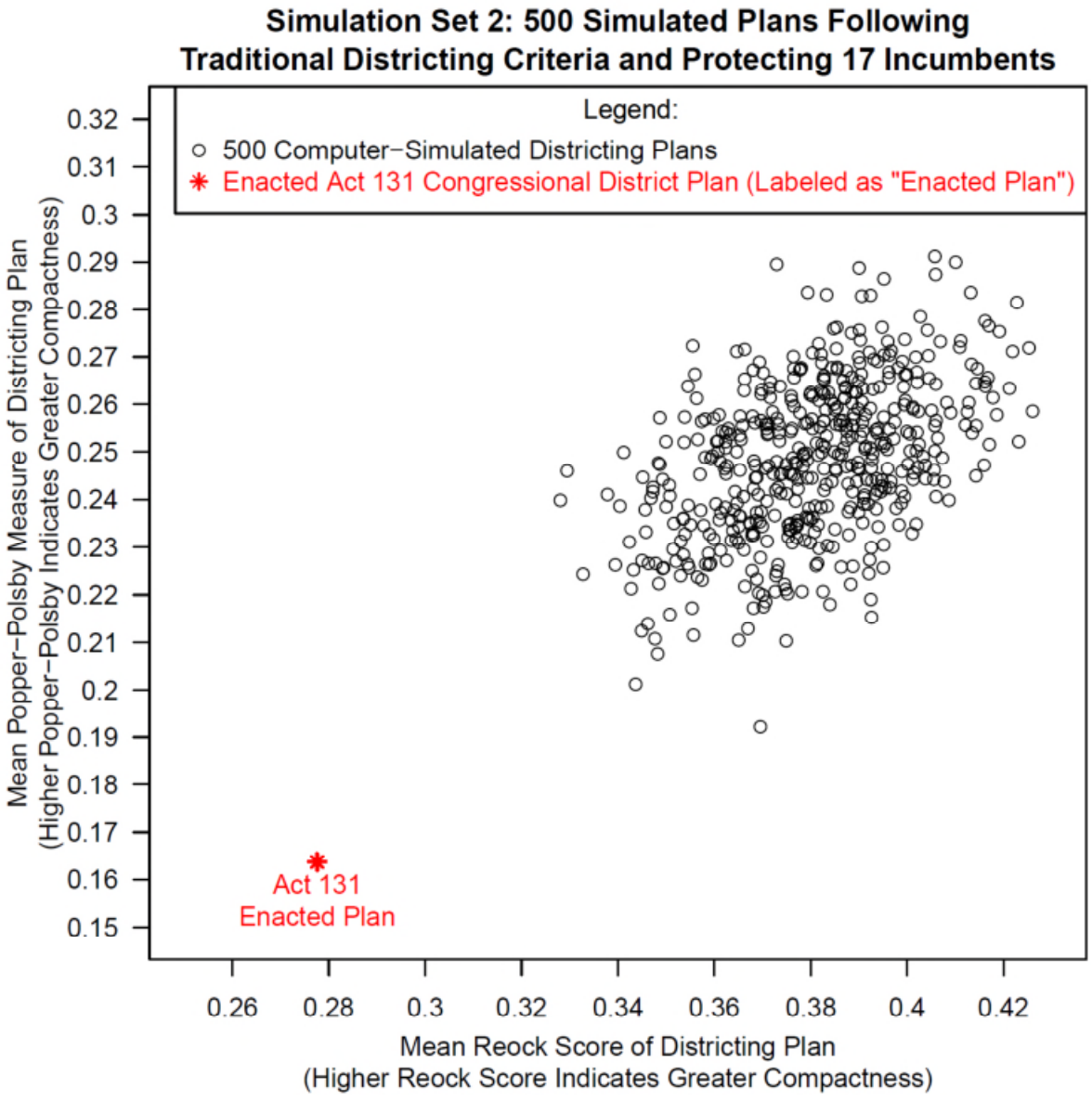


Petrs. Ex. 8.

89. The Court finds that a hypothetical non-partisan goal of protecting incumbents cannot justify or explain the number of counties and municipalities that the enacted plan splits. Tr. 217:10-21; *see Holt*, 38 A.3d at 756-57.

90. Likewise, Dr. Chen's Simulation Set 2 establishes that a hypothetical goal of not pairing incumbents cannot explain the lack of compactness of the 2011 plan. All 500 plans in Simulation Set 2 have much more compact districts than the 2011 plan. Tr. 218:9-220:5; Petrs. Ex. 1 at 24, 26.

91. Petitioners' Exhibit 9 depicts the compactness of the enacted plan and the 500 simulated plans in Simulation Set 2:

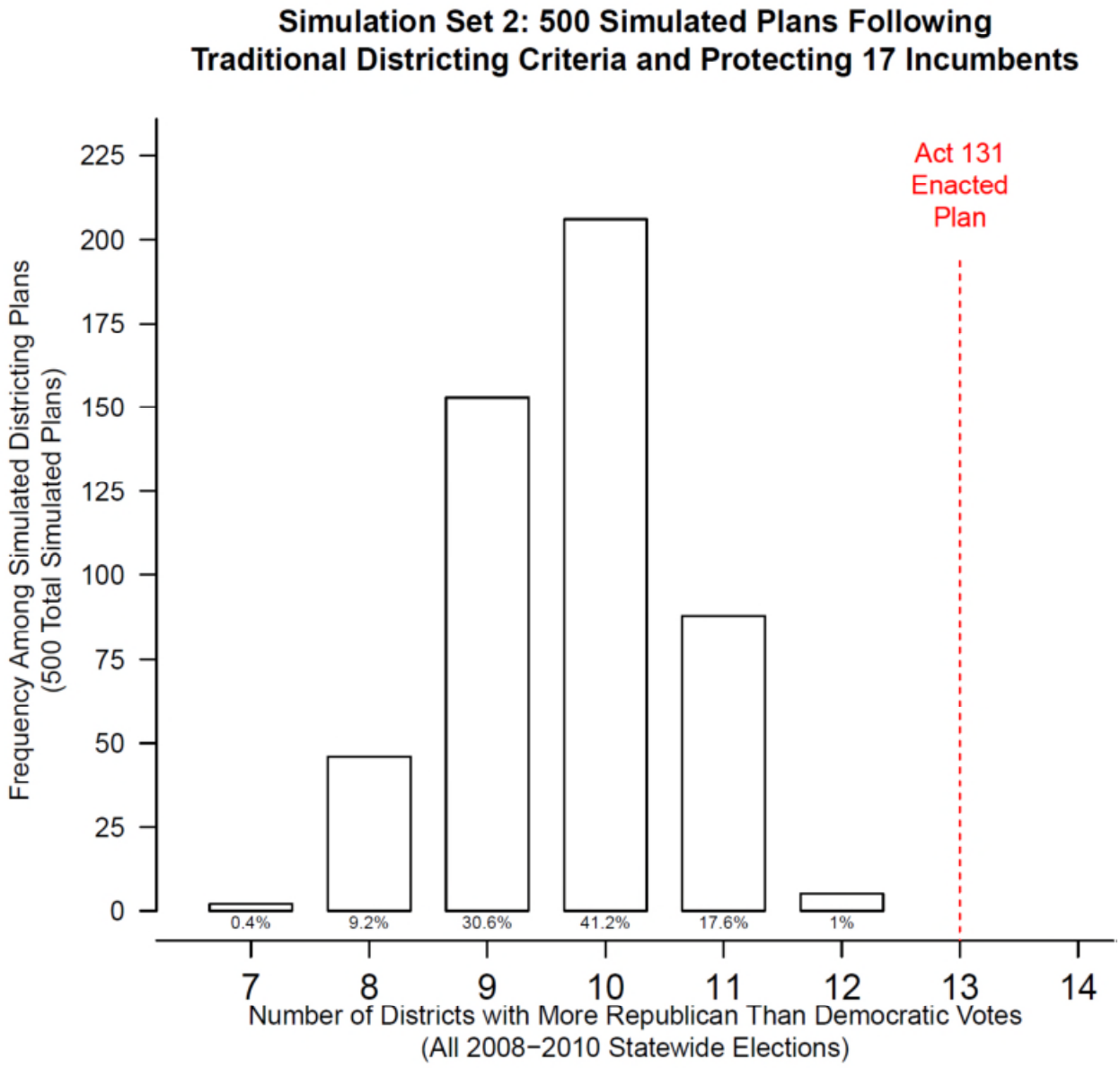


Petrs. Ex. 9.

92. Dr. Chen analyzed the partisan breakdown of the simulated plans in Simulation Set 2 using the same process he did for Simulation Set 1—by overlaying the precinct-level results of the six statewide elections in 2008 and 2010 onto the boundaries of the simulated districts. Tr. 221:14-20. The number of expected Republican districts increased slightly from Simulation Set 1 to Simulation Set 2. Tr. 233:22-234:21. That occurred because any effort to protect incumbents inherently favors the party previously holding more seats, and 12 of 19 incumbents were Republican at the time of the 2011 redistricting. *Id.* Dr. Chen explained that this inherent bias would be particularly pronounced if the prior plan were gerrymandered to favor Republicans. Tr. 234:22-235:20. The Pennsylvania Supreme Court has concluded that the prior plan was deliberately drawn to favor Republicans. *Erfer v. Commonwealth*, 794 A.2d 325, 332 (Pa. 2002).

93. Dr. Chen found that even with this baked-in bias, a hypothetical non-partisan effort to avoid pairing incumbents still could not explain the Republican advantage under the 2011 plan. Tr. 235:21-237:1. The most common outcome in Simulation Set 2 was the creation of plans with 10 Republican districts, with a 9-9 split being the second most common outcome. Tr. 221:21-222:15; Petrs. Ex. 1 at 27-28. Again, not a single one of the 500 simulated plans produced the 13-5 Republican advantage that exists under the 2011plan. *Id.*

94. Petitioners' Exhibit 10 depicts the distribution of seats that Republican are expected to win under the enacted plan and under the simulated plans in Simulation Set 2:



Petrs. Ex. 10.

95. This allowed Dr. Chen to conclude with overwhelmingly high statistical certainly that a non-partisan effort to protect incumbents cannot explain the partisan bias of the 2011 plan. Tr. 222:19-223:2; Petrs. Ex. 1 at 27. The Court finds this conclusion to be reliable and finds that Simulation Set 2 confirms that partisan intent was the predominant factor behind the 2011 plan. Tr. 223:3-6.

96. Petitioners' Exhibit 12 summarizes Dr. Chen's comparisons:

Chen Table 1: Summary of Two Sets of Simulated Districting Plans and Enacted Act 131 Plan

	Act 131 Plan (Senate Bill 1249):	Simulation Set 1:	Simulation Set 2:
Description:	General Assembly's Enacted Plan	Simulated maps only follow traditional districting criteria	Simulated maps protect 17 incumbents and otherwise follow traditional districting criteria
Total Number of Simulated Plans:		500 simulated maps	500 simulated maps
Number of Split Counties:	28	11 to 16	12 to 19
Number of Split Municipalities:	68	40 to 58	50 to 66
Incumbents Protected:	17	3 to 13	17
Average Reock Score (Compactness):	0.278	0.358 to 0.470	0.328 to 0.426
Average Popper-Polsby Score (Compactness):	0.164	0.286 to 0.342	0.192 to 0.291
Republican Districts (using 2008-2010 statewide elections):	13	7 (32 simulations) 8 (181 simulations) 9 (277 simulations) 10 (10 simulations)	7 (2 simulation) 8 (46 simulations) 9 (153 simulations) 10 (206 simulations) 11 (88 simulations) 12 (5 simulations)

Petrs. Ex. 12

97. Dr. Chen also found that the specific pairing of incumbents that occurred under the 2011 plan is one that could not have occurred under a non-

partisan process that adhered to traditional districting criteria. Tr. 225:19-226:5. Under the 2011 plan, the two incumbents paired together were Jason Altmire and Mark Critz, both Democrats. Tr. 224:19-21. Yet Altmire and Critz are never paired together in any of the 500 plans in Simulation Set 2. Tr. 225:25-226:5; Petrs. Ex. 1 at 30-31. Dr. Chen found ten different pairings of incumbents that could have occurred if there had been a non-partisan effort to pair only 2 of 19 incumbents, and Altmire and Critz are not among the possible pairings. Petrs. Ex. 11. Dr. Chen explained that Altmire and Critz are never paired in his simulated plans because they did not live remotely close to one another; they did not live in the same county or even in adjacent counties. Tr. 226:25-227:14.

98. Petitioners' Exhibit 11 summarizes the incumbent pairings that occurred, and the frequency of those pairings, in Simulation Set 2:

Chen Table 3: Paired Incumbents under Simulation Set 2
(Simulations Protecting 17 of 19 Incumbents
While Following Traditional Districting Criteria)

Incumbent Pair:	Percent of simulated plans in which incumbent pair is placed into the same district:
Jim Gerlach & Pat Meehan	**40.2%**
Bob Brady & Pat Meehan	**34.4%**
Bob Brady & Chakkah Fattah	**18.2%**
Jim Gerlach & Joe Pitts	**0.6%**
Pat Meehan & Joe Pitts	**4.8%**
Bill Shuster & Mark Critz	**0.6%**
Glenn Thompson & Tom Marino	**0.4%**
Tim Murphy & Mike Doyle	**0.4%**
Bill Shuster & Glenn Thompson	**0.2%**
Bob Brady & Allyson Schwartz	**0.2%**

Petrs. Ex. 11

99. The Court finds that any effort to protect incumbents under the 2011 plan was done in a partisan manner to advantage Republican incumbents and disadvantage likely Democratic voters. Tr. 227:15-22.

100. Dr. Chen also established that the partisan bias of the 2011 plan cannot be explained by Pennsylvania's political geography, meaning the geographic locations of Republican and Democratic voters. Tr. 251:21-25. Political geography can create a natural advantage for Republicans in winning congressional seats where, for example, Democratic voters are clustered in urban

areas. Tr. 252:6-253:3. But Dr. Chen designed his simulations with the express purpose of accounting for Pennsylvania's political geography. Tr. 253:7-19. The simulations build districts using the same Census geographies and population data that existed in 2011; thus, the simulated plans capture any natural advantage that one party may have had based on population patterns when General Assembly passed the 2011 plan. Petrs. Ex. 1 at 5-6. That none of the 1,000 simulated plans produces a 13-5 Republican advantage demonstrates that voter geography cannot explain the 2011 plan's extreme Republican bias. Tr. 255:16-256:24.

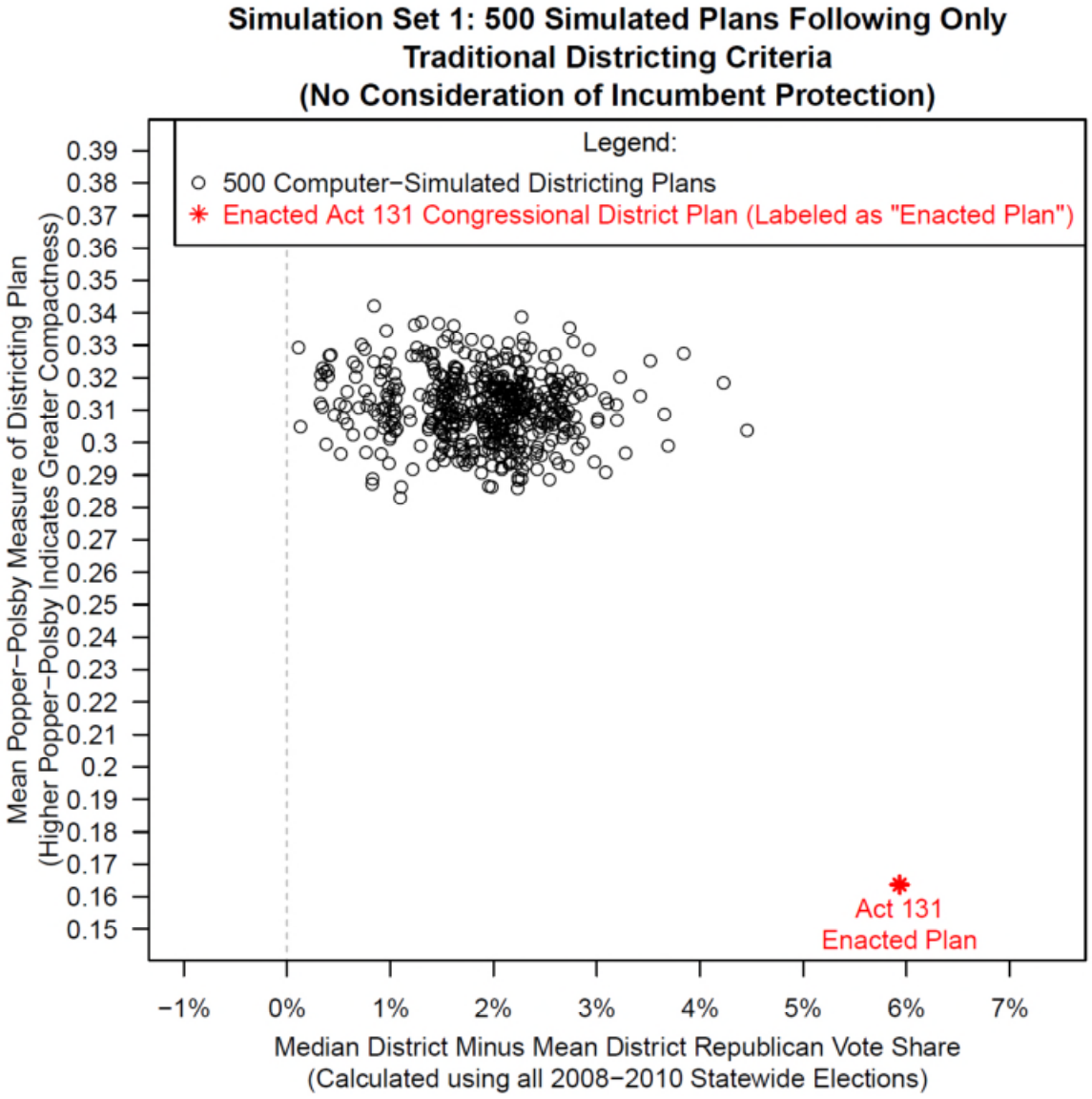
101. Dr. Chen's analysis of the "mean-median gap" further demonstrated that Pennsylvania's political geography cannot explain the 2011 plan's partisan bias. Tr. 256:25-264:16. For purposes of this measure, the Republican "mean" vote share is the average Republican vote share in each of the 18 congressional districts. Tr. 257:10-21. The Republican "median" vote share is the Republican vote share in the district where Republicans performed the middle-best out of the 18 districts; hence, it is the Republican vote share in the district that either party needs to win to earn a majority of seats. Tr. 257:22-258:10-19. The mean-median gap is simply the difference between the mean and median. Tr. 258:20-259:6.

102. If the Republican mean vote share is lower than the Republican median vote share, that is favorable for Republicans because it indicates that Republicans can win the median district even when their mean vote share across

the state is less than 50%. Tr. 259:7-21. On the flip side, if the Democratic mean vote share is higher than the Democratic median vote share, that means it is harder for Democrats to win a majority of seats. Tr. 259:22-260:13. This can result from the clustering of Democratic voters in urban centers, since lopsided Democratic victories will be reflected in the Democratic mean vote share (making it higher), but not in the Democratic vote share in the median district. Tr. 261:9-17.

103. Dr. Chen found that under the 2011 plan, the mean-median gap is equal to 5.9% in Republicans' favor. Tr. 260:18-261:8. Dr. Chen concluded that this mean-median gap cannot be explained by Pennsylvania's political geography. Tr. 261:18-266:15; Petrs. Ex. 1 at 20-21. The 500 simulated plans in Simulation Set 1 produce mean-median gaps generally ranging from 1%-3%. Tr. 262:5-263:25. That range reflects a small natural Republican advantage due to political geography, but not an advantage nearly as large as that under the 2011 plan. *Id.* None of the 500 simulated plans produced a mean-median gap as large as that under the 2011 plan. *Id.*

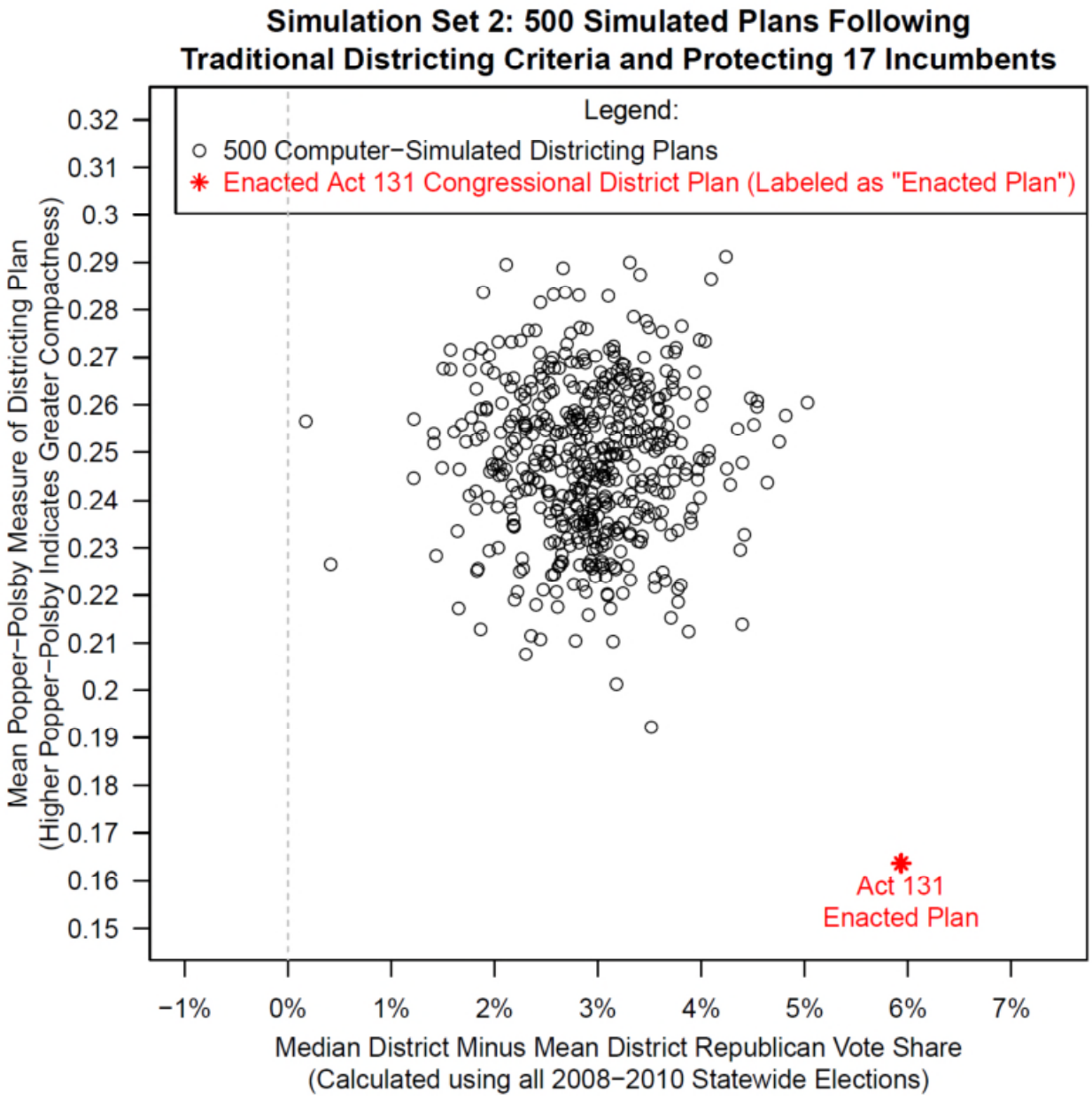
104. Petitioners' Exhibit 16 depicts the mean-median gap of the 2011 plan and the 500 simulated plans in Simulation Set 1:



Petrs. Ex. 16.

105. Dr. Chen found similar results under Simulation Set 2. Even when protecting 17 of 19 incumbents, none of the 500 simulated plans produced a mean-median gap as large as the 5.9% gap under the 2011 Plan. Tr. 265:9-266:15.

106. Petitioners' Exhibit 17 depicts the mean-median gap of the 2011 plan and the 500 simulated plans in Simulation Set 2:



Petrs. Ex. 17.

107. The Court finds that Dr. Chen's mean-median gap analysis confirms that political geography does not explain the Republican bias of the 2011 plan.

108. Dr. Chen conducted a robustness analysis to support his conclusions regarding the partisan intent and effects of the 2011 plan. Tr. 282:6-24; Petrs. Ex.

1 at 44-45. As a robustness check, Dr. Chen measured the partisanship of the enacted plan and of the simulated plans using a different set of statewide elections than the 2008 and 2010 elections he previously used; he now used all 11 statewide elections in Pennsylvania from 2012 to 2016. Tr. 283:2-20.

109. As with the 2008-2010 statewide elections, Dr. Chen found that Republican candidates in these 2012-2016 statewide elections received more votes than Democratic candidates in 13 of 18 districts under the 2011 plan. Tr. 284:20-285:5. Again, those 13 districts are the same districts that Republican congressional candidates have won in every election under the 2011 plan. Tr. 285:6-16. This indicates that the 2012-2016 statewide elections are also an accurate predictor of congressional elections under the 2011 plan, and that the precinct-level results from these elections allow for direct comparisons between the enacted plan and simulated plans. Tr. 285:16-286:2. What's more, when combined with the prior analysis using the 2008-2010 elections, this result shows that across all statewide elections in Pennsylvania over the last 10 years, Republican candidates have received more votes than Democratic candidates in 13 of 18 districts under the 2011 plan. Tr. 286:3-18. In other words, the 2011 plan is simply a 13-5 Republican plan in the underlying partisanship of its districts. *Id.*

110. Dr. Chen thus applied the precinct-level results from the 2012-2016 statewide elections to the same 1,000 simulated plans analyzed previously. In

Simulation Set 1, the vast majority of the simulated plans produce 9 Republican districts using the 2012-2016 data, and almost all of the remaining simulated plans result in 8 or 10 Republican districts. Tr. 287:11-288:5; Petrs. Ex. 19. In Simulation Set 2, Republicans win 9 or 10 districts in over 75% of the simulated plans. Petrs. Ex. 20; Tr. 289:15-290:10. As with the 2008-2010 data, Republicans do not win 13 districts in any of the 1,000 simulated plans using the 2012-2016 elections data. Tr. 292:3-19; Petrs. Exs. 19, 20.

111. The Court finds that this robustness analysis bolsters Dr. Chen's conclusions regarding the partisan intent of the 2011 plan. Using two different sets of statewide elections—which combined reflect all statewide elections in Pennsylvania over the last ten years—the partisan bias of the 2011 plan cannot be explained by the traditional districting criteria, by Pennsylvania's political geography, or by a hypothetical non-partisan effort to protect 17 of 19 incumbents. Petrs. Ex. 1 at 49. Dr. Chen's analysis leads to the inescapable conclusion that partisan intent predominated in the creation of the 2011 enacted plan.

112. Legislative Respondents' expert, Dr. Wendy Tam Cho, offered no opinion as to whether Pennsylvania's map was gerrymandered, instead seeking only to rebut Dr. Chen's analysis. The Court finds that Dr. Cho was not a reliable witness.

113. In her expert report, in a section entitled "What is the Simulation Algorithm?," Dr. Cho stated that Dr. Chen "does not describe his algorithm in any detail in his report," that "the algorithmic details determine the output produced," and that "omitting the details is not acceptable." Leg. Resps. Ex. 11 at 18. Dr. Cho stated that Dr. Chen presented a "black box" and that a "learned reader [lacked] sufficient information to independently evaluate and implement said algorithm." Leg. Resps. Ex. 11 at 19. She said that based on Dr. Chen's purported failure to disclose the algorithm, "[i]t is not clear that his algorithm produces a set of maps that is not biased in some systematic way." Leg. Resps. Ex. 11 at 19.

114. In her testimony, Dr. Cho changed stories. Dr. Cho acknowledged that she was offered the opportunity to examine Dr. Chen's source code, but declined to do so because she was unwilling to sign the parties' confidentiality agreement limiting her use of the code to this case. Tr. 1224:8-1225:20.

115. Dr. Cho then took the position that she "did not" "have to review Dr. Chen's source code in order to reach [her] conclusion[s]" about how it operated. Tr. 1141:5-8. Directly contradicting her report, Dr. Cho explained that she didn't need the code: "I understand what Dr. Chen is trying to do regardless of whether I see his exact code . . . because he's described it well enough." Tr. 1294:8-13.

116. Dr. Cho proceeded to evaluate Dr. Chen's simulations based on her understanding of his algorithm. Specifically, Dr. Cho predicated her analysis on

the assumption that, in this case, Dr. Chen employed an algorithm that he had used in a 2013 academic paper. Tr. 1136-4:1143:6. That algorithm would first pick a random geographic unit to begin building a simulated district. Tr. 1137:23-1138:9. Dr. Cho testified that she understood the second step of the 2013 algorithm to add the adjacent unit that was geographically closest to the first unit. *Id.* Dr. Cho believed that the second step of the 2013 algorithm, and all subsequent steps, were "completely determined" by the first point chosen because the algorithm always added the adjoining unit that met a fixed criterion (being the one geographically closest). Tr. 1140:6-1142:18. According to Dr. Cho, this meant that if the 2013 algorithm picked the same starting point twice, it would "create[] the exact same map." *Id.* Dr. Cho therefore opined that Dr. Chen's simulated plans were not "random maps," Tr. 1142:3-7, and that this lack of randomness rendered Dr. Chen's simulations a unreliable method of evaluating the 2011 plan's partisan bias. Tr. 1166:12-1167:20.

117. Dr. Cho had it wrong. Had Dr. Cho reviewed the source code that Dr. Chen turned over to Legislative Respondents, she would have quickly learned that Dr. Chen did not use his 2013 algorithm in this case. Tr. 1656:22-24. In the algorithm that Dr. Chen did use here, a starting building block on the map is selected at random, and at the critical second step, a neighboring building block is *also added at random.* Tr. 1157:12-1158:2. The algorithm then continues to add

adjoining building blocks at random. Tr. 1158:3-9. Dr. Chen displayed and explained his code in open court to prove this was the case. Tr. 1658:9-1661:3.

118. Dr. Cho thus predicated her entire analysis of Dr. Chen's simulations on an incorrect understanding of his algorithm. Tr. 1656:15-21. Indeed, Dr. Cho said elsewhere in her testimony that one *could* make meaningful comparisons between simulated plans and the enacted plan if the simulated plans were random and independent. Tr. 1133:18-22. Dr. Chen's simulations were exactly that.

119. Dr. Cho made several verifiably inaccurate statements about Dr. Chen's analysis. Dr. Cho said three different times in her testimony that, in a 2016 academic paper, Dr. Chen described the algorithm he used to simulate maps for that paper only in a footnote. Tr. 1135:7-10, 1171:15-20, 1172:19-21. Dr. Cho declared that, because the algorithm was merely "described in a footnote," there had not been proper "validation" of it. Tr. 1171:15-20; *see also* Tr. 1172:19-21 (Dr. Cho testifying that "if you publish in Political Science and put the algorithm in a footnote, that's not a validation of the algorithm"). This was incorrect. Dr. Chen's 2016 paper includes an entire section titled "The Automated Districting Algorithm," which provides extensive details on the algorithm used over several lengthy paragraphs in the main body of the article. Leg. Resps. Ex. 39 at 331-32. That 2016 algorithm also assigned the second building block at random. Tr. 1663:25-1664:6.

120. Dr. Cho also inaccurately claimed that Dr. Chen did not release his source code for the algorithm used in the 2016 paper. Tr. 1246:16-1247:12. Dr. Cho claimed that Dr. Chen disclosed only a "binary executable" for the 2016 paper, *id.*, but Dr. Chen showed on rebuttal that he had in fact disclosed the source code behind the 2016 algorithm, Tr. 1664:20-1665:9. The Court finds that Dr. Cho's inaccurate statements on these matters undermine her reliability.

121. Based on these totality of the circumstances, the Court ascribes no weight to Dr. Cho's testimony as it relates to Dr. Chen.

122. Legislative Respondents' other expert, Dr. Nolan McCarty, likewise offered no opinion as to whether Pennsylvania's map was gerrymandered. Tr. 1417:1-3. Instead, he opined that Dr. Chen's analysis was flawed because Dr. Chen supposedly did not use a good indicator of how Pennsylvanians would vote for Congress. Tr. 1500:21-1501:3.

123. Even though both of Dr. Chen's measures of partisanship—the 2008-2010 statewide elections and the 2012-2016 statewide elections—perfectly predicted the outcomes in all 54 U.S. House elections held under the 2011 map, Dr. McCarty claimed that Dr. Chen's measures "overstate[] how favorable the 2011 enacted plan was to Republicans." Leg. Resps. Ex. 17 at 11. According to Dr. McCarty's measure, notwithstanding the fact that Republicans have won 13

seats in all three elections since 2011, the enacted map "should have produced from 9 to 11 Republican seats." Leg. Resps. Ex. 17 at 11; Tr. 1472:11-14.

124. Dr. McCarty's measure also suggested that "all" of Dr. Chen's simulated maps—which ignored partisan considerations—were *more favorable to Republicans* than the enacted map, which was drawn by a Republican-controlled General Assembly and signed by a Republican Governor. Tr. 1529:23-1530:18; *see* Leg. Resps. Ex. 17 at 12. Dr. McCarty says that this shows Dr. Chen's analysis failed to support a finding that the enacted map is an outlier with respect to its pro-Republican advantage. Leg. Resps. Ex. 17 at 13; *see* Tr. 1489:19-1490:1.

125. Dr. McCarty employed a novel and convoluted method of estimating the partisanship of the enacted map. Dr. McCarty first calculated a Partisan Vote Index ("PVI") for each district based on the 2004 and 2008 Presidential elections. Tr. 1421:6-1423:2. He then generated a probability that a given PVI would produce a Republican or Democratic result by looking at the results of congressional races from across the United States that had the exact same PVI at the time of the congressional election. Tr. 1428:1-1431:3. According to Dr. McCarty, he did this to create an uncertainty factor—the notion that even if a district was Republican leaning, in some percentage of cases of cases, it would vote Democratic. Leg. Resps. Ex. 17 at 7-9. Finally, Dr. McCarty simulated 1,000 elections using his calculated probabilities. Leg. Resps. Ex. 17.

126. The most obvious flaw in Dr. McCarty's approach is that it repeatedly yielded the wrong result. In his 1,000 simulated elections, Dr. McCarty's measure predicted the actual 13 Republican-seat outcome only 3% of the time. Tr. 1451:21-1452:1. In the other 97% of the simulations, his measure produced something else, typically closer to just 10 Republican seats. Tr. 1453, 1517:3-11; Leg. Resps. Ex. 18, Figure 3. In fact, according to Dr. McCarty, it was twice as likely that Republicans would win just *7 of 18 seats* under the 2011 plan than it was that they would win the 13 seats they have won in real life in three straight elections. Tr. 1523:17-21; Leg. Resps. Ex. 18, Figure 3. Dr. McCarty estimated that it was four times as likely that Republicans would win 8 of 18 seats than the 13 seats they have won in the real world, and seven times as likely that they would win 9 seats as compared to the 13 seats they have won in the real world. Tr. 1615:2-14; Leg. Resps. Ex. 18, Figure 3. Dr. McCarty offered no substantive explanation for why his predictions were so inaccurate; he merely asserted without explanation that Republicans have "over performed." Leg. Resps. Ex. 18 at 10.

127. Based on his PVI measure, Dr. McCarty also opined that there were 10 supposedly competitive districts. Tr. 1443:4-16. There have been three congressional elections conducted under the enacted map, meaning that there have been a total of 30 elections in Dr. McCarty's so-called competitive districts. In the real world, the Republican candidates have won all 30 of these elections. Tr.

1590:16-1591:1. Dr. McCarty's classification of these districts as "competitive" makes clear that something is very askew in his partisanship measure.

128. Other flaws in Dr. McCarty's PVI measure include that he relied entirely on the 2004 and 2008 Presidential elections. Dr. McCarty stated in his direct testimony that "using presidential votes as a measure of partisanship in Congressional districts . . . is commonly accepted." Tr. 1422:10-13. Yet Dr. McCarty said the exact opposite in an expert report in a prior Florida case, where he had said "the use of presidential vote outcomes to predict Congressional elections is problematic" because "presidential election vote is only a crude measure of partisanship and may not predict Congressional voting patterns." Tr. 1501:25-1502:4.

129. Dr. McCarty's turnabouts did not stop there. In this case, Dr. McCarty said in his direct testimony that using all "statewide elections" to measure partisanship was inferior to using just Presidential elections. Tr. 1423: 2-14. But in the Florida case, Dr. McCarty wrote that the "best" way to measure partisanship and predict the outcomes of congressional elections was to "use precinct-level vote returns from other Florida statewide elections." Tr. 1502:7-10. Using statewide elections, including but not limited to Presidential elections, is exactly what Dr. Chen did in this case. Tr. 1504:13-15

130. Dr. McCarty later testified that he used only Presidential elections in this case as a convenience because he wanted to make comparisons with the rest of the country. Tr. 1423:15-19.

131. Dr. McCarty conceded that the 2004 election was a relatively dated election to use in evaluating elections under the 2011 enacted plan, Tr. 1566:6-9, and that ideally he would have used more elections than just two, Tr. 1565:15-17. The fragility of relying on just two presidential elections, one dated, was demonstrated by Dr. McCarty's own work in this case. Although not presented in his report, Dr. McCarty also calculated the PVI for the enacted plan using the 2008 and 2012 elections. Petrs. Ex. 34. Switching the 2012 election for the 2004 election increases the Republican lean. Tr. 1559:15-156:9, Petrs. Ex. 34.

132. While Dr. McCarty testified that he did not use the 2012 election results because they were not available when the 2011 plan was created, Tr. 1475:21-1476:7, this finding should have suggested to him that using other elections, such as more recent elections or all statewide elections as he had advocated in the Florida case, would have produced a more accurate result. Dr. Chen's measure demonstrates this fact; Dr. Chen's use of all 2008 and 2010 statewide elections perfectly estimates the correct results in all districts under the enacted map. Tr. 152:11-18. Dr. McCarty's upside-down view that the enacted map is not the 13-5 Republican map that it is in real life was in part a product of

his choice to use just two Presidential elections, one of which was dated, and to avoid all other statewide elections.

133. Dr. McCarty's translation of his PVI numbers into a Democratic probability of winning was also extremely problematic. Dr. McCarty converted his PVI estimates into a Democratic probability of winning by looking at all congressional elections nationwide from 2004 to 2014, identifying those elections that had the same exact PVI, and calculating the percentage of that subset of elections in which the Democratic candidate won. Leg. Resps. Ex. 18 at 5-6 & app'x A. Dr. McCarty used nationwide elections "not because it's necessarily the best generator of [his] uncertainty principle . . . [but] because it had enough elections that [he] could produce a probability for every PVI imaginable." Tr. 1568:22-1569:1; *see* Tr. 1431:2-11.

134. Dr. McCarty did not point to a single peer-reviewed article that has ever estimated a party's probability of winning congressional districts in a state using such a method. Tr. 1677:15-25 (Dr. Chen). Nor did Dr. McCarty point to any real-life example where a state's partisan mapmakers have used such a method for predicting the partisanship of the districts they are creating. Tr. 1680:2-1681:4 (Dr. Chen). Dr. Chen confirmed that, to his knowledge, no such peer-reviewed article or real-life example exists. Tr. 16177:15-1681:4.

135. The Court concludes that Dr. McCarty's conversion methodology is flawed. It makes no sense to evaluate Pennsylvania elections by looking at elections from other states. Tr. 1680-1681 (Dr. Chen). As Dr. Chen explained, no partisan mapmaker would ever look to congressional election results in other states to predict the partisanship of the districts within their home state. Tr. 1681:5-1683:2 (Dr. Chen). In North Carolina, for example, where mapmakers disclosed the information they relied upon to predict partisan voting, the mapmakers did not look to votes in states other than North Carolina. *Id.*

136. Dr. McCarty's conversion methodology also leads to serious anomalies. For example, Dr. McCarty estimates that when moving from a district with a PVI of 0 to a *more* Democratic-leaning district with a PVI of -1, the Democratic chances of winning somehow goes *down*. Tr. 1684:8-1685:22 (Chen); Leg. Resps. Ex. 18 app'x A. The same anomaly occurs when moving from a PVI of 6 to 5 and from a PVI of -4 to -5. Tr. 1686:20-1687:22 (Chen); Leg. Resps. Ex. 18 app'x A. These anomalies directly impacted Dr. McCarty's analysis of Pennsylvania: Dr. McCarty estimated that Democrats have a better chance of winning District 7 than District 8, even though District 8 has a more Democratic-leaning PVI. Tr. 1688:19-1689:7; Leg. Resps. Ex. 18 at 9.

137. Notwithstanding the dismal prediction record produced by his conversion methodology, Dr. McCarty defended his approach, saying "the

methodology I use is better at predicting Congressional elections in general," Tr. 1525:7-9, only to concede that he had never applied his methodology to any state other than Pennsylvania, an admission wrung out of him only after repeated questions and intervention by the Court. Tr. 1525:12-1529:3.

138. Dr. McCarty's evaluation of Dr. Chen's simulated maps had all these flaws, plus one more. Dr. McCarty could have computed the PVI scores of Dr. Chen's simulated districts directly, but he chose not to do so, purportedly because of the "tight deadline" and the number of "calculations" he would have needed to do. Tr. 1464:20-1465:8-12. Dr. Chen clarified on rebuttal that it would have taken Dr. McCarty no more than an hour to do the calculations. Tr. 1692:17-1693:8.

139. Yet instead of doing so, Dr. McCarty estimated PVI scores for the simulated districts using a makeshift regression analysis. Tr. 1550:8-12, 1464:20-1465:16. According to Dr. McCarty, the regression produced "essentially the same" information as calculating the actual PVI. Tr. 1466:9-12. But the regression had the effect of inflating the expected Republican performance under Dr. Chen's simulated maps. Petrs. Ex. 162. When Dr. McCarty was pointed to a specific simulated map showing that his regression had increased the Republican lean, he assured the Court that it was an outlier. Tr. 1474:3-12; Petrs. Ex. 162. On cross-examination, when confronted with the first ten maps from Dr. Chen's simulation set, Dr. McCarty conceded that every single one showed that his

regression increased Republican lean, Tr. 1554:18-1558:21, and the initial map he had been shown was no outlier, Tr. 1558:24-1559:9. In fact, Dr. McCarty's changed methodology increased the Republican lean on each and every one of Dr. Chen's 1,000 simulated maps, explaining why Dr. McCarty somehow found that Dr. Chen's non-partisan maps are more pro-Republican than the enacted map. Tr. 1697:18-1698:11 (Dr. Chen).

140. Dr. McCarty's testimony was marked by bias and a refusal to consider real-world results and common sense. For example, although his PVI measure failed to estimate the 13 Republican seats that Republicans have won in all three congressional elections under the 2011 plan, Dr. McCarty steadfastly refused to say his method was generating the "wrong" result. Tr. 1517:3-11. Instead, he testified that the mismatch between reality and his measure showed that Republicans winning 13 seats was merely an "outlier." Tr. 1517:8. To Dr. McCarty's way of thinking, the fact that the Republicans in reality won more seats than his measure estimated showed only that Republicans had "overperformed," or that Democrats had "underperformed." Leg. Resps. Ex. 17 at 10; *see* Tr. 1517:7-9 ("[I]t just means the 2012 election was an outlier relative to the fundamentals of the districting plan."), 1518:18-21 ("13 is -- is an outlier, outcome, with respect to what one would expect . . . . I'm showing that the plan was not designed to create 13."). He "disagree[d]" that he should even "consider the possibility that [his]

measure . . . is just not a good predictor of how the real world works." Tr. 1594:10-15. Asked whether he would suggest to one of his Princeton students whose results were off 97% of the time that the student should "at least consider the possibility" that his model "may not be a good model," Dr. McCarty filibustered to avoid answering. Tr. 1594:25-1596:22.

141. With respect to his opinion that Dr. Chen's maps, which were simulated without any partisan information, were more favorable to Republicans under his measure than the enacted map, Dr. McCarty testified that he did not want to consider whether this made any sense given that Republicans controlled both chambers of the General Assembly and the Governor's office at the time, and given the enacted plan's bizarre district shapes. Tr. 1530:18-1537:22, 1541:6-1542:2. And although he testified as an expert in the federal case, Dr. McCarty avoided learning what discovery had been produced there about what information the mapmakers had consulted. Tr. 1535-36:14.

142. Dr. McCarty's head-in-the-sand methodology defies any appreciation of the real world. If Legislative Respondents really believed that all of Dr. Chen's simulated maps made with no partisanship input were better for Republican candidates than the 2011 enacted map, then this case should have settled.

143. In sum, Dr. McCarty's choices had the combined effect of making the enacted plan look *less* Republican that it is in real life and making Dr. Chen's

simulated plans look *more* Republican. Tr. 340:4-341:25. Under the circumstances, it is reasonable to believe that Dr. McCarty adjusted his method because it produced a result more favorable to Legislative Respondents.

144. The Court assigns no weight to Dr. McCarty's testimony as it related to Dr. Chen.

3. Dr. Pegden's Expert Testimony Established That the Map Was Carefully Crafted to Ensure a Republican Advantage

145. Wesley Pegden, Ph.D., an Associate Professor in the Department of Mathematical Sciences at Carnegie Mellon University in Pittsburgh, testified as an expert in mathematical probability. Tr. 707:19-24, 715:25-716:2; Petrs. Ex. 118 (Dr. Pegden's CV). Dr. Pegden, a Pennsylvania native, has published numerous papers on discrete mathematics and probability in high-impact, peer-reviewed journals, and has been awarded multiple prestigious grants, fellowships, and awards. Tr. 709:4-710:20; Petrs. Ex. 118.

146. In early 2017, before this case was even filed, Dr. Pegden published a paper in the Proceedings of the National Academy of Sciences, a top-ranked, peer-reviewed journal. Tr. 710:7-15, 712:4-6, 1368:18-1369:13; Petrs. Ex. 119 (Dr. Pegden's PNAS paper). This paper provides an innovative and rigorous method to identify whether a particular configuration (here, the 2011 enacted plan) is an outlier with respect to a set of candidate configurations (here, the universe of all possible congressional districting maps for Pennsylvania meeting specified

constraints). Tr. 711:4-7. Dr. Pegden's method has a wide range of applications, and his paper used the method specifically to examine the partisanship of Pennsylvania's 2011 congressional districting plan. Tr. 711:10-21, 712:7-713:10, 1368:9-18.

147. For this case, Dr. Pegden evaluated whether the 2011 plan is an outlier with respect to partisan bias and, if so, whether that could be explained by the interaction of political geography and traditional districting criteria. Tr. 716:20-717:1; Petrs. Ex. 117 at 1-2 (Pegden Report). Dr. Pegden concluded that the 2011 plan is indeed an extreme outlier with respect to partisan bias. He found—with a probability of over 99.99%—that the Republican bias of the 2011 plan cannot be explained by political geography or the districting criteria he considered. Tr. 717:2-8; Petrs. Ex. 117 at 1-2, 8.

148. Dr. Pegden's academic paper includes the proof of a mathematical theorem that creates a new way to determine whether a particular configuration is an outlier with respect to a "bag" of all possible configurations. Tr. 719:5-19; Petrs Exs. 117, 119. His theorem makes it possible to do so without analyzing every configuration in the bag, and without randomly selecting configurations from the bag as in conventional statistical sampling approaches. Tr. 719:20-722:6; Petrs. Ex. 117 at 4 & nn.4-5; Petrs. Ex. 119.

149. Dr. Pegden's approach involves Markov chains. A Markov chain is a sequence of random observations for which each observation can depend on the previous observation but not on things that came before it. A Markov chain is therefore often described as a "memoryless random process." Tr. 787:4-8.

150. To analyze the 2011 plan using this technique, Dr. Pegden began with the 2011 plan, made a sequence of small random changes to it, and then observed whether the partisan bias in the districting evaporated or decreased. Tr. 722:9-23. His method calls a districting an "outlier" if its partisan bias decreases when he makes these small random changes. Tr. 723:13-21; Petrs. Ex. 117.

151. Dr. Pegden's method involves four steps. *See generally* Petrs. Ex. 117 at 4. The first step is to start from the configuration that is to be evaluated—here, Pennsylvania's 2011 congressional districting plan. Tr. 725:2-9.

152. In the second step, the software randomly chooses a precinct (also known as a "Voter Tabulation District" or "VTD") on the boundary of two congressional districts, and attempts to move or "swap" this precinct from the district it's in to the district it borders. Tr. 725:10-726:4, 762:1-762:23.

153. At step 2, the swap is allowed only if it would generate a new potential districting that satisfies all the constraints that define the bag of districtings in the particular version of the test being run. These constraints vary from run to run. Three constraints always apply: there must be 18 contiguous

districts, the districts must have approximately equal population, and the districts must be at least as compact as the enacted plan. Tr. 726:5-16, 727:23-728:14; Petrs. Ex. 117 at 3. Different runs use different thresholds for population deviation and different compactness measures. Tr. 729:2-12; Petrs. Ex. 117 at 3, 8-9.

154. At step 3, the test uses precinct-level voting data to evaluate whether the new districting is more or less biased in favor of Republicans than the 2011 plan. Tr. 729:16-730:21; Petrs. Ex. 117 at 4.

155. At step 4, the test loops back to step 2 and makes another small random swap of precincts at a district boundary. The test can be run for a large number of steps. For each run reported in his expert report, Dr. Pegden ran the test for 2^{40} or 2^{39} steps. 2^{40} equals 1,099,511,627,776—about 1 trillion. 2^{39} is half as large—just over a half trillion. Tr. 730:23-731:20, 738:3-18; Petrs. Ex. 117 at 4.

156. Although not every one of the trillion iterations of step 2 generates a valid districting (by which Dr. Pegden means a districting that meets that run's constraints), each run generates several hundred billion districtings that meet the constraints imposed. Tr. 768:11-769:14, 1371:13-1372:18.

157. The new districtings generated by this test are not meant to be proposed legal districtings for Pennsylvania. Rather, they are districtings similar to the 2011 plan that are used for comparison purposes. Tr. 733:1-734:24. As Dr. Pegden explained, his "method accepts as given that the mapmakers' taste in

squiggly districts is the correct taste and shows that even against that backdrop, where we have weird-looking districts . . . still, Pennsylvania's districting is an outlier." Tr. 734:2-8.

158. Petitioners' Exhibit 121 is a set of sample maps generated during a run of Dr. Pegden's test:

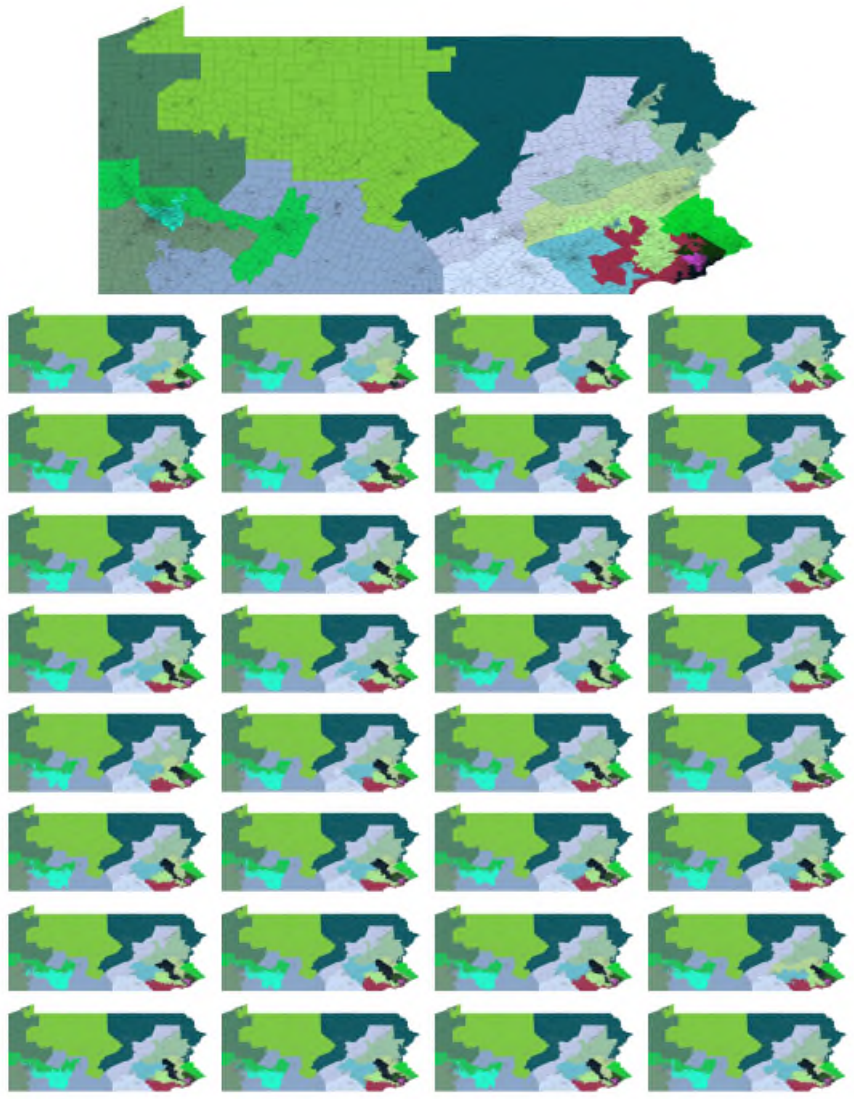


Figure 2: These examples are from the 6th row of our results table. In particular, careful inspection shows that precincts in District 2 remain assigned to District 2 in these maps, and that several rural districts experience few changes since large portions of their boundaries are county boundaries which this run is required to preserve. Again, examples were taken every $10 \cdot 2^{31}$ steps.

Petrs. Ex. 121.

159. Dr. Pegden's method evaluates the partisan bias of districtings using one of the same tests employed by Dr. Chen: the mean-median gap. As explained above, this test compares the mean level of Republican support in each of the 18

districts to the level of Republican support in the median of the 18 districts. Tr. 735:10-737:5, 782:11-783:12; Petrs. Ex. 117 at 10; Petrs. Ex. 119 at 7.

160. Dr. Pegden measured each precinct's level of Republican support by reference to the precinct-level election returns in Pennsylvania's 2010 U.S. Senate general election. Tr. 737:6-738:2, 783:13-785:3; Petrs. Ex. 117 at 9. Dr. Pegden checked whether this method would have accurately predicted the results of Pennsylvania's 2012, 2014, and 2016 U.S. House general elections, and found that it returned the correct result for all 54 such elections. Tr. 813:23-814:7.

161. Dr. Pegden ran his test eight times. Each of these eight runs used a different set of constraints. Dr. Pegden refers to the "bag of districtings" as *all possible districting plans* that meet the constraints imposed in that run. Petrs. Ex. 117 at 3; Tr. 738:20-739:15. While Dr. Pegden took up to a trillion steps in each run, the runs did not generate the entire bag of districtings; as Dr. Pegden explains, that would be impossible since the number of possible configurations in the bag of districtings is astronomically large, possibly larger than the number of elementary particles in the universe. Petrs. Ex. 117 at 4 n.5. Nevertheless, Dr. Pegden's newly developed theorem enabled him to calculate, based on the number of steps in a particular run, how unusual the partisan bias of the enacted plan is across the entire bag of possible districtings. Petrs. Ex. 117 at 4 n.5.

162. Dr. Pegden reported his results in a table. Petrs. Ex. 122. Dr. Wendy K. Tam Cho, an expert witness for Legislative Respondents, did not challenge Dr. Pegden's calculations in this table. Tr. 1302:22-25, 1306:10-1307:3.

163. Some of the eight runs allowed districtings to deviate from absolute population equality by up to 2%; others allowed a deviation of up to 1%. Tr. 739:23-742:13, 763:21-764:15, 779:6-780:19; Petrs.' Ex. 117 at 3-4.

164. Dr. Pegden's test uses two different measures of compactness: the average perimeter of all 18 districts, and the average Polsby-Popper score of all 18 districts. Tr. 742:15-744:21; Petrs.' Ex. 117 at 9. He permits candidate districtings to be of comparable compactness to the 2011 plan. Tr. 743:11-25.

165. In some runs, Dr. Pegden imposes the constraint that any county preserved by the 2011 plan would have to be preserved in all the maps encountered by his algorithm. Other runs do not include this requirement. Tr. 744:22-745:8; Petrs. Ex. 117 at 3.

166. In some runs, Dr. Pegden does not allow any changes to District 2 of the 2011 plan, in case it might be argued that the enacted shape of District 2 is mandated by the Voting Rights Act. Tr. 745:9-19; Petrs. Ex. 117 at 3.

167. Dr. Pegden's results table reports epsilon values for each run's partisan bias. The epsilon value represents the fraction of districtings encountered

in the trillion (or half trillion) steps that had as much partisan bias as the 2011 plan, as measured by the mean-median gap. Tr. 746:14-747:20; Petrs. Ex. 122.

168. The epsilon values that Dr. Pegden found are minuscule. For example, in his sixth run, he found that $\varepsilon = 0.00000000097$. Petrs. Ex. 122. This means that, after taking roughly a trillion steps of swapping one precinct at a time, only 97 out of the 100,000,000,000 (100 billion) valid districtings encountered in that run exhibited as much partisan bias as the 2011 plan. Tr. 747:6-20. In the fourth run of his test, *every districting encountered in the trillion steps* of the algorithm exhibited less partisan bias than the 2011 plan. Tr. 752:14-753:23.

169. Dr. Pegden calculates a "p value" for each run. The p value is where Dr. Pegden employs his theorem to translate the results of the run (*i.e.*, epsilon value described above) to a probability of finding the 2011 plan's partisan bias across the entire bag of possible districtings in Pennsylvania meeting the constraints imposed on that run. Petrs. Ex. 117 at 8. The p value thus identifies, with mathematical rigor, the probability that a random districting of Pennsylvania would have such a small epsilon value. *Id.* In other words, the p value is the probability that a randomly chosen districting from the bag of districtings will perform as poorly as the enacted plan in terms of partisan bias. Tr. 1306:19-25.

170. For example, in the sixth run, the epsilon value is significant at $p = 0.000045$. Petrs. Ex. 122. This means that the probability that a typical (*i.e.*,

randomly selected) districting of Pennsylvania could have such a low epsilon value is 0.0045%. This is true regardless of the political geography of Pennsylvania, and can be calculated even without individually comparing the 2011 plan to every member of the "bag of districtings" for that row of the results table. Tr. 747:21-752:12; *see also* Petrs. Ex. 117 at 8; Petrs. Ex. 123 (Dr. Pegden's theorem). Nothing in the theorem depends on how many districtings are in the bag of districtings being analyzed, or on how many steps the algorithm completes. Tr. 816:8-11, 817:20-818:3.

171. Dr. Pegden's table further reports epsilon and p values with respect to anti-competitiveness. Petrs. Ex. 122. For these columns, instead of measuring the mean-median difference, the test measures the anti-competitiveness of each districting encountered by the algorithm. A new districting is considered more anti-competitive than the enacted plan if there is a greater variance in the Republican vote share among the districts of the new districting than among the districts of the enacted plan. Tr. 754:2-755:2; *see also* Petrs. Ex. 117 at 10. In other words, a districting is considered more anti-competitive when it has fewer close districts and instead has more solidly Democratic and solidly Republican districts. Tr. 753:24-755:2; Petrs. Ex. 117 at 10.

					partisan bias		anti-competitiveness	
	population threshold	compactness measure	preserve counties?	freeze dist. 2?	ε-outlier at $\varepsilon =$	significant at $p =$	ε-outlier at $\varepsilon =$	significant at $p =$
1	2%	perimeter	No	No	.00000000058	.000034	.000000031	.00025
2	2%	Avg. P.P	No	No	.00000000057	.000034	.000000000051	.000011
3	2%	perimeter	Yes	No	.0000000013	.000051	.000000032	.00025
4	2%	avg. P.P.	Yes	No	.00000000000017	.00000058	.00000000042	.000029
5	2%	perimeter	Yes	Yes	.00000000050	.000032	.0000000000049	.0000032
6	2%	avg. P.P.	Yes	Yes	.00000000097	.000045	.0000000000048	.0000031
7	1%	perimeter	Yes	Yes	.00000000038	.000028	.0000000000099	.0000045
8	1%	avg. P.P.	Yes	Yes	.00000000053	.000033	.0000000000096	.0000044

Petrs. Ex. 122

172. On the basis of his analysis, Dr. Pegden concluded that the 2011 plan is a gross outlier with respect to partisan bias in a way that is mathematically impossible to be caused by political geography or traditional districting criteria, and that is insensitive to precisely how the bag of districtings is defined. Tr. 755:19-756:10, 757:24-758:25, 763:2-8; Petrs. Ex. 117 at 2, 8. As he testified, the intentional drawing of the 2011 plan to maximize partisan advantage is the only conceivable explanation "for having a districting which appears so carefully crafted in the sense of being such an extreme local outlier in the set of its districtings." Tr. 1384:22-1385:4. Dr. Pegden established a greater than 99.99% confidence level for this claim. Tr. 1385:21-1386:12.

173. Dr. Pegden's mathematical analysis removes any conceivable doubt that the 2011 plan was drawn with an intent to benefit Republicans. It also eliminates the possibility that the high level of partisan bias observed in the 2011 plan could be a natural consequence of Pennsylvania's political geography.

174. Legislative Respondents offered their expert Dr. Cho to criticize Dr. Pegden's analysis and conclusions. But Dr. Cho did not take issue with Dr. Pegden's theorem, and she acknowledged that his theorem makes it possible to "take the results of the local districtings and then make a statement about how the actual map, the enacted map, relates to the bag of all possible districtings that satisfy his constraints." Tr. 1301:12-19; *see also* Tr. 1211:17-18 (Dr. Cho stating that "I'm not challenging the theorem").

175. None of Dr. Cho's critiques of Dr. Pegden's analysis withstand scrutiny. Dr. Cho claimed that Dr. Pegden's conclusions are "overbroad" because he has not "examined all possible redistrictings" or produced a "large representative sample" of all possible districtings. Leg. Resps. Ex. 11 at 5-6. This critique simply ignores or fails to understand Dr. Pegden's theorem. The theorem allows Dr. Pegden to draw mathematical conclusions about the entire bag of districtings based on the results of his reversible Markov chain, which makes small random changes to the district boundaries. Petrs. Ex. 117 at 5. The theorem does not require him to examine all possible districtings or to draw a representative

sample. Tr. 1363:21-1368:2; *see also* Petrs. Ex. 117 at 5. Again, Dr. Cho challenges neither the theorem nor the p values for each run that the theorem produces, and that p value represents a probability of finding the partisan bias of the enacted plan in the entire bag of districtings. Petrs. Ex. 117 at 5. If the theorem and p values are right, Dr. Pegden's conclusions are right.

176. Dr. Cho unpersuasively testified that swapping one precinct at a time is too little of a change to make the new map sufficiently different from the immediately preceding map or from the beginning map (*i.e.*, the 2011 plan). Tr. 1213:23-1216:13, 1234:18-1235:3. However, Dr. Pegden's analysis found that making even such small changes to the 2011 plan reduced its partisan bias, and he calculated a precise mathematical probability of that result occurring in the entire bag of possible districtings. Tr. 1369:14-1370:16. Again, the math cannot be—and was not—disputed. Indeed, the whole *point* of Dr. Pegden's analysis was that even when he made these tiny changes, the partisan bias dissipated instantly, showing how carefully the enacted plan was crafted. Dr. Pegden testified that this "is so dramatically the case that after the first second, we never again encou[nter] maps with as much partisan bias as the current districting in Pennsylvania." Tr. 1378:7-12; *see generally* Tr. 765:12-766:2, 1376:20-1378:18. That is a feature, not a bug, of his approach.

177. Dr. Cho criticized Dr. Pegden's approach because he did not require the preservation of municipalities, the protection of incumbents, or absolute population equality, Tr. 1218:24-1220:12, but those criticisms were unpersuasive.

178. As for the preservation of municipalities, Dr. Cho stated that the 2011 plan preserved 97.3% of the municipalities. She denied having any knowledge as to whether the preservation of municipalities was a goal of the drafters of the 2011 plan, but stated that "that doesn't happen by chance." Tr. 1226:5-17. On cross-examination, however, Dr. Cho admitted that it was "pure conjecture that if you preserve 97 percent, it's -- it's probably not by chance." Tr. 1317:24-1318:3. Dr. Cho further acknowledged that Dr. Pegden's maps may have preserved as many municipalities as the 2011 plan, but that she had not checked. Tr. 1318:4-1321:5.

179. Dr. Pegden testified that he ran his test with quantifiable constraints such as limiting county splits, whereas limiting municipality splits would require the injection into his algorithm of subjective considerations such as whether splitting larger cities should be weighted the same or differently as splitting smaller cities or townships. Tr. 772:22-777:24. Dr. Pegden did not know whether the mapmakers behind the 2011 plan had actually adhered to any criteria related to the preservation of municipalities, but had he been informed of any such criteria, he could have conducted additional runs taking account of those criteria. Tr. 822:13-823:4.

180. Dr. Cho's criticism of Dr. Pegden relating to incumbency protection was also unpersuasive. Tr. 1227:25-1228:10. On cross-examination, Dr. Cho admitted that in an August 2017 presentation, she had stated that "philosophically, incumbency protection does not make sense if the current map is arguably gerrymandered" and that "if the current map is arguably a gerrymander, it really doesn't make sense to preserve it." Tr. 1260:22-1266:1. Likewise, she acknowledged having criticized incumbency-protection in her academic work: "one might argue that jurisdictions that use political data in redistricting are conditioning state action (*i.e.*, district design) on the content of past speech (*e.g.*, previous vote history or voter registration) in order to create safe incumbent seats or safe Democratic- or Republican-held seats." Tr. 1268:6-20.

181. Dr. Pegden persuasively testified that it would be easy for him (or for other potential users of his code such as Dr. Cho) to freeze the incumbents' home precincts in the simulations, and that doing so would make little difference in the final results, because 19 precincts are a tiny fraction of Pennsylvania's many thousands of precincts. Tr. 812:7-813:22.

182. Insofar as Dr. Cho criticized Dr. Pegden for not preserving the cores of incumbents' districts, her criticism was put to rest by Dr. Pegden's explanation that a side effect of his technique—making small, random changes to the districts of the 2011 Plan—was to preserve the cores of districts. Tr. 780:24-782:6.

183. Dr. Cho failed to rebut Dr. Pegden's explanation for why allowing 1 or 2 percent population deviation did not affect his analysis. Dr. Pegden correctly concluded that the small variance from absolute population equality does not impact his conclusions. Tr. 739:23-742:13, 763:21-764:15, 779:6-780:19; Petrs.' Ex. 117 at 3-4. First, he saw no degradation of his results when he changed the population constraint from 2 percent to 1 percent, establishing that changing the population threshold would not affect his results. Tr. 870:3-19. Second, the different in the magnitude of partisan bias encountered in his trillions of maps and the actual map was too large as a numerical matter to have been accounted for by the slight variation in population equality. Tr. 740:23-741:23.

184. Dr. Cho did not explain why she would expect a change from 1 percent to zero percent to affect Dr. Pegden's results when the shift from 2 percent to 1 percent did not. Tr. 870:3-19. And she did not dispute Dr. Pegden's testimony that difference in the magnitude of partisan bias encountered in his trillions of maps and the actual map was too large as a numerical matter to have been accounted for by the small departures from absolute population equality. Tr. 740:23-741:23; Tr. 1373:2-1374:21. Dr. Cho acknowledged that she had no basis other than conjecture to testify that the slight deviation in population made a difference, and she testified that "I don't know what happens when you go to zero." Tr. 1316:23-1317:11.

185. Dr. Pegden conducted his analysis with software that he wrote, and he has made this software package—including all source code, data sets, and instructions—publicly available at no cost on his website since the publication of the PNAS paper. Numerous researchers have downloaded his code and quickly modified it or used it to run their own analyses. Tr. 718:1-719:4, 764:23-765:8, 1375:1-1376:14, 1391:14-1392:14; Petrs. Ex. 117 at 8-9. Dr. Cho acknowledged on cross-examination that although she was aware that Dr. Pegden's code had been posted on the internet for "the whole time," Tr. 1294:4-5, she had not taken the time to look at his code, Tr. 1295:18-1296:19.

186. Finally, Dr. Cho testified that she has a "supercomputer"—which is the "fastest research supercomputer in the world"—on which she has developed an algorithm to test to detect whether a map is gerrymandered. Tr. 1325:4-21. Yet, Dr. Cho admitted that she chose not to run her supercomputer to test whether Pennsylvania's congressional map is gerrymandered here. Tr. 1324:7-1326:25. She explained that she is a "very busy person" and has "a lot of things to do, and this was not one of them." Tr. 1327:20-25. "When I rank the number of things I have to do today," Dr. Cho said, "this is not on top." Tr. 1328:2-3.

187. The Court ascribes no weight to Dr. Cho's testimony as it relates to Dr. Pegden.

4. Voters Likely to Vote for Democratic Congressional Candidates Are an Identifiable Political Group

188. The Court concludes that Pennsylvania voters likely to vote for Democratic congressional candidates are an identifiable political group. Dr. Chen conducted an independent statistical analysis that provides empirical proof for this proposition. Tr. 310:3-315:14; Petrs. Ex. 1 at 12 (Chen Report). Dr. Chen analyzed Pennsylvania election results over the last ten years and found that, for each precinct, municipality, and county in the Commonwealth, there was an extremely strong correlation in the level of support for Democratic candidates across elections. Tr. 310:10-311:12. That correlation was as high as 0.90 to 0.95. *Id.* Dr. Chen explained that, given this correlation, it is "very easy" to identify particular geographic units, all the way down to the precinct level, that are likely to vote for Democratic candidates in future elections. Tr. 315:6-14, 317:1-15. He testified that when we see lots of Democrats, meaning likely Democratic voters as opposed to registered Democrats, in one precinct or district, "we can be sure that . . . they are Democrats in the next election as well." Tr. 311:5-12.

189. Dr. Chen's analysis merely provides statistical proof for what is common sense. As Dr. Chen explained in his report, the entire reason why partisan mapmakers are able to gerrymander districts so effectively is because they are able to use past voting history to identify a class of voters likely to vote for Democratic

(or Republican) candidates for Congress. Petrs. Ex. 1 at 12. There would be no such thing as partisan gerrymandering if such identifiable classes did not exist.

190. Dr. Warshaw confirmed the point. He testified without rebuttal or contradiction that today, "[m]embers of the mass public are extremely sorted by party" and "Congressional elections are extremely predictable." Tr. 998:3-6; *see also* Tr. 950:7-10; 894:24-895:14; 956:12-957:2 (political scientists measure partisan preference by party identification or voting history, not party registration).

191. None of Respondents' experts suggested that people likely to vote for Democratic (or Republican) congressional candidates are not identifiable.

192. Indeed, the Court concludes from Dr. Chen's analysis of the files Speaker Turzai produced in the federal case that the General Assembly in fact did identify likely Democratic voters in creating the 2011 map. The General Assembly assigned partisanship scores to every single precinct in Pennsylvania specifically to identify those precincts more or less likely to vote for Democratic congressional candidates. The General Assembly clearly assigned precincts likely to vote for Democratic voters to particular congressional districts so as to maximize Republicans' overall advantage across the Commonwealth.

D. The 2011 Map Produced a Durable 13-Seat Republican Majority in Pennsylvania's Congressional Delegation

1. Republican Candidates Have Won 13 of 18 Seats In Each of the Three Congressional Elections Under the 2011 Map

193. In each of the three congressional elections under the 2011 map, Republican candidates have won 13 of Pennsylvania's 18 congressional seats—the same 13 seats each time. JSF ¶¶ 73, 78, 82.

194. In 2012, Republican candidates won a minority—only 49%—of the total statewide vote, but still won a 13 of 18 seats—72% of them. JSF ¶¶ 71-73.

195. The extreme partisan bias in the 2011 map is evident from the distribution of vote percentages across the districts. Democrats win five relatively lopsided victories, while Republicans win in closer—but still reliably red—districts. This is exactly how a well-crafted partisan gerrymander operates.

196. Stipulated Fact 73 shows the election results in 2012:

District	Democratic Vote	Republican Vote
1	84.9%	
2	90.5%	
13	69.1%	
14	76.9%	
17	60.3%	
3		57.2%
4		63.4%
5		62.9%
6		57.1%
7		59.4%
8		56.6%
9		61.7%
10		65.6%
11		58.5%

District	Democratic Vote	Republican Vote
12		51.7%
15		56.8%
16		58.4%
18		64.0%
Average of Districts Won by Party	**76.4%**	**59.5%**
Statewide Vote Share	**50.8%**	**49.2%**

JSF ¶ 73.

197. As illustrated in the table above, in 2012, Democrats won approximately 51% of the statewide vote for Pennsylvania congressional candidates (50.8% precisely). JSF ¶ 73; Tr. 896:18-20. They won only 5 of 13 seats. JSF ¶ 72. Democrats would have needed to win an additional *seven percentage points* of the statewide vote—or 58%—to win a majority of the seats. Tr. 896:24-897:12 (Dr. Warshaw); Petrs. Ex. 41. That is the only way Democrats would have won in Districts 3, 6, 15, 8, and 12, which were their five next best districts after the five Democrats won. Tr. 896:21-897:12 (Dr. Warshaw). If Democrats had won *57 percent* of the statewide congressional vote in 2012, they still would only have won *one-third* of the seats. Tr. 897:17-898:8. By contrast, Republicans were able to win over *two-thirds* of the seats (13 of 18, or 72%) even though they won a *minority* of the statewide vote. JSF ¶¶ 72-73.

198. The 2014 elections were strikingly similar. That year, Republicans won only 55.5% of the statewide vote, yet still won the same 13 seats (72%). JSF

¶¶ 74-75, 78. Again, the distribution of votes across the districts in 2014 illustrates just how effectively the map packs and cracks Democratic voters across the state:

District	Democratic Vote	Republican Vote
1	82.8%	
2	87.7%	
13	67.1%	
14	100%	
17	56.8%	
3		60.6%
4		74.5%
5		63.6%
6		56.3%
7		62.0%
8		61.9%
9		63.5%
10		71.6%
11		66.3%
12		59.3%
15		100%
16		57.7%
18		100%
Average of Contested Districts Won by Party	**73.6%**	**63.4%**
Statewide Vote Share	**44.5%**	**55.5%**

JSF ¶ 78.

199. The fact that Republicans in 2014 won an extra six percentage points of the statewide congressional vote compared to 2012 but did not pick up any additional seats further demonstrates the durability of the 13-5 Republican split. The 2011 map is utterly unresponsive to the will of the voters.

200. And in 2016, the most recent election under the 2011 map, the results were almost identical. Republicans won 54.1% of the statewide vote and again

won the exact same 13 of 18, or 72%, of the congressional seats. JSF ¶¶ 80-82. The 2016 results appear below:

District	Democratic Vote	Republican Vote
1	82.2%	
2	90.2%	
13	100.0%	
14	74.4%	
17	53.8%	
3		100.0%
4		66.1%
5		67.2%
6		57.2%
7		59.5%
8		54.4%
9		63.3%
10		70.2%
11		63.7%
12		61.8%
15		60.6%
16		55.6%
18		100.0%
Average of Contested Districts Won by Party	**75.2%**	**61.8%**
Statewide Vote Share	**45.9%**	**54.1%**

JSF ¶ 82.

201. In both the 2014 and 2016 elections, the margin of victory in districts Democrats won was far higher than the margin of victory in districts Republicans won, which provides further evidence of cracking and packing of Democrats. In 2014, the average vote share for successful Democratic candidates was 73.6%,

compared to 63.4% for successful Republican candidates (excluding uncontested elections). JSF ¶ 78. The 2016 average vote share was 75.2% for successful Democratic candidates and 61.8% for successful Republican candidates (excluding uncontested elections). JSF ¶ 82.

2. Expert Testimony Established That Republicans Won 2-5 More Seats Than They Otherwise Would Have

202. Dr. Chen's simulations establish that the partisan intent behind the 2011 plan has had significant effects on the number of congressional seats that Democrats have won in Pennsylvania. Tr. 204:16-205:6; Petrs. Ex. 1 at 27.

203. First, Dr. Chen's simulated plans in Simulation Set 1 establish that Republicans have won 4 to 5 more seats under the 2011 plan than they would have won under a plan that followed only traditional districting criteria. Tr. 204:16-205:6.

204. Second, Dr. Chen's simulated plans in Simulation Set 2 establish that Republicans have won an extra 2 to 5 seats under the 2011 plan than they would have under a plan that both followed the traditional districting criteria and intentionally avoided pairing 17 of 19 incumbents. Petrs. Ex. 1 at 27.

205. Dr. Chen's robustness analysis confirms these effects. Using the 2012-2016 statewide elections to measure partisanship rather than the 2008-2010 statewide elections, Dr. Chen found almost identical results in the number of additional seats that Republicans have won under the enacted plan relative to the

simulated plans in each Simulation Set. Petrs. Exs. 19-20. Dr. Chen's analysis leaves no room for doubt that the partisan intent behind the 2011 Plan has resulted in Republicans winning several additional congressional seats in Pennsylvania.

3. Dr. Warshaw's Expert Testimony Established That the 2011 Map's Pro-Republican Advantage Is Historically Extreme

206. Christopher Warshaw, Ph.D., is a Pennsylvania native and political scientist at George Washington University who was accepted as an expert in American politics with specialties in political representation, public opinion, elections, and polarization.

207. The purpose of a partisan gerrymander is to ensure that the advantaged party translates its votes into seats as efficiently as possible, while the disadvantaged party translates its votes into seats as inefficiently as possible. Tr. 839:6-21; Petrs. Ex. 35 at 4 (Warshaw Report). The goal is to make the advantaged party win as many seats as possible, given their number of votes. Tr. 839:22-24. Conversely, a partisan gerrymander attempts to "waste as many of [the] opponent's voters as possible." Tr. 840:17-20.

208. The Efficiency Gap is a measure for evaluating the partisan bias in a plan that picks up on the basic intuition that "what gerrymandering is ultimately about is efficiently translating votes into seats by wasting as many of your opponent's supporters as possible and as few as possible … of your own." Tr.

840:1-8. It directly captures the cracking and packing that is at the heart of gerrymandering. Tr. 852:15-853:6.

209. The efficiency gap is calculated by comparing the number of votes that each party "wastes" in a given election. Tr. 841:2-10. A party wastes all votes in any congressional district where its candidate loses (i.e., in cracked districts). When a party wins in a particular congressional district, the wasted votes are those above the 50%+1 needed to win (i.e., the excess votes in packed districts). Tr. 841:2-10. The basic equation to calculate the Efficiency Gap is as follows:

$$EG = \frac{W_R}{n} - \frac{W_D}{n}$$

Petrs. Ex. 35 at 6.

210. The Efficiency Gap is one party's total wasted votes in an election minus the other party's total wasted votes, divided by the total number of votes cast (n in the equation above). It captures in a single number the extent to which one party's voters are more cracked and packed than the other party's voters. Tr. 841:6-24; Petrs. Ex. 35 at 6. Because the Efficiency Gap is a percentage of the total votes cast in the election, the Efficiency Gap is comparable across time and across states. Tr. 842:15-843:13; Tr. 853:7-20.

211. In a hypothetical congressional districting plan involving 3 districts with 100 people each, where the Democrats win 80 to 20 in District 1 and the

Republicans win 60-40 in Districts 2 and 3, there would be a pro-Republican Efficiency Gap of 24%. In that hypothetical, the Democrats wasted 29 votes (80 minus the 51 needed to win) in District 1 and 40 votes in Districts 2 and 3, for a total of 109 wasted Democratic votes. The Republicans in that hypothetical waste 20 votes in District 1 and 9 votes in Districts 2 and 3 (60 minus the 51 needed to win), for a total of 38 wasted votes. Accordingly, the Efficiency Gap is 38/300 minus 109/300, for a 24% pro-Republican advantage. Tr. 844:18-848:20.

212. An advantage of the Efficiency Gap is that it can be calculated directly from actual congressional election results. Tr. 851:20-852:6; 853:21-23.

213. Dr. Warshaw calculated the Efficiency Gap across every state in the country in every congressional election between 1972 and 2016. Tr. 863:7-13. Respondents offered no challenge to his calculations. Tr. 1487:17-22.

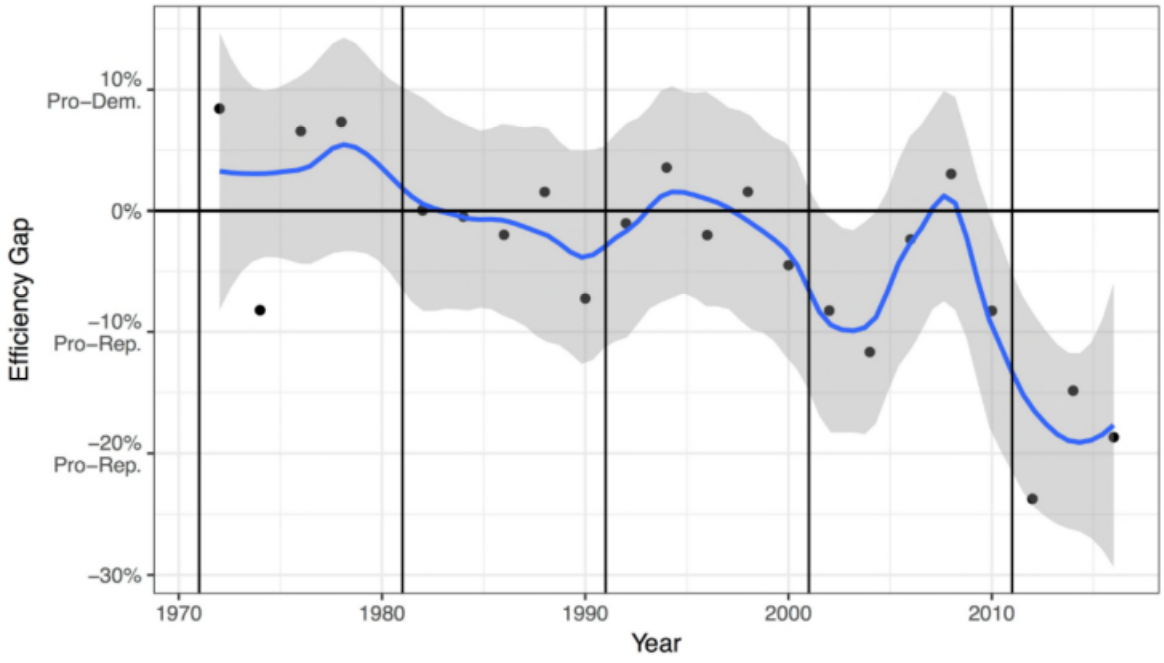
214. A large degree of partisan bias in a particular congressional election, as measured by the Efficiency Gap, is historically rare. The vast majority of Efficiency Gaps lie close to zero. Across all congressional elections since 1972 in states with more than 6 congressional seats, 75% of Efficiency Gaps show a 10% or less advantage for either party, and 96% of Efficiency Gaps show a 20% or less advantage for either party. Tr. 865:2-866:10; Petrs. Ex. 35 at 7-8; Petrs. Ex. 37.

215. The Efficiency Gap is not a measure of partisan bias that inherently or consistently favors either party. Tr. 866:17-867:18. Across history, sometimes

the Democrats have held an advantage as measured by the Efficiency Gap, and sometimes the Republicans have held an advantage. Tr. 866:17-867:18; Petrs. Ex. 38. There is no basis for concluding that Republicans have a substantial long-term advantage in the Efficiency Gap due to political geography or any other factor. Tr. 867:6-12.

216. The historical norm in Pennsylvania is a partisan bias relatively close to zero, as measured by the Efficiency Gap. Tr. 870:7-9.

217. Petitioners' Exhibit 40 plots the Efficiency Gap in Pennsylvania in every congressional election year between 1972 and 2016:



Warshaw Figure 4: Historical Trajectory of the Efficiency Gap in Pennsylvania. Each vertical line shows the demarcation between decennial redistricting plans. The blue line shows the moving average and the grey bar is a confidence interval. The dots represent the Efficiency Gaps in each year in Pennsylvania.

Petrs. Ex. 40

218. The partisan bias in Pennsylvania's 2011 map is historically extreme, both in comparison to prior Pennsylvania maps and other states' maps. Petrs. Ex. 42. The following undisputed chart illustrates the Efficiency Gaps in Pennsylvania relative to other states between 1972 and 2016:

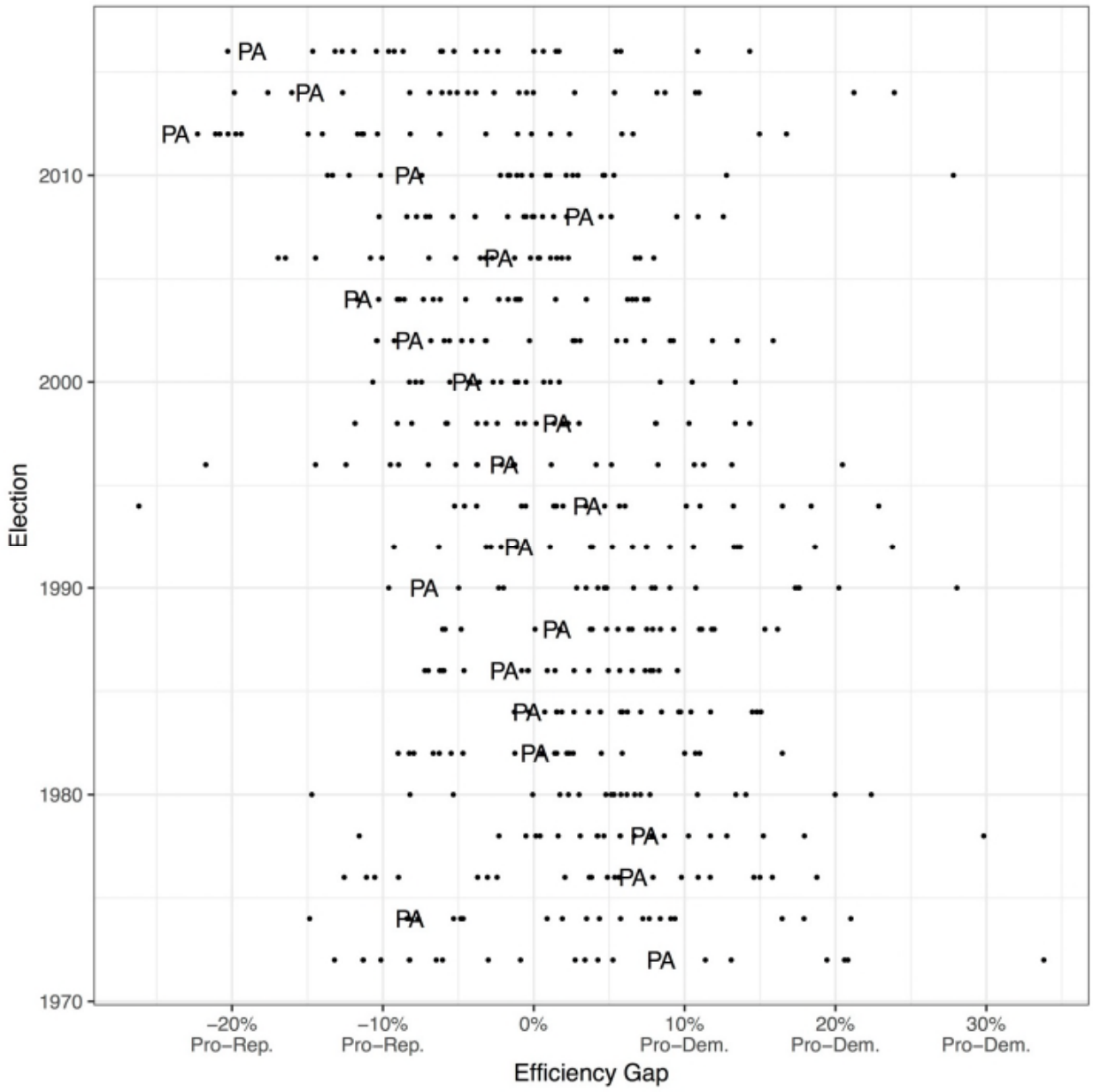


Figure 5: Efficiency Gap in Pennsylvania Relative to Other States. The dots represent the Efficiency Gaps in individual states. The Efficiency Gaps in Pennsylvania are labelled to distinguish them from other states.

Petrs. Ex. 42.

219. The partisan bias in Pennsylvania's 2011 districting plan is the largest in Pennsylvania history. Pennsylvania had a pro-Republican Efficiency Gap of 24% in the 2012 congressional elections, 15% in 2014, and 19% in 2016. Tr. 871:3-25. Prior to the 2011 redistricting plan, Pennsylvania had never once had an Efficiency Gap of 15% or greater in favor of either party, and only one time had an Efficiency Gap of even 10% or greater in favor of either party. Tr. 872:1-10.

220. The partisan bias in the 2011 plan is also extreme relative to the country as a whole. Pennsylvania's pro-Republican Efficiency Gap in the 2012 election was the largest in the country that year, and the second largest in modern history in any state. Tr. 874:11-16; 876:2-8; Petrs. Ex. 42. Averaging across all three elections to date under the plan, Pennsylvania had an average pro-Republican Efficiency Gap of 19%. Tr. 876:17-877:16. No other state save North Carolina had a larger average Efficiency Gap over the past three election cycles, and North Carolina only beat Pennsylvania by one percent. Tr. 876:17-877:16.

221. The partisan bias in the 2011 plan as measured by the Efficiency Gap gave Republicans an extra 3 to 4 congressional seats, on average, in each of the three congressional elections that have been held under the plan. Tr. 873:9-22.

222. The extreme partisan bias in the 2011 plan, as measured by the Efficiency Gap, cannot be attributed to Pennsylvania's political geography. Tr. 878:10-880:10. Although natural clustering of voters could theoretically contribute to partisan bias, the fact that the Efficiency Gap grew 15 percentage points more pro-Republican between the 2010 and 2012 elections indicates that the 2011 plan, rather than Pennsylvania's natural political geography, is responsible for the bias. Tr. 878:10-880:10. Political geography tends to change slowly, Tr. 879:17-23, as Legislative Respondents' expert Dr. McCarty agreed, Tr. 1587:8-10. No possible change in political geography could have led to the dramatic shift in the Efficiency Gap that occurred in Pennsylvania following the 2011 redistricting. Tr. 879:17-23. Legislative Respondents presented no contrary evidence; their expert "did not conduct any analysis to determine whether geographic factors" could cause the bias of the 2011 plan. Tr. 1587:3-7.

223. Although Efficiency Gaps can be volatile in states with only a few congressional seats where there are several toss-up, 51-49 districts, that does not affect the usefulness of the measure in evaluating the partisan bias in the 2011 plan. Dr. Warshaw's principal analysis focused on states with more than 6 congressional seats, where the Efficiency Gap is not volatile. Tr. 891:17-892:11. When he did a robustness check to find out whether the results held when comparing Pennsylvania to states with fewer than six congressional seats, he found

that they did. Tr. 892:23-893:12. The potential volatility of an Efficiency Gap in states with several 51-49 districts is not relevant to the analysis, because that is not a real world scenario. Tr. 1035:5-11. Nobody gerrymanders a congressional map by creating a lot of 51-49 districts, and that is not what Pennsylvania's map looks like. Tr. 1034:10-1035:11. Across the three elections following the 2011 redistricting cycle, the closest race was 52-48, the next closest after that was 55-54, and the average winning percentage in any contested district never dropped below 59% for the Republicans and 74% for the Democrats. JSF ¶¶ 73, 78, 82.

224. The partisan bias in the 2011 plan, as measured by the Efficiency Gap, will persist across the life of the plan and is unlikely to be remedied through the normal electoral process. Dr. Warshaw analyzed the durability of Efficiency Gaps across the nation in the elections following the 2011 redistricting, and found a "very high correlation" of 0.82. Tr. 889:14-25; Petrs. Ex. 39. He found that across the country, Efficiency Gaps in 2012 "are extremely predictive" of Efficiency Gaps in 2016, and the same is true in Pennsylvania. Tr. 890:1-5. In other words, the post-2011 Efficiency Gaps have persisted across three elections. Because the Efficiency Gaps immediately after the 2011 redistricting predict the vast majority of variation in Efficiency Gaps four years later in the 2016 election, the normal electoral process is unlikely to provide a remedy. Tr. 890:22-891:4; Petrs. Ex. 39.

225. Legislative Respondents' expert Dr. McCarty did not dispute that Pennsylvania's Efficiency Gap following the 2011 redistricting has been durable. Dr. McCarty testified that he did not believe that Efficiency Gaps were durable because Pennsylvania's pro-Republican Efficiency Gaps after the 2002 redistricting had persisted through two elections, but then swung back in the third. Tr. 1487:1-8. Dr. McCarty did not testify that any prior Pennsylvania plan had exhibited stable, durable Efficiency Gaps for the first three elections and then reverted to the mean.

226. Dr. Warshaw offered unrebutted testimony that the variability in the Efficiency Gap today is "much smaller" than it was in previous decades. Tr. 997:14-18. Dr. Warshaw testified that Efficiency Gap vacillation during a districting cycle in prior decades did not imply that the normal political process could remedy the partisan bias in the current plan, because the magnitude of the partisan bias in past plans was in every case much smaller than it was today. Tr. 1017:5-16. Dr. McCarty did not point to any historical example in which Efficiency Gaps of the magnitude currently seen in Pennsylvania dissipated within the life of a redistricting plan.

227. Dr. Warshaw ultimately concluded that "there is a large and durable Republican advantage in the districting process in Pennsylvania that spiked dramatically after the 2011 Plan went into place." Tr. 836:18-21.

E. The 2011 Map Disadvantages Petitioners and Other Democratic Voters in Electing Candidates of Their Choice

228. Petitioners are eighteen individual Pennsylvania voters, one from each congressional district. All of the Petitioners are registered Democrats who have consistently voted for Democratic candidates in congressional elections both before and after the enactment of the 2011 plan. *See* JSF ¶¶ 12-13, 19.

229. Petitioner Carmen Febo San Miguel is an Executive Director of a non-profit cultural organization and a former physician who resides in the 1st District in Philadelphia. Petrs. Ex. 163 (Febo Dep.) 6:23-7:10; 19:6 -11; JSF ¶ 12. The 2011 map dilutes Dr. Febo San Miguel's vote. Petrs. Ex. 163 (Febo Dep.) 9:7-8; 36:7-13. Although Dr. Febo San Miguel is in a packed Democratic district and thus able to elect a Democratic congressperson, this leaves "another district with less Democrats," and "maybe the other district would also choose a Democrat if there were a better distribution based on where people live, not what people practice in terms of the party that they practice." *Id.* at 34:6-22. This packing and cracking harms Dr. Febo San Miguel because she "cannot expect that [her] vote has the same strength and value to defend and move and push forward the agendas that [she] believe[s] in." *Id.* at 41:14-19.

230. Petitioner James Solomon is a retired federal employee who resides in the 2nd District in Philadelphia. Petrs. Ex. 164 (Solomon Dep.) 7:2-22. As a resident of "one of the poorest cities in the nation," Mr. Solomon is concerned

about food insecurity, basic shelter needs, and inequitable schoolfunding. *Id.* at 22:2-11. Mr. Solomon's "voice is ignored" because of "the imbalance in the number of representatives based on party affiliation." *Id.* at 21:2-21:10.

231. Petitioner John Greiner, a software engineer who owns his own business, resides in the 3rd District in Erie, Erie County. Petrs. Ex. 168 (Greiner Dep.) 7:18-25; JSF ¶ 12. Under the prior map, Mr. Greiner was able to vote for and elect a Democratic congressional candidate. Petrs. Ex. 168 (Greiner Dep.) 12:20-22; 19:20-23. But the 2011 map splits Erie County, which has a large Democratic population, between the reliably Republican 3rd and 5th Districts. *Id.* at 14:12-13; 17:22-18:19; 19:3-10. As a result, Mr. Greiner is no longer able to be represented by a Democratic congressperson. *Id.* at 19:11-21:24. Also as a result of splitting Erie County, no congressperson needs "to pay close attention to the constituents in Northwestern Pennsylvania." *Id.* at 18:10-13. Beyond the borders of his own district, Mr. Greiner is harmed by the 2011 map because the large Pennsylvania majority hinders any Democratic initiatives in the House of Representatives. *Id.* at 42:3-42:14. Mr. Greiner wants a map that gives "a Democratic candidate a better chance to get elected." *Id.* at 43:10-43:14.

232. Petitioner John Capowski, a law professor emeritus at Commonwealth Law School in Harrisburg, resides in the 4th District in Camp Hill, Cumberland County. Petrs. Ex. 166 (Capowski Dep.) 6:4-16; JSF ¶ 12. The 2011 map harms

Professor Capowski because a Democratic candidate for Congress in the 4th District has "no chance of winning." Petrs. Ex. 166 (Capowski Dep.) 24:9-19.

233. Petitioner Gretchen Brandt, a mother of two and a school board director, resides in the 5th District in State College, Centre County. Ms. Brandt "already know[s] the winner of [her] particular district." Petrs. Ex. 165 (Brandt Dep.) 14:19-21. The 2011 map results in "no competition among candidates for the U.S. House." *Id.* at 14:8-9. The shape of the 5th District results in "the Democratic Party producing unqualified candidates because the Democratic Party knows that a Democrat will not win in that district based on the way the lines are drawn." *Id.* at 35:20-35:25. Ms. Brandt further testified that "when the lines of the U.S. House districts are drawn to, in my case, dilute my vote, then it is not really representational democracy. " *Id.* at 25:7-10. Ms. Brandt's district "is not a competitive district based on the way the geographic lines are drawn for the district. And so because we don't have good highly qualified candidates, we don't even have discussions about issues." *Id.* at 34:22-35:2.

234. Petitioner Thomas Rentschler, an attorney, resides in the 6th District in Exeter Township, Berks County. Tr. 668:23-669:2; JSF ¶ 12. Mr. Rentschler has three children and two stepchildren who depend on the Affordable Care Act for health insurance and the ability to deduct student loan debt. Tr. 669:4-8; 675:10-21; 676:20-677:15. Mr. Rentschler himself depends on the preexisting condition

protections under the Affordable Care Act as he has Type 1 diabetes. Tr. 674:13-675:7. Mr. Rentschler votes in all primaries and general elections because it is his "civic duty to select people who represent me." Tr. 669:19-24. He testified that the 2011 map "has unfairly eliminated my chance of getting to vote and actually elect a Democratic candidate just by the shape and design of the district." Tr. 673:25-674:9. The 2011 map separates Mr. Rentschler from Reading, which is two miles from his house and the seat of Berks County, pairing Mr. Rentschler with communities in eastern Lebanon County with which he has no connection. Tr. 681:9-682:4. Mr. Rentschler testified that "the 2011 Plan has really diluted what I believe is my participation in the voting process and in selecting leaders. I believe that the plan has been so structured so that politicians have picked their voters in so many places, and that's not the way that it should work. We should be picking our elected representatives. And I believe that we've been picked by the politicians and we just fill in their slots for what they need." Tr. 682:5-16.

235. Petitioner Mary Elizabeth "Beth" Lawn, a mother and grandmother who works as a chaplain at a retirement community, lives in "Goofy's finger" in the 7th District in Chester, Delaware County. Tr. 134: 24; 138:1. Ms. Lawn votes in every election because she considers it her "duty as a citizen to participate, that if I want to have an impact, if I want to have a possibility of having my voice heard, of having the things that are important to me, the things that I value to be

listened to and to have some chance of . . . being enacted, that I need to vote." Tr. 136:13-20. Under the prior map, Ms. Lawn's home fell in the 1st district, where she was able to elect a Democratic congressman. Tr. 138:20-24; 139:6-12. But under the 2011 map, Ms. Lawn was moved to the 7th District, where Republican Congressman Pat Meehan has been elected. Tr. 138:17-139:9. As a result, she is in a "district now that is largely Republican, and it's safe for Republicans, so the Democratic candidate doesn't really have a chance." Tr. 140: 8-18. The Affordable Care Act is important to Ms. Lawn because her son, who was disabled at age 25 in an accident, depends in part on Medicaid. Tr. 142: 20-25. Ms. Lawn is also deeply concerned about income inequality. Tr. 141:2-9. But Congressman Meehan voted to repeal the Affordable Care Act and is one of the sponsors of the current tax bill. Tr. 143:9-16; Tr. 144:7-13. Ms. Lawn noted that Pennsylvania was founded by William Penn and that the Pennsylvania Constitution reflects the Quaker values of "fairness, of equality, of integrity, of community, of care for each other and that these are essential to our . . . engagement with each other in a democracy and . . . are being threatened." Tr. 147:3-17.

236. Petitioner Lisa Isaacs, an attorney, resides in the 8th District in Yardley, Bucks County. Petrs. Ex. 170 (Isaacs Dep.) 5:21-23. JSF ¶ 12. Under the prior map, voters in the 8th district had elected both Republican and Democratic congressman. Petrs. Ex. 170 (Isaacs Dep.) 27:7-9. Since the 2011 map was

enacted, Republican Michael Fitzpatrick and then his brother Republican Brian Fitzpatrick have represented Ms. Isaacs. *Id.* at 22:4-225, 23:8-12. The 2011 map harms Ms. Isaacs because "the drawing of the district has skewed the outcome just enough to dilute the Democratic vote in the district." *Id.* at 26:22-27:3. Election outcomes are "fait accompli" in the 8th District. *Id.* at 29:6-7. Ms. Isaacs's congressman fails to represent her on important issues such as "gun rights, gun control, . . . abortion rights . . . he voted to repeal the Affordable Care Act. He voted for the tax reform." *Id.* at 47:7-19.

237. Petitioner Don Lancaster, a retired special education teacher who has twice been elected to his borough council, resides in the 9th District in Indiana County. Petrs. Ex. 164 (Lancaster Dep.) 8:19-20; 9:13-9:18. The 2011 map splits communities of interest in the 9th District, pairing vastly different rural, agricultural regions with regions that are depressed former coal and industry based economies. *Id.* at 23:18-24:16, 44:1-7. Under the 2011 map, Democratic candidates "don't stand a chance" there. *Id.* at 28:12-13. Although Mr. Lancaster serves on bipartisan county boards, he receives no responses from his Republican congressman, Bill Shuster. The congressman "doesn't have to listen. He doesn't have to respond. He's still going to get elected." *Id.* at 33:13-15.

238. Petitioner Jordi Comas, an academic and chef who is very active in local politics, resides in the 10th District in Lewisburg, Union County. Petrs. Ex.

167 (Comas Dep.) 8:9-22, 11:25-14:10; JSF ¶ 12. It is now "virtually impossible for anyone to be even competitive" in his district. Petrs. Ex. 167 (Comas Dep.) 30:1-2. Mr. Comas is represented by Republican Congressman Tom Marino who is unresponsive on issues like the opioid crisis and gun control. *Id.* at 31:15-35:11. The 10th District splits the Susquehanna Valley and pairs parts of it with regions that have very different economic concerns. *Id.* at 40:5-8, 40:13-16. Having the region split into different congressional districts "means the very act of normal petitioning of the government is that much harder." *Id.* at 36:5-36:9.

239. Petitioner Robert Smith, a retired health executive, resides in the 11th District in Bear Creek Village Borough, Luzerne County. Petrs. Ex. 176 (Smith Dep.) 8:10-19; 9:9-10:10. Under the prior map, Mr. Smith was able to elect a Democratic congressman in several election cycles. *Id.* at 18:12-22; 19:21-24. But Republican congressman Lou Barletta has been Mr. Smith's representative since 2010. *Id.* at 17:6-7. Mr. Smith testified that "Congressman Barletta is assured of his seat under this redistricting and he doesn't really have to listen to me. He can be concerned about anybody running against him in the Republican Party more than he has to be concerned about a Democrat." *Id.* at 23:22-24:5.

240. Petitioner William Marx, a high school teacher in the Pittsburgh public school system who teaches U.S. History, Civics, and U.S. Government, resides in the 12th District in Delmont, Westmoreland County. Tr. 104:7-11; JSF

¶ 12. Previously, Mr. Marx was a Marine and an Army helicopter pilot, and he continues to serve in an Army Reserve unit. Tr. 16-23. Mr. Marx recently ran for and was elected to his borough council because when he "came back from deployment in January, I wanted to make the town that I was living in a little better place for my family. I was looking around and saw that there were some needs, so I decided to get on council to try to change." Tr. 105:13-18. Mr. Marx votes in every election—even school board elections—because "[o]ur founders really extolled . . . the benefits of having an engaged citizenry. Throughout our history, people have died to give me the right to vote, so I really honor them by voting. And it's one of those things where if I don't make my voice known, how are you going to know what I want." Tr. 106:23-107:3. Under the 2011 map, Mr. Marx was moved from the former 4th district to the current 12th District. Tr. 109:12-110:18. Under the prior map, Mr. Marx had been able to elect a Democratic congressman. Tr. 112:15-22. But now "there's no chance of a Democrat winning in this district," Tr. 113:12-14, and "the entire map of the state has really taken away any chance of having a Democratic majority Congressional delegation," Tr. 113:16-114:2. Since the enactment of the 2011 plan, Mr. Marx has been represented Republican Congressman Keith Rothfus. Tr. 111:4-112:14. Mr. Rothfus does not represent Mr. Marx's views on important issues such as the Affordable Care Act, the Violence Against Women Act, and anti-discrimination

legislation for gays and lesbians. Tr. 115:6-116:4. When Mr. Marx has called Congressman Rothfus's office, he gets a busy signal or a full voicemail box. Tr. 116:15-23. Congressman Rothfus doesn't hold town hall meetings. Tr. 117:9-11.

241. Petitioner Richard Mantell, a retired Philadelphia high school principal, resides in the 13th District in Jenkintown, Montgomery County. Petrs. Ex. 174 (Mantell Dep.) 7:6-18; JSF ¶ 12. As a voter in a packed Democratic district, Mr. Mantell is harmed by the 2011 map because the goal "was to pack Democrats into one boundary so that there would be less competition in other parts of the state or in other areas for the Republican candidate to win the election." Petrs. Ex. 174 (Mantell Dep.) 13:7-13:10. The 2011 map "singles out Democrats" and under it Mr. Mantell's "vote has been minimized." *Id.* at 18:19-18:20.

242. Petitioner Priscilla McNulty, a manager at a non-profit, resides in the 14th District in Pittsburgh, Allegheny County. Petrs. Ex. 173 (McNulty Dep.) 7:5-20; JSF ¶12. Ms. McNulty is harmed by the 2011 map because her "democratic positions have not been adequately represented in congress because the way the districts are drawn, the Democrats are unfairly—they can't win as many elections when the districts are drawn to favor the Republicans." Petrs. Ex. 173 (McNulty Dep.) 14:7-13. Ms. McNulty testified that "I can elect a Democrat which I appreciate, but my views that are generally supported by the Democratic party do not get fair examination or ability to be enacted because . . . the Republicans are

getting an unfair advantage in an overabundance of Republicans elected, so that drowns out the Democratic message." *Id.* at 66:8-67:3.

243. Petitioner Thomas Ulrich, a retired middle school teacher, resides in the 15th District in Bethlehem, Lehigh County. Petrs. Ex. 177 (Ulrich Dep.) 13:7-13; JSF ¶ 12. Mr. Ulrich cannot elect a Democratic congressperson because "the district is drawn so that it almost encourages people to not run against [Republican Congressman Charlie Dent]." Petrs. Ex. 177 (Ulrich Dep.) 21:13-21.

244. Petitioner Robert B. McKinstry, Jr., an environmental attorney, resides in the 16th District in East Marlborough Township, Chester County. Petrs. Ex. 175 (McKinstry Dep.) 13:3-4; JSF ¶ 12. Mr. McKinstry testified that the 2011 map harmed him because "the district was manufactured to keep a safe district for [Republican Congressman] Joe Pitts . . . who was a person who I knew did not represent me or my views and it was engineered to keep him in . . . power, and to have my vote diluted." Petrs. Ex. 175 (McKinstry Dep.) 101:11-19.

245. Petitioner Mark Lichty, a retired attorney and manufacturer, resides in the 17th District in East Stroudsburg, Monroe County. Petrs. Ex. 172 (Lichty Dep.) 8:11-15; 9:8-16. JSF ¶ 12. As a Democratic voter in a packed district, "the shape of [Mr. Lichty's] Congressional district affects the shape of the other Congressional districts and promotes gerrymandering." Petrs. Ex. 172 (Lichty Dep.) 43:17-21. The 2011 map harms him because "legislation that is important to

me just doesn't see the light of day . . . you have to look at the whole state and the configuration of the state." *Id.* at 33:19-34:8.

246. Petitioner Lorraine Petrosky, a retired preschool teacher, resides in the 18th District in Latrobe, Westmoreland County. Petrs. Ex. 171 (Petrosky Dep.) 14:22-15-8; JSF ¶ 12. Under the 2011 map, "pockets of Democrat were kind of moved away and put into other districts." Petrs. Ex. 171 (Petrosky Dep.) 43:7-10. Ms. Petrosky is unable to elect a Democratic congressman, *id.* at 41:16-18; in 2014 and 2016, she was unable even to vote for a Democratic candidate, *id.* at 85:8-15.

247. Dr. Chen's simulated plans leave no doubt that the 2011 enacted plan has deprived certain Petitioners of the ability to elect a candidate of their choice. Using the home address of each Petitioner, Dr. Chen analyzed the likelihood that each Petitioner would be in a Democratic-leaning district under the simulated plans. Tr. 268:21-270:17; Petrs. Ex. 1 at 35-38 (Chen Report).

248. Dr. Chen found that four Petitioners who currently reside in Republican-held districts—Beth Lawn (7th District), Lisa Isaacs (8th District), Robert Smith (11th District), and Thomas Ulrich (15th District)—would be in a Democratic district in a majority or even an overwhelming majority of the 1,000 simulated non-partisan plans. Tr. 280:4-19; Petrs. Ex. 18.

249. Petitioner Isaacs would be in a Democratic district in over 99% of the 1,000 simulated non-partisan plans. Tr. 277:19-279:4; Petrs. Ex. 18.

250. Petitioner Ulrich would be in a Democratic district in over 99% of the simulated plans in Simulation Set 1 and over 90% of the simulated plans in Simulation Set 2. Tr. 279:18-280:3; Petrs. Ex. 18.

251. Petitioner Lawn would be in a Democratic district in over 99% of the simulated plans in Simulation Set 1, and Petitioner Smith would be in a Democratic district in over 68% of the simulated plans in Simulation Set 1 and over 94% of simulated plans in Simulation Set 2. Tr. 279:18-280:3; Petrs. Ex. 18.

252. Petitioners' Exhibit 18 depicts the percentage of simulated plans in which each Petitioner would be placed into a Democratic-leaning district:

Chen Table 4: Petitioners' Districts in Act 131 and in Simulation Sets 1 and 2 Districting Plans
Percent of Simulated Plans Placing Petitioner into a Democratic District.

		Percent of Simulated Plans Placing Petitioner into a Democratic District:			
	Partisan Tilt of Petitioner's District In Enacted Plan (Act 131 Plan)	Simulation Set 1	Simulation Set 1: Plans Containing a District with BVAP > 56.8%	Simulation Set 2	Simulation Set 2: Plans Containing a District with BVAP > 56.8%
Carmen Febo San Miguel	1st Dist. (Democratic)	100%	100%	100%	100%
James Solomon	2nd Dist. (Democratic)	100%	100%	100%	100%
John Greiner	3rd Dist. (Republican)	7.6%	8.3%	5.2%	3.7%
John Capowski	4th Dist. (Republican)	0%	0%	0%	0%
Gretchen Brandt	5th Dist. (Republican)	1.0%	2.0%	0.4%	0%
Tom Rentschler	6th Dist. (Republican)	24.6%	12.7%	1.0%	3.7%
Beth Lawn	7th Dist. (Republican)	99.8%	100%	26.8%	11.1%
Lisa Isaacs	8th Dist. (Republican)	99.8%	100%	99.4%	98.1%
Don Lancaster	9th Dist. (Republican)	0.6%	0.5%	6.2%	7.4%
Jordi Comas	10th Dist. (Republican)	0%	0%	0.6%	0%
Robert Smith	11th Dist. (Republican)	68.4%	72.7%	94.4%	92.6%
William Marx	12th Dist. (Republican)	1.8%	1.5%	38.4%	40.7%
Richard Mantell	13th Dist. (Democratic)	100%	100%	100%	100%
Priscilla McNulty	14th Dist. (Democratic)	99.8%	100%	98.6%	100%
Thomas Ulrich	15th Dist. (Republican)	99.6%	99.0%	90.6%	77.8%
Robert McKinstry	16th Dist. (Republican)	8.8%	1.0%	7.0%	7.4%
Mark Lichty	17th Dist. (Democratic)	94.0%	95.6%	43.2%	46.3%
Lorraine Petrosky	18th Dist. (Republican)	1.8%	1.5%	37.6%	42.6%

Petrs. Ex. 18

253. Many districts are uncontested because of the gerrymander. After the Republican candidate won 64% of the vote in the 18th District in 2012, JSF ¶ 73, Democrats did not even contest the seat in 2014, JSF ¶ 76. As a result, Petitioner Lorraine Petrosky did not even have an opportunity to vote for a Democratic candidate. Petrs. Ex. 171 (Petrosky Dep.) 41:22-43:6, 84:1-10.

254. Nor did Petitioner Thomas Ulrich have an opportunity to vote for a Democratic candidate in the 15th District in 2014, JSF ¶ 76, even though he is placed in a Democratic district in over 99% of Dr. Chen' simulated plans in Simulation Set 1 and over 90% of the simulated plans in Simulation Set 2. Tr. 279:18-280:3; Petrs. Ex. 18.

255. In the 2016 congressional elections, the elections in the 3rd, 13th, and 18th Districts were all uncontested. JSF ¶ 83. There was no Democratic challenge in the 3rd and 18th Districts, depriving Petitioners John Greiner and Lorraine Petrosky of the opportunity to vote for a Democratic candidate. JSF ¶ 84.

256. Without competitive districts, promising future political leaders do not even bother running for office because they know they have no realistic likelihood of success. For example, Greg Vitali, a Democratic member of the Pennsylvania House of Representatives, testified that he contemplated a congressional run in the 7th District in 2012, but decided not to do so after he "saw the lines and analyzed the data and [saw] that it was no longer a competitive seat." Petrs. Ex. 179 (Vitali

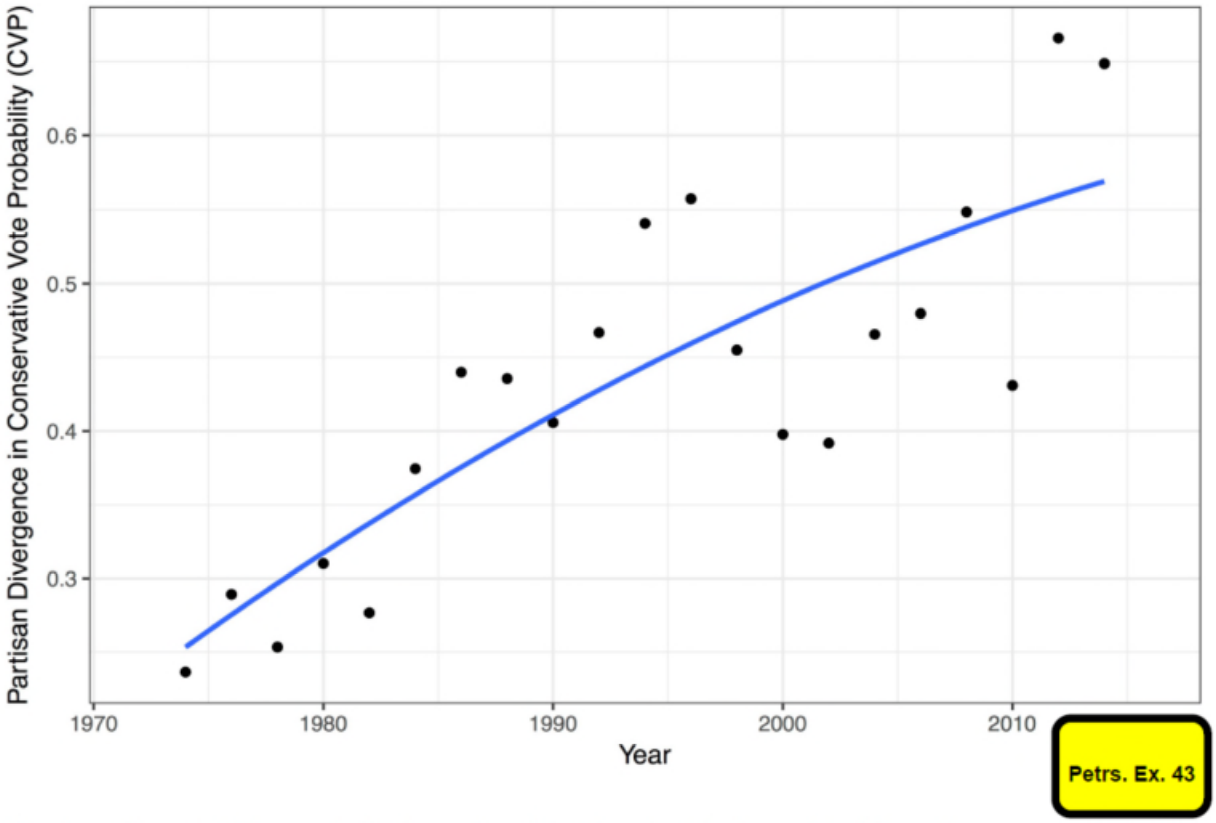
Dep.) 34:23-35:9. After "stud[ying] the maps and talk[ing] with people," Representative Vitali realized that running for Congress in the 7th District "would be a suicide mission." *Id.* at 35:21-23.

F. The 2011 Map Deprives Petitioners and Other Democratic Voters of an Effective Voice in the Political Process

257. Petitioners' expert Dr. Warshaw testified that the partisan bias exhibited in the 2011 map has extreme and negative representational consequences for Pennsylvania's voters. *See generally* Tr. 899:23-946:23. The overwhelming majority of his testimony on the representational consequences of gerrymandering was not rebutted at all, and none of that testimony was rebutted persuasively.

258. There is a consensus among political scientists that polarization in today's Congress is not only extremely large, but that it is much larger today than it used to be. Tr. 900:9-15. Polarization in Congress has increased dramatically over the past 40 years. Tr. 900:14-15.

259. In today's Congresses, there is a 65 percentage point difference in the percentage of time that Democratic and Republican members of Congress voted in a conservative direction. Tr. 903:4-15. Petitioners' Exhibit 43 demonstrates that the partisan divergence in voting behavior by Members of Congress has increased dramatically:



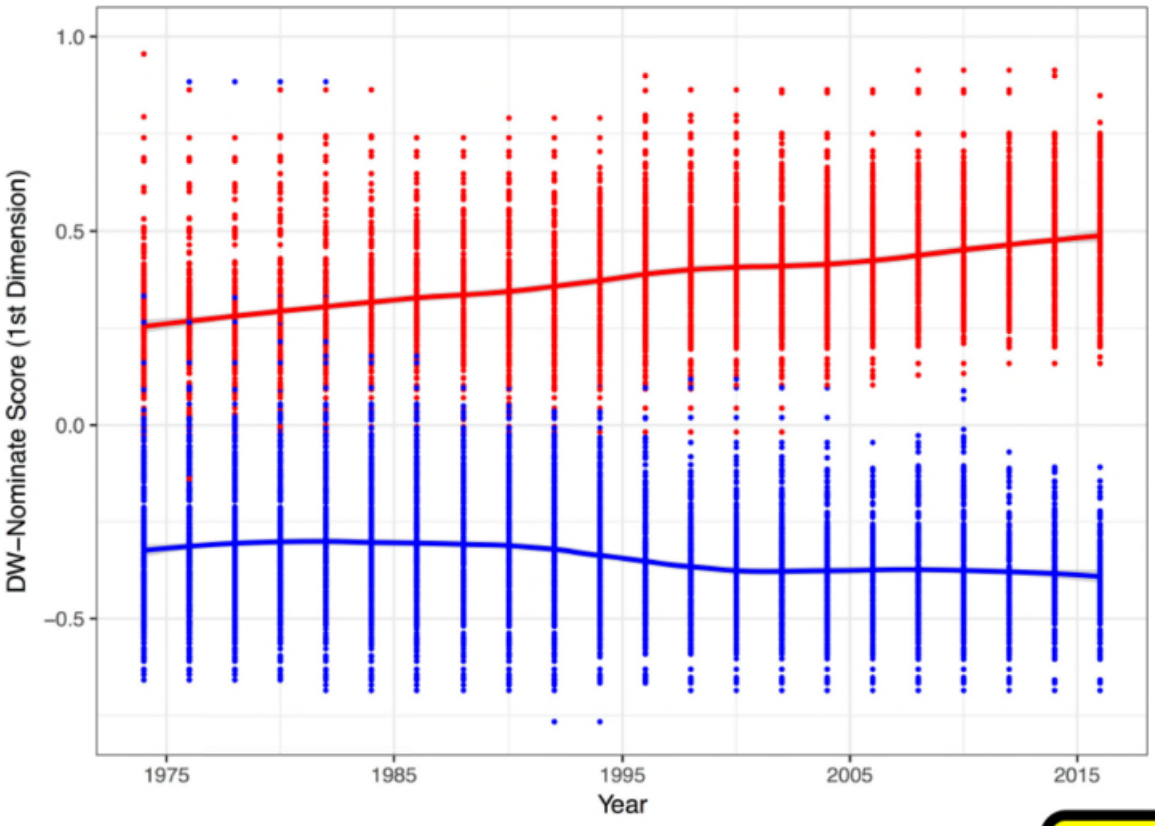
Warshaw Figure 6: Difference in the Proportion of the Time that Members of Each Party Vote Conservatively. The dots represents the averages in each year, and the line shows a moving average.

260. Today, every single Republican member of Congress is substantially more conservative than the most conservative Democrat. Tr. 911:11-13. There is no overlap between the parties. Tr. 911:10-11. If voters in a particular district elect a Republican to Congress instead of a Democrat, there is essentially a 100% chance that they will be substantially more conservative than the Democrat that would have been elected if the district had gone Democratic. Tr. 911:14-20. This testimony from Dr. Warshaw went unrebutted.

261. The gulf between the parties has widened over time. Tr. 912:12-19. There are now no moderates in either party who are similar to members of the

other party. Tr. 912:12-19. When Pennsylvania' prior congressional districting map was drawn, that was not the case. While Republicans were more conservative than Democrats on average in the early 2000s, there was still some overlap between the parties, including some individual Republican House members who were more liberal than the most conservative individual Democratic House members, and vice versa. Tr. 913:1-14; Petrs. Ex. 44.

262. Petitioners' Exhibit 44, shown below, maps the individual ideology of each member of Congress in every Congress since the early 1970s. Tr. 904:9-905:6; 909:6-14; 910:3-6. The red and blue dots indicate ideology scores for individual Representatives from each party, with higher numbers indicating a more conservative Representative and lower numbers indicating a more liberal Representative. Tr. 908:20-23; 909:6-14. The white space between the two parties at the right of the graph visually illustrates that every single Republican member of Congress today is more conservative than every single Democratic member. Tr. 911:5-13; 912:8-19. The red and blue horizontal lines show that the average ideology of Democrats and Republicans in Congress is also increasingly diverging. Tr. 908:15-23.



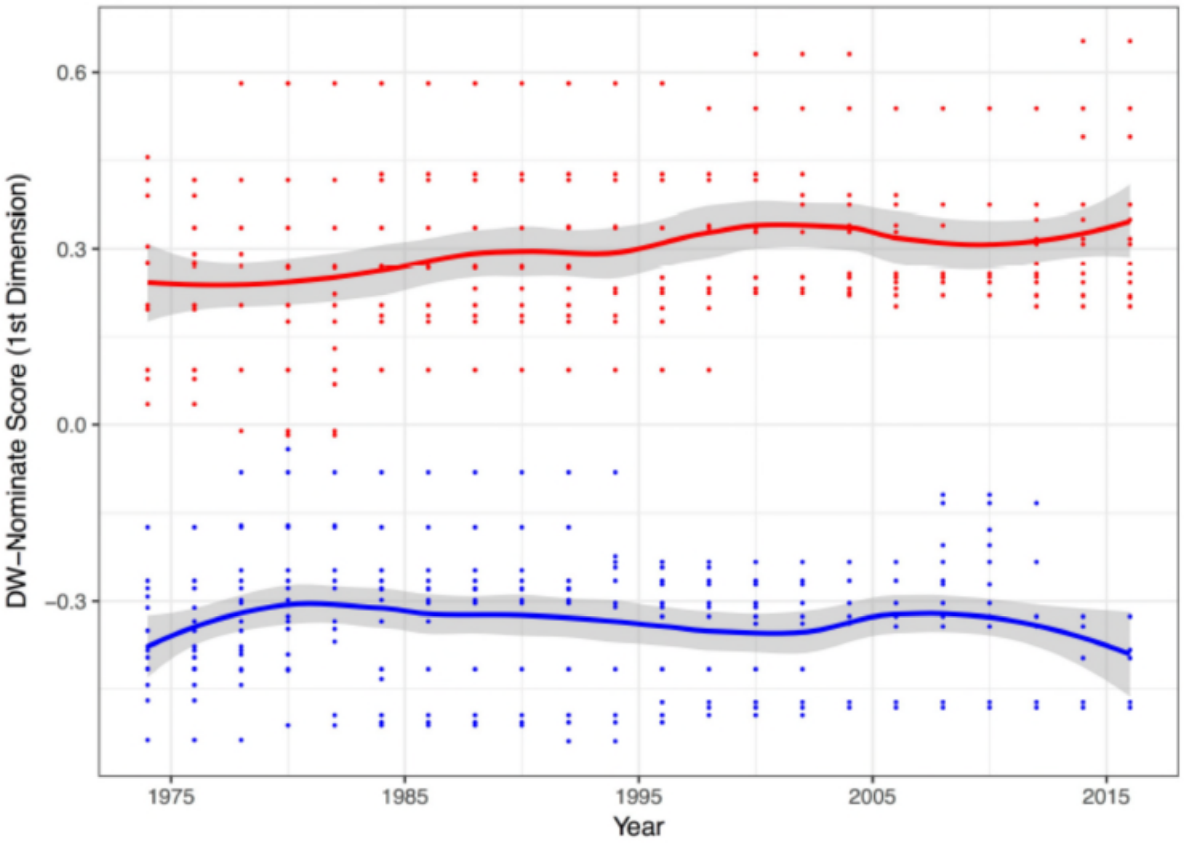
Warshaw Figure 7: The average ideology of members of each party.

Petrs. Ex. 44

263. The national trend of extreme polarization holds true in Pennsylvania. Today, there is no overlap among representatives from each party within Pennsylvania's congressional delegation. Tr. 922:1- 925:4; Petrs. Ex. 46. If a particular congressional district in Pennsylvania elects a Republican legislator instead of a Democratic one, there will be a vast difference in their voting behavior in Congress, and the Republican is going to be much more conservative than the Democrat would have been in that same district. Tr. 924:15-24.

264. Petitioners' Exhibit 46 (the top panel of which is shown below) demonstrates the growing gulf between Republican and Democratic members of

Pennsylvania's congressional delegation. Each dot represents a Republican or Democratic member of the delegation, and the white space in the chart illustrates that every Republican member of Pennsylvania's delegation is significantly more conservative than every Democratic member, and vice versa.



Petrs. Ex. 46.

265. Among the Pennsylvania delegation as a whole, there is today a very large, substantive difference between the average Democratic and Republican congressperson in Pennsylvania. Tr. 926:4-17; Petrs. Ex. 46.

266. Consensus among Pennsylvania legislators has also reached historic lows. Petrs. Ex. 35 at 20. There is no consensus among Pennsylvania legislators on issues facing the nation or the Commonwealth. Tr. 928:9-11. In prior decades, Pennsylvania legislators voted together in the U.S. House around 30% or even 40% of the time; in the most recent Congresses, Democrats and Republicans from Pennsylvania vote together less than 10% of the time. Tr. 927:7-928:8.

267. After the 2012 elections, members of Pennsylvania's congressional delegation voted with the majority of their own party in Congress virtually all the time. Tr. 930:5- 932:24; Petrs. Ex. 48. On average, Pennsylvania's representatives took the same position as the majority of their own party 93% of the time, and 90% of the time counting only non-unanimous votes (*i.e.*, excluding non-controversial votes like naming post offices). Tr. 932:16-24; Petrs. Ex. 48.

268. This effect holds even for members of Congress who were elected in more competitive races. Members of Congress do not take more moderate positions simply because they represent a more moderate district. Tr. 917:2-921:3. For example, the most competitive election in the 2012 congressional elections in Pennsylvania was the 12th District, where Republican Keith Rothfus won with about 52% of the vote. Tr. 934:12-25; Petrs. Ex. 41. But Congressman Rothfus still votes with a majority of members of his own party 96% of the time. Tr.

935:6-9; Petrs. Ex. 48. That is more than Tom Marino, who won with 66% of the vote in 2012. Petrs. Ex. 48; Petrs. Ex. 41; JSF ¶ 73.

269. Legislative Respondents had no persuasive rebuttal to any of Petitioners' evidence regarding polarization. Legislative Respondents' expert Dr. McCarty testified on direct that Figure 5 of his report showed that "as districts become more competitive, the differences between the two parties become much smaller." Tr. 1479:7-18; *see* Leg. Resps. Ex. 18 at 7. He testified on direct that this showed that because districts in Pennsylvania are purportedly "reasonably competitive," Tr. 1497:7-11, Democratic voters in any competitive, "slightly Republican" districts where Republicans won would purportedly receive "more moderate" representation from their Republican congresspersons, Tr. 1481:11-24. He testified that Figure 5 showed that "Democrats and Republicans who represent competitive districts tend to be more moderate." Tr. 1482:15-20.

270. But Dr. McCarty undermined his own conclusions on cross-examination. First, Dr. McCarty acknowledged that in his academic work, he had taken the exact opposite position, and had conducted research showing that Democrats and Republicans who represent moderate districts are not more moderate. Dr. McCarty explained that in a figure in one his articles that was "exactly the same idea" as Figure 5, he had concluded that "Republican representatives from districts with a given presidential vote are much more

conservative than are Democratic representatives from districts with similar presidential votes." Tr. 1576:1-1577:1; Petrs. Ex. 266 at p.671. The article described this as a "large gap between Republican and Democratic [ideology] scores" in districts with the same presidential vote share. Petrs. Ex. 266 at p.670. Dr. McCarty similarly wrote in a Washington Post op-ed that "polarization has grown because Democrats and Republicans are representing moderate districts in increasingly extreme ways." Tr. 1579:14-23.

271. Confronted with this contradiction, Dr. McCarty agreed on cross-examination that "Members of Congress are taking positions that are more extreme than the average voter in their district." Tr. 1586:13-16. He agreed that there was "no real overlap" of Democratic and Republican legislators in "moderate districts." Tr. 1575:2-10. Dr. McCarty confirmed his agreement that the consequence of that fact was that polarization could lead to "poor representation." Tr. 1586:17-21.

272. Dr. McCarty's second premise—that Pennsylvania has "reasonably competitive" districts, Tr. 1497:7-11—is not credible either. Dr. McCarty acknowledged on cross-examination that Pennsylvania's districts under the 2011 plan are neither moderate nor competitive. Tr. 1580:11-20, 1582:1-3, 1582:4-17, 1582:18-1583:20. In particular, of the 54 congressional elections held under the 2011 plan (18 seats times 3 elections), only one was even plausibly described as competitive. Tr. 1583:10-20. In other words, Dr. McCarty suggested that the

average partisanship of a legislator in a competitive district would be in the middle—this was the purple line he drew on Figure 5. Tr. 1482:6-14, 1572:21-1573:1. But given his acknowledgment on cross that Pennsylvania's districts are not competitive, the average partisanship is irrelevant to the analysis.

273. Petitioners' expert Dr. Warshaw persuasively testified that combining a partisan gerrymander with the immense polarization in Congress creates stark and negative representational consequences for Pennsylvania's voters. If Pennsylvania voters in a particular district are unable to elect someone of their own party, voters in that district are unlikely to see their preferences represented by their representatives, and effectively have no voice in Congress via their representative. Tr. 933:18-22. Even in a close district, Democratic voters with a Republican congressperson have essentially no influence on that congressperson, and it is very unlikely that their preferences are going to be reflected in their congressperson's roll call votes in Congress. Tr. 936:5-10.

274. Dr. Warshaw testified that because of the partisan bias of the 2011 map, many Democratic voters are unable to elect a representative of their choice. And because Democrats and Republicans in Congress almost always vote the party line, Pennsylvanians who are shut out of the political process by not being able to elect a representative of their choice effectively have no voice in Washington and no influence on how their member of Congress votes. Tr. 947:10-948:3.

275. Dr. Warshaw testified that, based on the partisan bias of the 2011 map and the gulf between the parties, Democratic voters in Pennsylvania whose votes are wasted through cracking have little or no voice in Washington. Tr. 837:21-838:1. The majority of Democratic voters in Pennsylvania live in districts that Republicans won, and Democratic voters in Pennsylvania whose votes are "wasted" in cracked districts—*i.e.*, districts Democrats lost—constitute 80 percent of the total wasted votes by Democrats in Pennsylvania. Tr. 1020:18-25.

276. Dr. Warshaw testified to his opinion that the availability of alternative forms of expression, like writing an op-ed, cannot make up for an inability to influence a member of Congress. The key feature of democratic representation is the ability of citizens to affect the lawmaking process in Congress through elections. Tr. 948:10-13. Dr. Warshaw concluded that gerrymandering has large and pernicious effects on democratic representation in our country. Tr. 948:17-19.

277. Although Dr. Warshaw did not testify that gerrymandering causes polarization, his unrebutted analysis showed that a pro-Republican shift in a state's Efficiency Gap leads to a quantifiably more conservative congressional delegation. In other words, because a more pro-Republican Efficiency Gap leads to more Republican legislators in any particular state, it also leads to a more conservative congressional delegation overall. Tr. 904:20-25, 937:24-938:9, 940:6-15, 940:23-25; Petrs. Ex. 49.

278. Dr. Warshaw concluded that if the Efficiency Gap moves in a Republican direction, as in Pennsylvania, the Members of Congress from that state are going to take much more conservative roll call positions than one would see in a state with a partisan-neutral Efficiency Gap. Tr. 942:1-6.

279. Dr. Warshaw concluded that Republican representatives in districts where Democratic voters are cracked are unlikely to represent those voters on the most important issues of the day. Tr. 942:20-946:15. He analyzed the congruence between public opinion and legislative votes on the Affordable Care Act, and how partisan bias affected that congruence. Dr. Warshaw concluded that in states with a pro-Republican Efficiency Gap, like Pennsylvania, Republican voters are much more likely to agree with their legislators' votes on Affordable Care Act repeal. Tr. 945:18-24. Conversely, in states with a pro-Democratic advantage in the Efficiency Gap, Democrats are more likely to agree with their legislators. Tr. 945:25-946:6; Petrs. Ex. 50. Dr. Warshaw concluded that voters are extremely unlikely to see their preferences on major bills translated into action in Congress when their legislator is from the opposite party. Petrs. Ex. 35 at 24.

280. Petitioners' testimony confirms that the extreme bias of the 2011 map has deprived them of any effective voice in Congress. Petitioner Bill Marx, who lives in the heavily Republican 12th District, testified that 2011 map has "really taken away my voice, because I have no hope of expressing my voice and making

it heard." Tr. 113:23 - 114:2. And the 2011 has also "taken away any chance of having a Democratic majority Congressional delegation." Tr. 113:16-22.

281. Petitioner Priscilla McNulty, in the 14th District, testified that "Pennsylvanians are deprived a full voice" because Republicans have an unfair advantage in winning seats. Petrs. Ex. 173 (McNulty Dep.) 67:3. "[L]aws that are enacted in Washington, it requires more than just Mike Doyle's point of view to get our issues addressed." *Id.* at 66:20-25.

282. John Capowski testified that "there may be no political or social views that [his Republican congressman] and [Professor Capowski] have in common," Petrs. Ex. 166 (Capowski Dep.) 17:7-16, and "in terms of voting, [he] seems to be a party line Republican," *id.* at 17:23-24. Professor Capowski testified that "not only am I not represented by someone who shares my view, the Pennsylvania Congressional Delegation does not share or represent my views." *Id.* at 37:25-38-11.

283. Petitioner Bob Smith's Republican congressman "supports the Republican party 95% of the time and so there are things enacted that [Mr. Smith] is totally in disagreement with." Petrs. Ex. 176 (Smith Dep.) 30:18-21. Mr. Smith testified that "I don't feel as though I have a voice in congressional affairs." *Id.* at 23:22-23.

284. The 2011 map "negated" Petitioner Don Lancaster's "vote and the votes of people like [him]self." Petrs. Ex. 164 (Lancaster Dep.) 27:20-27:24.

285. Since the enactment of the 2011 plan, Jordi Comas (10th District) testified that "if I want to try to effect the final outcome, I have to change my registration. Aside from not wanting to do that . . . I would have to make a choice. Do I care more about having a vote in the Republican primary, which is the only way to have a meaningful vote—and then I have to sacrifice what else is up in 2016." Petrs. Ex. 167 (Comas Dep.) at 56:14-24.

286. Beth Lawn, in the 7th District, is unable "to elect a candidate of my choice" and is "just shut out." Tr. 148: 8-18. Ms. Lawn testified that she is "very frustrated, because we feel we can't make a difference. We can't get the attention of our representative, because he's just not available to us; he doesn't have to listen to us; there's no incentive for him to do that." Tr. 145:22-146:2.

287. Petitioners Tom Rentschler, Lisa Isaacs, Gretchen Brandt, and Robert McKinstry testified that their representatives do not represent their views on issues like the Affordable Care Act, tax policy, reproductive rights, gun control, and the environment, and simply vote with their party leadership. Tr. 675:22-676:3, 676:4-14 (Rentschler); Petrs. Ex. 170 (Isaacs Dep.) 47:7-19 ; Petrs. Ex. 175 (McKinstry Dep.) 73:9-74:4; Petrs. Ex. 165 (Brandt Dep.) 40:15-21, 68:11-69:5. Their Republican congressmen vote "with the party leadership very consistently." Petrs.

Ex. 175 (McKinstry Dep.) 75:14-16. It was "hard for" Ms. Brandt "to think of an issue where I have heard about something that [her congressman] voted on that is the way I would have wanted him to vote." Petrs. Ex. 165 (Brandt Dep.) 40:18-21.

288. Some districts are so reliably red that no Democrat bothers running, denying Democratic voters in those districts any opportunity even to cast a ballot for the candidate of their choice. For example, Tom Ulrich testified that his "ideas are not competitive in [his] district or not being heard." Petrs. Ex. 177 (Ulrich Dep.) 21:4-22:1. In 2014, Mr. Ulrich could not even cast a vote for a Democratic candidate for Congress because no Democrat ran. *Id.* at 35:9-35:14. Mr. Ulrich testified that "it is hard to get a person to run where there's very little chance that in that district that someone other than a Republican is going to be elected . . . [w]as it interference with my right to vote . . . . I still could vote, but there was nobody there to vote for." *Id.* at 49:15- 50:1.

289. In 2014 and 2016, Lorraine Petrosky was unable even to cast a ballot for a Democratic candidate because no Democrat would run in such a safe Republican district. Petrs. Ex. 171 (Petrosky Dep.) 41:22-43:6, 84:1-10. Ms. Petrosky currently has no representative in Congress because Republican congressman Tim Murphy has resigned. While he was in office, Mr. Murphy did not represent Ms. Petrosky's views and she "couldn't find any commonality" with him. *Id.* at 85:8-15.

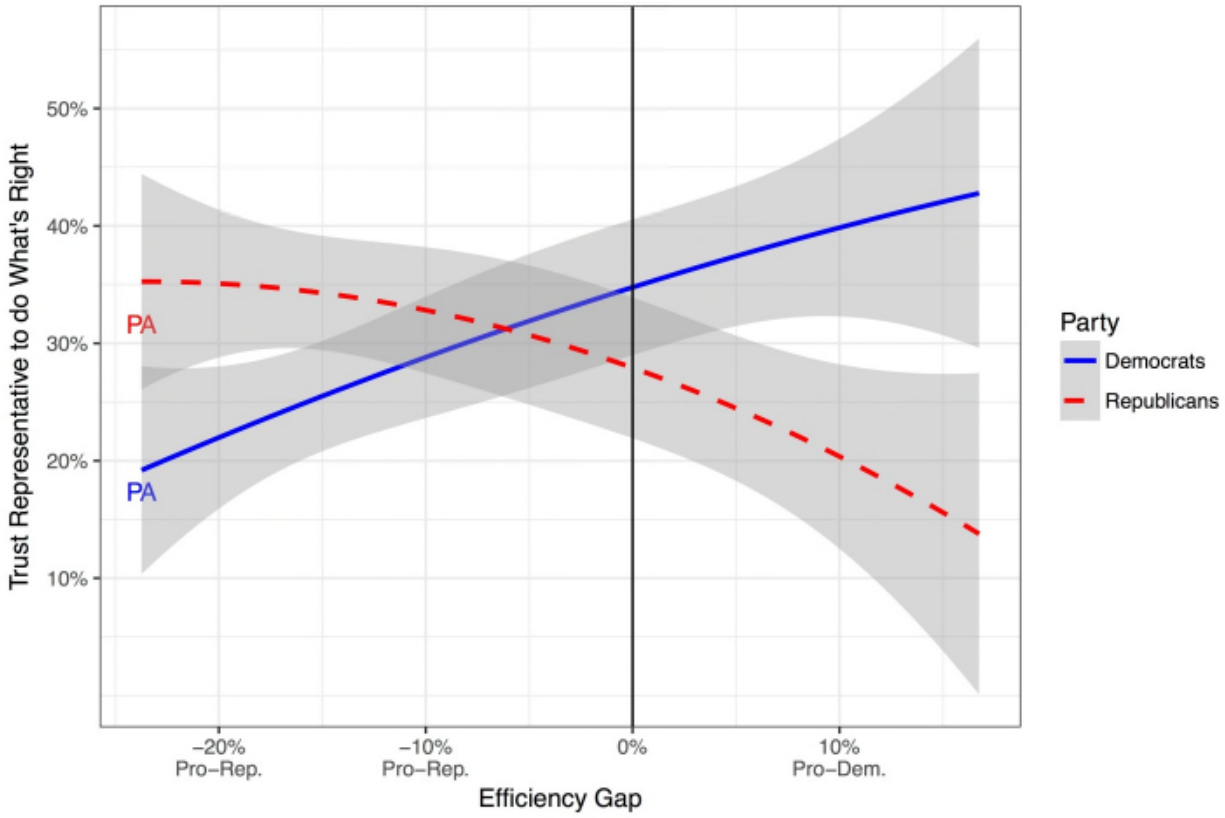
290. John Greiner (3rd District) is concerned about healthcare, taxation, immigration and preservation of the environment. Mr. Greiner's Republican congressman does not support any of his positions on these key issues and his vote is "very much straight political Republican party line." Petrs. Ex. 168 (Greiner Dep.) 40:5-41:11. In 2016, Mr. Greiner was not even able to vote for a Democratic candidate because the Republican incumbent ran unopposed. *Id.* at 17:5-10; 21:25-22:2; 22:25-23:11.

G. The 2011 Map Undermines Citizens' Trust in Government

291. Dr. Warshaw testified that partisan gerrymandering is undermining citizens' trust in their government. He used a study called the Cooperative Congressional Election Study, which asks thousands of people across the country whether they trust their district's representative in Congress to "do what's right." Tr. 949:5-20; Petrs. Ex. 35 at 26. Dr. Warshaw concluded that, across the country, Republican voters in states with a pro-Republican Efficiency Gap are far more likely to trust their representatives than Democrats are. Conversely, in places with a pro-Democratic Efficiency Gap, Democrats are more likely to trust their representative than Republicans. Tr. 952:14-23.

292. The numbers showed a strong relationship between the Efficiency Gap and citizens' trust in government. Tr. 952:14-16. Democratic voters in Pennsylvania were roughly 15 percentage points less likely to trust their

representatives than Republicans, and less than 20% likely to trust their representatives overall. Petrs. Ex. 35 at 27; Petrs. Ex. 51. Petitioners' Exhibit 51 shows the relationship between the Efficiency Gap and citizens' trust in government; the red and blue "PA" markers show Pennsylvania on the chart:



Petrs. Ex. 51.

293. Dr. Warshaw concluded that partisan gerrymandering is undermining citizens' faith in democracy and government itself. Tr. 838:17-21, 953:9-19.

294. The testimony of the Petitioners bore out, on an individual level, Dr. Warshaw's expert opinion about the broad-scale effects of gerrymandering on Pennsylvanians' trust in government. Richard Mantell testified that the 2011 map

is "contrary to the essence of a Democratic society." Petrs. Ex. 174 (Mantell Dep.) 18:12-13. Mark Lichty testified that the 2011 map "undermine[s] our sense of trust in our democracy." Petrs. Ex. 172 (Lichty Dep.) 37:8-9.

295. Petitioner Comas testified that "one of the strengths of American democracy is that we have faith in our political institutions in general. And, when that is eroded, it is hard to get it back. . . . Partisan gerrymandering [means] that, not just in my district but across the state, that instead of thinking that these are well-intentioned civil servants who are trying to do their best to represent their constituents, I assume that because of partisan gerrymandering that they are only beholden to their party structure which drew the lines and can constantly threaten them." Petrs. Ex. 167 (Comas Dep.) 36:17-37:11.

296. Bill Marx discussed gerrymandering with his students, "and how Pennsylvania has a 13-5 representation in Congress—and how it will always be 13-5 because of the way these districts have been drawn to [be] such safe districts—and you just see these 18-year-olds, before I send them out to the world, before they even have experience—they just ask me questions, like, Well, then, why should we vote? Why does this matter? I'm not going to make a difference. Why should I care? And as a civics teacher, as somebody who . . . really puts my heart out there . . . that's upsetting to me, and that's depressing." Tr. 124:15-125:3.

"This is causing people to distrust our Government, pull away from the political process . . . [a]nd it's wrong and it needs to change." Tr. 126:1-9.

H. Legislative Respondents Offered No Defense of the 2011 Map

297. Legislative Respondents offered no affirmative defense of the 2011 map. They put on two witnesses, Dr. Cho and Dr. McCarty. Dr. McCarty testified that he was offering no "opinion on whether or not Pennsylvania's map is a gerrymandered map." Tr. 1417:17-21. Dr. Cho testified that she had her own approach, using a supercomputer, to determine whether a map was gerrymandered, but that she had not completed her own analysis of the map because she was too "busy." Tr. 1324:7-1328:3. Legislative Respondents withheld all information about legislators' actual intent in drawing the 2011 map and had no witness who testified that the legislators were motivated by anything other than partisan intent.

298. A hypothetical effort to protect incumbents does not explain, and could not justify, the extreme partisan bias in Pennsylvania's 2011 map. First, Legislative Respondents failed to establish that incumbency protection is a traditional districting criteria in Pennsylvania, much less one that should subordinate traditional criteria like contiguity, compactness, and avoiding county and municipal splits. Legislative Respondents' own expert Dr. McCarty testified that incumbency protection is an "invitation to overt corruption" and "does little to enhance legitimacy of American democracy." Tr. 1591:2-1592:21.

299. Dr. Cho, Legislative Respondents' only witness who testified that incumbency protection is traditional, was entirely unfamiliar with the prior Pennsylvania districting plan, did not know that six Democratic incumbents were paired together in that plan, and was not qualified to testify about districting criteria in Pennsylvania. Tr. 1271:10-1272:4. After being shown a video of a presentation she gave at a conference at Tufts, Dr. Cho admitted that incumbency protection is subordinate to districting principles like compactness and contiguity, and that incumbency protection can be used "in a bad way." Tr. 1261:21-1264:5.

300. Dr. Cho's original testimony was inconsistent with the approach she has taken in her own academic work. While Dr. Cho testified on direct that leaving out incumbency protection when simulating maps might lead someone to conclude that a map was partisan when it was "at least partly . . . incumbency protection," Tr. 1179:13-17, she acknowledged on cross-examination that in her own academic article running simulations to ascertain whether a map is gerrymandered, she doesn't "consider the preservation of incumbency." Tr. 1339:11-15; *see* Tr. 1330:8-12, 1334:8-11, 1334:22-1335:11.

301. Incumbency protection "doesn't make sense" if the existing map is "arguably a gerrymander," said Dr. Cho. Tr. 1265:2-6. Pennsylvania's 2002 districting plan produced the incumbents existing at the time of the drawing of the 2011 map. The Pennsylvania Supreme Court, with respect to the 2002 map, found

that "the legislature deliberately drew the congressional districts so as to grant an advantage to the Republican party" and agreed "that there was a discriminatory intent." *Erfer v. Commonwealth*, 794 A.2d 325, 332 (Pa. 2002).

302. In any event, any effort at incumbency protection in drawing the 2011 map was itself partisan. The two incumbents paired were both Democrats, Jason Altmire and Mark Critz. JSF ¶ 122. No other incumbents were paired; each and every Republican incumbent was protected. JSF ¶ 122. Petitioners' experts established both qualitatively and quantitatively that that outcome would not have occurred absent a deliberate, partisan effort. Dr. Kennedy testified that the newly combined 12th District bypasses four other districts along the way from the Ohio border to Johnstown, in an effort to pair Altmire and Critz. Tr. 633:15-25, 634:13-24. He testified that pairing Altmire and Critz required the mapmakers to create a 120-mile long district that combined "two disparate communities of interest." *Id.*; *see* Tr. 635:6-8. Quantitatively, Dr. Chen established that pairing Altmire and Critz could not have occurred as a result of a non-partisan effort to protect 17 incumbents. Tr. 225:25-227:14; Petrs. Ex. 11.

303. Legislative Respondents' expert Dr. Cho stated that she did not analyze the question whether any incumbency protection in the 2011 plan was done for partisan reasons. Tr. 1251:2-6. Nor did she address the fact that, when

the 2011 plan was enacted, five of the Republican incumbents had been in office for less than a year.

304. Dr. Chen's testimony established that an effort at incumbency protection could not justify the 2011 map's partisan bias—or negate a conclusion that the map was drawn with partisan intent. Dr. Chen conducted a set of 500 random simulations that avoided pairing 17 incumbents. Not a single one produced 13 Republican seats, and the most common outcomes were plans with 9 or 10 Republican seats. Tr. 232:22-234:21. Every single one of these plans was significantly more compact than the enacted 2011 map and split fewer counties and municipalities. Tr. 215:7-217:7; Tr. 218:9-220:5; Petrs. Ex. 1 at 24-26. Dr. Chen's conclusion, with overwhelming statistical certainty, that a non-partisan effort to protect incumbents cannot explain the partisan bias in the 2011 map is reliable, and the Court accepts it. Tr. 222:19-223:2; Petrs. Ex. 1 at 27. Partisan intent was the predominant factor behind the 2011 plan even controlling for incumbency. Tr. 223:3-6.

305. Dr. Cho testified that preserving "district cores" is purportedly a traditional redistricting principle, Tr. 1252:6-11, but neither Dr. Cho nor any other witness for Legislative Respondents testified that the 2011 map actually *did* preserve district cores. To the contrary, Dr. Kennedy offered unrebutted testimony that the 2011 map carved up communities of interest. *See generally* Petrs. Ex. 53.

306. There is no evidence to establish that the Voting Rights Act was a consideration at all in drawing the 2011 map. The only two districts with sizable African-American voting age populations became *less* African-American in the 2011 map. Petrs. Exs. 13, 14 (showing that District 1 went from 43.9% African-American in the 2002 map to 32.8% in the current map, while District 2 went from 58% African-American to 56.8% in the current map); *see also* Tr. 238:1-241:14 (Dr. Chen). Dr. Cho initially testified that any districting plan that did not produce a district with at least a 56.8% African American voting age population would violate the Voting Rights Act, Leg. Resps. 11 at 23; Tr. 1274:24-1276:11, but admitted on cross-examination that she had no basis for offering that opinion because she had not conducted any analysis of the *Gingles* factors. Tr. 1281:11-23. Dr. Cho confirmed that "cannot make [the] statement" that any of Dr. Chen's maps have to be thrown out based on the VRA. Tr. 1286:10.

307. Nor could any *hypothetical* racial goal explain or justify the partisan bias present in the map, or alter the conclusion that the map was drawn with the intent to discriminate against Democratic voters. Dr. Chen's simulations demonstrated that a hypothetical goal of creating a majority-minority district could not explain the 2011 map's pro-Republican bias. Dr. Chen found that hundreds of simulated maps produced a district with an African-American voting age population of 50% or even 56.8%, and that such a hypothetical goal would not

alter the expected Republican seat share. Tr. 242:13-245:19; Tr. 246:15-247:4; Tr. 249:17-250:18; Petrs. Exs. 15, 21, 23. Dr. Chen found that a total of 534 of his 1000 simulations would produce a majority African-American district (234 in Simulation Set 1 and 300 in Simulation Set 2). Petrs. Exs. 21, 23. The partisan breakdown of those plans mirrored that of the broader simulations. *Id.*

308. Dr. Pegden froze District 2, and still found with a greater than 99.99% mathematical confidence level that intentional drawing of the 2011 plan to maximize partisan advantage was the only explanation for his results. Tr. 1384:22-1385:4; Tr. 1385:21-1386:12; Tr. 745:9-19; Petrs. Ex. 117 at 3.

PROPOSED CONCLUSIONS OF LAW

I. STANDING AND JUSTICIABILITY

1. As Democratic voters from each of Pennsylvania's 18 congressional districts, Petitioners have standing to challenge the 2011 congressional districting map. *See Erfer v. Commonwealth*, 794 A.2d 325, 329-30 (Pa. 2002).[3]

2. Partisan gerrymandering claims are justiciable under the Pennsylvania Constitution. *See Erfer*, 794 A.2d at 331; *In re 1991 Reapportionment*, 609 A.2d 132, 141-42 (Pa. 1992).

II. THE 2011 MAP VIOLATES THE PENNSYLVANIA CONSTITUTION'S FREE EXPRESSION AND FREE ASSOCIATION CLAUSES

3. The Pennsylvania Constitution guarantees the rights of free expression and free association. Pa. Const. Art. I, §§ 7, 20. Article I, Section 7 provides in relevant part: "The free communication of thoughts and opinions is one of the invaluable rights of man, and every citizen may freely speak, write and print on

[3] The League of Women Voters of Pennsylvania ("LWVPA") is a nonpartisan organization that encourages the informed and active participation of citizens in government, works to increase understanding of major public policy issues, and influences public policy through education and advocacy. The LWVPA supports full voting and representational rights for all eligible Commonwealth citizens and opposes efforts to disadvantage or burden voters based on their political affiliation. Petition for Review, ¶ 13; Petitioners' Answer to the Preliminary Objections of Respondents Pennsylvania general Assembly, Michael C. Turzai. And Joseph B. Scarnati III, at 4, ¶ 65. The LWVPA was dismissed from this Action on November 13, 2017. JSF ¶ 11. The LWVPA has standing as a membership organization of voters. *See Applewhite v. Commonwealth*, No. 330 M.D. 2012, 2014 Pa. Commw. Unpub. LEXIS 756, at *21 (Pa. Commw. Ct. Jan. 17, 2014); *Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 343 (1977).

any subject, being responsible for the abuse of that liberty." Pa. Const. Art. I, § 7. Article I, Section 20 provides: "The citizens have a right in a peaceable manner to assemble together for their common good . . . ." Pa. Const. Art. I, § 20.

A. Pennsylvania's Constitution Provides Greater Protection for Speech and Associational Rights Than the First Amendment

4. The rights of free expression and free association were a vital part of Pennsylvania's political identity long before the enactment of the federal Bill of Rights in 1791. In 1681, William Penn drafted a social contract—his "Frame of Government"—granting eligible residents the right to vote and liberty of conscience, protecting what he saw as their basic natural rights. Frederick D. Rapone, Jr., *Article I, Section 7 of the Pennsylvania Constitution and the Public Expression of Unpopular Ideas*, 74 Temp. L. Rev. 655, 659-60 (2001).

5. Pennsylvania's Constitution, enacted in 1776, provided that the people "have a right to freedom of speech" as well as "a right to assemble together, to consult for their common good, [and] to instruct their representatives." Seth F. Kreimer, *The Pennsylvania Constitution's Protection of Free Expression*, 5 U. Pa. J. Const. L. 12, 15 n.7 (2002). Pennsylvania's Constitutional Convention of 1790 consolidated the free expression provisions into their current form, introduced by a new declaration that the "general, great, and essential principles of liberty and free Government" enumerated therein would "forever remain inviolate." *Id.* at 17-18.

6. Pennsylvania's Constitution was the first to explicitly incorporate the freedom of speech, placing it "squarely within the framework of natural rights and popular sovereignty." Steven J. Heyman, *Righting the Balance: An Inquiry Into the Foundations and Limits of Freedom of Expression*, 78 Bos. Univ. L. Rev. 1275, 1287 (1998). The concept of free association blossomed in the Commonwealth. In 1793, Pennsylvania became home to the first political society in the nation. John D. Inazu, *The Forgotten Freedom of Assembly*, 84 Tul. L. Rev. 565, 577 (2010). Pennsylvania also had the largest of the "Democratic-Republican" societies that sprung up in the late 1790s. *Id.*

7. Naturally, "freedom of expression has special meaning in Pennsylvania given the unique history of [the] Commonwealth." *Pap's A.M. v. City of Erie* ("*Pap's II*"), 812 A.2d 591, 604 (Pa. 2009). As the Pennsylvania Supreme Court has recognized, "[t]he protections afforded by Article I, § 7 are . . . distinct and firmly rooted in Pennsylvania history and experience. The provision is an ancestor, not a stepchild, of the First Amendment." *Id.* at 605. The federal Bill of Rights "borrowed heavily from the Declarations of Rights contained in the constitutions of Pennsylvania and other colonies." *Commonwealth v. Edmunds*, 586 A.2d 887, 896 (Pa. 1991). "For instance, the Pennsylvania Declaration of Rights was the 'direct precursor' of the freedom of speech and the press." *Id.*

8. Pennsylvania courts were called upon to interpret the Pennsylvania Constitution's Free Expression Clause "long before the passage of the Fourteenth Amendment provided a basis for application of the First Amendment against the states; *i.e.*, before there was an applicable federal interpretation to follow or diverge from." *Pap's II*, 812 A.2d at 605-06. Pennsylvania courts thus have forged an "independent constitutional path" in analyzing freedom of expression issues. *Pap's II*, 812 A.2d at 606; *accord Goldman Theatres v. Dana*, 173 A.2d 59, 61 (Pa. 1961).

9. Key here, the Pennsylvania Constitution "provides greater protection of speech and associational rights than does its federal counterpart." *Working Families Party v. Commonwealth*, 169 A.3d 1247, 1262 (Pa. Commw. Ct. 2017). The Pennsylvania Supreme Court has repeatedly held that "Article I, Section 7 provides broader protections of expression than the related First Amendment." *DePaul v. Commonwealth*, 969 A.2d 536, 546 (Pa. 2009); *accord Pap's II*, 812 A.2d 591, 605 (Pa. 2002); *Uniontown Newspapers, Inc. v. Roberts*, 839 A.2d 185, 193 (Pa. 2003); *Commonwealth, Bureau of Prof'l & Occupational Affairs v. State Bd. of Phys. Therapy*, 728 A.2d 340, 343-44 (Pa. 1999).

10. The Pennsylvania Supreme Court accordingly has invalidated speech restrictions under Article I, § 7, irrespective of whether a restriction also violates the First Amendment. *See, e.g., Ins. Adjustment Bureau v. Ins. Comm'r for*

Commonwealth of Pa., 542 A.2d 1317, 1324 (Pa. 1988) (striking down statute as impermissible burden on speech under Article I, § 7 rather than First Amendment); *Commonwealth v. Tate*, 432 A.2d 1382, 1387-90 (Pa. 1981) (political leafleting deemed protected expression under Article I, § 7, even though First Amendment may not provide protection); *Goldman Theatres*, 173 A.2d 59 (statute censoring motion pictures violated Article I, § 7, even if it did not violate First Amendment).

11. In *Pap's II*, the Pennsylvania Supreme Court considered whether a public indecency ordinance proscribing nudity in public places violated the freedom of expression guaranteed by Article I, § 7. A plurality of the U.S. Supreme Court had earlier concluded that the restriction satisfied the applicable intermediate scrutiny test under, and thus did not violate, the First Amendment. *City of Erie v. Pap's A.M.*, 529 U.S. 277, 283 (2000). On remand, the Pennsylvania Supreme Court rendered an "independent judgment as a matter of distinct and enforceable Pennsylvania constitutional law," irrespective of the U.S. Supreme Court's First Amendment ruling. *Pap's II*, 812 A.2d at 607. The Pennsylvania Supreme Court concluded that the "state of flux" and "uncertain teachings" of the U.S. Supreme Court "afford[ed] insufficient protection to fundamental rights guaranteed under Article I, § 7." *Id.* at 611. The Pennsylvania Supreme Court therefore declined to analyze the ordinance in the same manner, noting that "[a]s a matter of policy, Pennsylvania citizens should not have the

contours of their fundamental rights under our charter rendered uncertain, unknowable, or changeable, while the U.S. Supreme Court struggles to articulate a standard to govern a similar federal question." *Id.*

12. Accordingly, although their analysis may be "guided by the teachings of the United States Supreme Court on these rights," Pennsylvania courts may conclude that a law burdening the rights of free expression and association violates the Pennsylvania Constitution irrespective of whether the law violates the First Amendment. *Working Families Party*, 169 A.3d at 1262; *see also Edmunds*, 586 A.2d at 894 (In interpreting the Pennsylvania Constitution, Pennsylvania courts are not bound by U.S. Supreme Court decisions interpreting "similar (yet distinct) federal constitutional provisions.").

B. Voting for the Candidate of One's Choice Constitutes Core Protected Political Expression and Association

13. Voting for the candidate of one's choice and associating with the political party of one's choice constitute core political expression and association protected by the Pennsylvania Constitution's Free Expression and Free Association Clauses. "The act of voting is a personal expression of favor or disfavor for particular policies, personalities, or laws." *Commonwealth v. Cobbs*, 305 A.2d 25, 27 (Pa. 1973). "Each individual voter as he enters the booth is given an opportunity to freely express his will." *Oughton v. Black*, 61 A. 346, 348 (1905).

14. Indeed, if providing campaign donations to a candidate "constitute[s] expressive conduct protected by Article I, Section 7," *DePaul*, 969 A.2d at 542, 548, voting for a candidate plainly constitutes expressive conduct as well. Voting, even more so than campaign donations, provides citizens a direct means of "express[ing] . . . support for [a] candidate and his views." *Id.* at 547 (quoting *Buckley v. Valeo*, 424 U.S. 1, 20-31 (1976)). Voting provides "opportunities [for] all voters to express their own political preferences," *Norman v. Reed*, 502 U.S. 279, 288 (1992), namely, "to express their support for [their chosen candidate] and the views [the candidate] expressed," *Anderson v. Celebrezze*, 460 U.S. 780, 806 (1983); *see also In re 223 Absentee Ballot Appeals*, 245 A.2d 265, 267 (Pa. 1968) ("[T]he will and intent of the voter, clearly expressed, must be the paramount consideration in determining the result of any election.").

15. As Chief Justice Roberts has explained, "[t]here is no right more basic in our democracy than the right to participate in electing our political leaders," including, of course, the right to "vote." *McCutcheon v. FEC*, 134 S. Ct. 1434, 1440-41 (2014) (plurality opinion). "[P]olitical belief and association constitute the core of . . . those activities protected by the First Amendment." *Elrod v. Burns*, 427 U.S. 347, 356 (1976); *see also Reynolds v. Sims*, 377 U.S. 533, 555 (1964) ("The right to vote freely for the candidate of one's choice is . . . the essence of a democratic society and any restrictions on that right strike at the heart of

representative government."); *Buckley v. Valeo*, 424 U.S. 1, 15 (1976) (The First Amendment protects the "freedom to associate with others for the common advancement of political beliefs and ideas," including "the right to associate with the political party of one's choice."). "[N]o right is more precious in a free country than that of having a voice in the election of those who make the laws." *Wesberry v. Sanders*, 376 U.S. 1, 17 (1964). Other constitutional rights, even the most basic, "are illusory if the right to vote is undermined." *Id.*

16. The constitutional guarantees of free expression and association require that "each citizen [must] have an *equally effective voice* in the election" of their representatives to government. *Reynolds*, 377 U.S. at 565 (emphasis added). "The right of qualified voters, regardless of their political persuasion, to cast their votes *effectively* . . . rank[s] among our most precious freedoms." *Anderson*, 460 U.S. at 787 (internal quotation marks omitted) (emphasis added).

C. The 2011 Map Is Subject to Strict Scrutiny Because It Discriminates Against Democratic Voters Based on the Content and Viewpoint of Their Political Expression and Association

17. Laws that discriminate against or burden protected expression based on its content or viewpoint are subject to strict scrutiny. *See Pap's II*, 812 A.2d at 611-12; *Purple Orchid, Inc. v. Pa. State Police*, 813 A.2d 801, 806 (Pa. 2002); *Free Speech LLC v. City of Phila.*, 884 A.2d 966, 971 (Pa. Commw. Ct. 2005). The government may not restrict expression "because of its message, its ideas, its

subject-matter, or its content." *Police Dep't of City of Chicago v. Mosley*, 408 U.S. 92, 95 (1972). The guarantee of free expression "stands against attempts to disfavor certain subjects or viewpoints." *Citizens United v. FEC*, 130 U.S. 876, 898 (2010); *see also Reed v. Town of Gilbert*, 135 S. Ct. 2218, 2226 (2015).

18. A law is content-based if it "target[s] speech based on its communicative content." *Reed*, 135 S. Ct. at 2226. "Viewpoint discrimination is a more blatant and egregious form of content discrimination." *Id.* A law is viewpoint-based if it targets speech conveying a "particular point of view," *FCC v. League of Women Voters of Col.*, 468 U.S. 364, 383-84 (1984)—"because of disagreement with the message [the speech] conveys," *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 566 (2011) (quotation marks omitted). Thus, the government may not "burden[] a form of protected expression" while leaving "unburdened those speakers whose messages are in accord with its own views." *Id.* at 580.

19. The government unconstitutionally burdens speech where it renders disfavored speech less *effective*, even if it does not ban such speech outright. "Lawmakers may no more silence unwanted speech by burdening its utterance than by censoring its content." *Sorrell*, 564 U.S. at 566 (internal quotation marks omitted). "It is thus no answer to say that petitioners can still be 'seen and heard'" if the burdens placed on their speech "have effectively stifled petitioners' message." *McCullen v. Coakley*, 134 S. Ct. 2518, 2537 (2014) (Roberts, C.J.); *see*

also Rosenberger v. Rector & Visitors of the Univ. of Va., 515 U.S. 819, 828 (1995); *Forsyth Cty. v. Nationalist Movement*, 505 U.S. 123, 134-35 (1992).

20. In *McCullen*, for instance, the U.S. Supreme Court invalidated a law that imposed a buffer zone around abortion clinics because the law "compromise[d] [the] ability" of the plaintiffs" to "initiate the close, personal conversations that they view as essential" to effectively communicate their message. 134 S. Ct. at 2535. And in *Sorrell*, the U.S. Supreme Court invalidated on viewpoint discrimination grounds a state law that burdened drug manufacturers by denying them information that made their marketing more effective. 564 U.S. at 580. The Court stressed that "the distinction between laws burdening speech is but a matter of degree and the Government's content-based burdens must satisfy the same rigorous scrutiny as its content-based bans." *Id.* at 555-56 (internal quotation marks omitted); *see also Ins. Adjustment Bureau v. Ins. Comm'r for Commonwealth of Pa.*, 542 A.2d 1317, 1323-24 (1988) (invalidating, under Article I, § 7, a statute that restricted insurers' ability to communicate effectively with potential customers); *Arizona Free Enterprise Club's Freedom Club PAC v. Bennett*, 564 U.S. 721, 747 (2011) (invalidating, on free speech grounds, a state law that burdened privately-financed candidates' speech by providing matching funds for publicly-financed candidates).

21. Pennsylvania's 2011 congressional districting map burdens protected political expression by discriminating against Democratic voters and burdening their core political speech and expressive conduct. It is no answer for Legislative Respondents to say that Democratic voters may still cast a ballot in Pennsylvania's congressional elections—the 2011 map targets Democratic voters and reduces the effectiveness of their votes by making it harder for them to translate votes into congressional seats. The 2011 map has thereby prevented Democratic voters from electing representatives of their choice**.**

22. The 2011 map's disfavored treatment of Democratic voters is textbook viewpoint discrimination. The map targets a "particular point of view"—that is, support for Democratic candidates as opposed to Republican candidates. *League of Women Voters of Col.*, 468 U.S. at 383-84; *see also Bd. of Educ., Island Trees Union Free Sch. Dist. No. 26 v. Pico*, 457 U.S. 853, 870-71 (1982) ("If a Democratic school board, motivated by party affiliation, ordered the removal of all books written by or in favor of Republicans, few would doubt that the order violated [the Constitution]"); *Anderson*, 460 U.S. at 793 (early filing deadline burdened an identifiable segment of Ohio's independent-minded voters who share a particular viewpoint); *William v. Rhodes*, 393 U.S. 23, 25, 32 (1968) (striking down Ohio election laws that "in effect tend[ed] to give [Republicans and Democrats] a complete monopoly," making it "virtually impossible" for a new

political party to get on the ballot). By packing and cracking Democratic voters to make it harder from them to translate votes into congressional seats, the map "single[s] out a subset of messages for disfavor based on the views expressed." *Matal v. Tam*, 137 S. Ct. 1744, 1766 (2017) (Kennedy, J., concurring). "This is the essence of viewpoint discrimination." *Id.* The burden is also content-based because it targets protected expression "based on its communicative content"—*i.e.*, support for a political candidate. *Reed*, 135 S. Ct. at 2226.

23. The 2011 map targeted Democratic voters on the basis of their political beliefs, expressive conduct, and association. Overwhelming evidence established this point. Dr. Kennedy's testimony demonstrated that the map packed and cracked Democratic voters to minimize the effectiveness of their votes. *See supra* Proposed Findings of Fact ("FOF") § B. Dr. Chen's analysis of the Turzai data files demonstrate that General Assembly used partisan preference scoring of every precinct in Pennsylvania to maximize Republican voters' advantage. *Supra* FOF § C.1. The independent statistical and mathematical analyses of Dr. Chen and Dr. Pegden established that partisan intent was the predominant motivation behind the 2011 map. *Supra* FOF §§ C.2, C.3.

D. The 2011 Map Fails Strict Scrutiny and Indeed Any Scrutiny

24. "In the ordinary case it is all but dispositive to conclude that a law is content-based and, in practice, viewpoint-discriminatory." *Sorrell*, 564 U.S. at

571. Such laws "are presumptively unconstitutional and may be justified only if the government proves that they are narrowly tailored to serve compelling state interests." *Reed*, 135 S. Ct. at 2226. At trial, Legislative Respondents made no effort to satisfy strict scrutiny. They offered no non-partisan justification for the map.

25. Nor could the map satisfy strict scrutiny. Drawing congressional district boundaries to disadvantage Democratic voters does not serve any legitimate government interest, much less a compelling interest.

E. The 2011 Plan Impermissibly Retaliates Against Democratic Voters Based on Their Voting Histories and Party Affiliations

26. The Pennsylvania Constitution's Free Expression and Free Association Clauses separately and independently prohibit retaliation against individuals because of their protected expression or association. *See Southersby Dev. Corp. v. Twp. of South Park*, 2015 WL 1757767 *8-9 (W.D. Pa. Apr. 17, 2015) (plaintiff adequately pled retaliation claim under Article I, §§ 7 & 20).

27. In general, courts are wary of permitting patronage or retaliation by the political party in power because of the damaging effect such actions have on political belief, association, and the electoral process. *See Elrod*, 427 U.S. at 356; *Branti v. Finkel*, 445 U.S. 507 (1980); *Rutan v. Republican Party of Ill.*, 497 U.S. 62 (1990); *Bd. of Cty. Comm'rs, Wabaunsee Cty., Kan. v. Umbehr*, 518 U.S. 668 (1996). When patronage restrains citizens' freedoms of belief and association, it

is "at war with the deeper traditions of democracy embodied in the First Amendment." *Elrod*, 427 U.S. at 357 (internal quotation marks omitted).

28. In the redistricting context, the prohibition on retaliating against protected expression and association is implicated when the government uses "data reflecting citizens' voting history and party affiliation" to "mak[e] it harder for a particular group of voters to achieve electoral success because of the views they had previously expressed." *Shapiro v. McManus*, 203 F. Supp. 3d 579, 597 (D. Md. 2016); *see also Shapiro v. McManus*, 136 S. Ct. 450, 456 (2015) (reversing the dismissal of a First Amendment retaliation claim, "along the lines suggested by Justice Kennedy in his concurrence in *Vieth*," challenging a Democratic gerrymander of a congressional district in Maryland).

29. "[W]hen a State draws the boundaries of its electoral districts so as to dilute the votes of certain of its citizens, the practice imposes a burden on those citizens' right to 'have an equally effective voice in the election' of a legislator to represent them." *Shapiro*, 203 F. Supp. 3d at 595-97 (quoting *Reynolds*, 377 U.S. at 565). "The practice of purposefully diluting the weight of certain citizens' votes to make it more difficult for them to achieve electoral success because of the political views they have expressed through their voting histories and party affiliations infringes this representational right." *Id.* at 595 (underlining in original). "It penalizes voters for expressing certain preferences, while, at the same

time, rewarding other voters for expressing the opposite preferences. In this way, the practice implicates the . . . well-established prohibition against retaliation, which prevents the State from indirectly impinging on the direct rights of speech and association by retaliating against citizens for their exercise." *Id.*

30. Both the "packing" and "cracking" aspects of a partisan gerrymander dilute the value of affected citizens' votes, in violation of the constitutional prohibition on retaliation. "[W]hile a State can dilute the value of a citizen's vote by placing him in an overpopulated district, a State can also dilute the value of his vote by placing him in a particular district because he will be outnumbered there by those who have affiliated with a rival political party." *Shapiro*, 203 F. Supp. 3d at 595. "In each case, the weight of the viewpoint communicated by his vote is debased." *Id.* (internal quotation marks omitted).

31. Thus, "when a State is alleged . . . to have not only intentionally but also successfully burdened 'the right of qualified voters . . . to cast their votes effectively,' by diluting their votes in a manner that has manifested in a concrete way, the allegation supports a justiciable [free expression] claim." *Shapiro*, 203 F. Supp. 3d at 598.

32. To establish such a retaliation claim, a petitioner must prove that (1) the district boundaries were drawn with the intent to burden the petitioner and similarly situated citizens "because of how they voted or the political party with

which they were affiliated"; (2) "the challenged map diluted the votes of the targeted citizens to such a degree that it resulted in a tangible and concrete adverse effect," *i.e.*, "the vote dilution must make some practical difference"; and (3) "absent the mapmakers' intent to burden a particular group of voters by reason of their views, the concrete adverse impact would not have occurred." *Shapiro*, 203 F. Supp. 3d at 596-97.

33. Pennsylvania's 2011 congressional districting map violates the Free Expression and Free Association Clauses by retaliating against Petitioners and other Democratic voters based on their past votes for Democratic candidates and their association with the Democratic party.

34. *First*, Legislative Respondents intentionally targeted Petitioners and other Democratic voters on their basis of their voting histories. Dr. Chen's analysis of the Turzai files proves that Legislative Respondents intentionally targeted Democratic voters because of their prior voting history and association with Democratic candidates. *Supra* FOF § C.1. The expert testimony of Dr. Kennedy, Dr. Chen, and Dr. Pegden separately confirmed through a variety of metrics that Democratic voters were singled out for disfavored treatment—cracked and packed into particular districts—because of their past protected expression and association. *Supra* FOF §§ B, C.2, C.3.

35. *Second*, the 2011 map diluted the votes of Petitioners and other Democratic voters to such a degree that it resulted in a tangible and concrete adverse effect—that is, it made a practical difference. Dr. Chen's expert testimony established that certain Petitioners currently residing in Republican districts—Beth Lawn, Lisa Isaacs, Robert Smith, and Thomas Ulrich—would have been virtually certain to live in Democratic-leaning districts under a non-partisan map. *Supra* FOF § E. The 2011 map injured these Petitioners by instead placing them into gerrymandered districts that have produced Republican representatives every time. *Supra* FOF § E.

36. Other petitioners suffer other concrete harms, such as splitting of their communities of interest (*e.g.*, Tom Rentschler, John Greiner, Jordi Comas, Don Lancaster), being placed in a packed district where their vote carries less weight statewide (*e.g.*, Carmen Febo San Miguel, James Solomon, Mark Lichty, Richard Mantell, Priscilla McNulty), being placed in a district so uncompetitive that no Democrat will run (*e.g.*, Tom Ulrich, Lorraine Petrosky, and John Greiner), or no qualified Democrat will run (*e.g.*, Gretchen Brandt), and being placed in districts that are absurdly contorted and barely contiguous (*e.g.*, Beth Lawn, Bill Marx). *Supra* FOF §§ B, E, F.

37. The map's retaliation against Petitioners and other Democratic voters also produces a tangible and concrete adverse effect on Democratic voters

statewide, including every Petitioner. Based on the dilution of Democratic voters' votes through packing and cracking, Republicans have won 13 of 18 seats—the same 13 seats—in each of the three congressional elections under the 2011 map. Republicans won those same 13 seats irrespective of swings in the vote—and even when Democrats won a majority of votes statewide. *Supra* FOF § D.1. Democrats would have won between 2 and 5 more seats each election absent the intentional retaliation against Petitioners and other Democratic voters. *Supra* FOF § D.2, D.3.

38. *Finally*, these adverse effects would not have occurred absent the intent to burden Petitioners and other Democratic voters. But for the retaliatory packing and cracking, Petitioners Beth Lawn, Lisa Isaacs, Robert Smith, and Thomas Ulrich specifically would have been in Democratic-leaning districts. *Supra* FOF § E. And but for the retaliatory packing and cracking, Petitioners would not have experienced the other harms just described, and Petitioners and other Democratic voters would have been able to elect more candidates of their choice across Pennsylvania's delegation, instead of being locked into a 13-5 Republican majority. *Supra* FOF § D.

39. With respect to Petitioners and other Democratic voters, Legislative Respondents "expressly and deliberately considered [their] protected . . . conduct, including their voting histories and political party affiliations, when it redrew the lines of" their districts. *Shapiro*, 203 F. Supp. 3d at 595. Legislative Respondents

"did so with an intent to disfavor and punish [Petitioners] by reason of their constitutionally protected conduct." *Id.* This intentional retaliation had an "actual effect" that would not have occurred but-for the retaliation. *Id.* Petitioners and other Democratic voters are inhibited in their ability to elect representatives of their choice and to influence the political process.

F. Petitioners' Free Expression and Association Claim Is Separate and Distinct From Their Equal Protection Claim

40. In their oral motion for nonsuit at trial, Legislative Respondents erred in suggesting that Petitioners' free expression and association claim is no different than the equal protection claim. The Pennsylvania Supreme Court made clear in *Erfer* that it was not considering any claim under Article I, §§ 7 & 20. *Erfer*, 794 A.2d at 328 n.2. And any question about an equal protection claim "does not necessarily doom a claim that the State's abuse of political considerations in districting has violated any other constitutional provision." *Shapiro*, 203 F. Supp. 3d at 594; *see also Vieth*, 541 U.S. at 294 (plurality opinion) ("It is elementary that scrutiny levels are claim specific. An action that triggers a heightened level of scrutiny for one claim may receive a very different level of scrutiny for a different claim because the underlying rights, and consequently constitutional harms, are not comparable"). In reversing the dismissal of a First Amendment retaliation claim in *Shapiro*, the U.S. Supreme Court noted that the plaintiffs' legal theory—which is

premised on the First Amendment rather than the Equal Protection Clause—was "uncontradicted by the majority in any of [its] cases." 136 S. Ct. at 456.

III. THE 2011 MAP VIOLATES THE PENNSYLVANIA CONSTITUTION'S EQUAL PROTECTION GUARANTEES AND ITS FREE AND EQUAL CLAUSE

41. The Pennsylvania Constitution guarantees equal protection of law as well as free and equal elections. Pa. Const. Art. I, §§ 1, 26; Pa. Const. Art. I, § 5. The equal protection guarantees provide that "[a]ll men are born equally free and independent," Pa. Const. Art. I, § 1, and that "[n]either 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," Pa. Const. Art. I, § 26. The Free and Equal 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.

42. Under these equal protection guarantees, the General Assembly is not "free to construct political gerrymanders with impunity." *Erfer*, 794 A.2d at 334. On the contrary, a congressional districting map violates equal protection if the map reflects "intentional discrimination against an identifiable political group" and "there was an actual discriminatory effect on that group." *Id.* at 332; *see also Whitford v. Gill*, 218 F. Supp. 3d 843, 884 (W.D. Wis. 2016) (finding equal

protection violation in Wisconsin redistricting where there was both discriminatory purpose and effects).

A. The Map Intentionally Discriminates Against Democratic Voters

43. Where, as here, one political party had unified control over a redistricting, "it should not be very difficult to prove that the likely political consequences of the reapportionment were intended." *Erfer*, 794 A.2d at 332 (quotation marks omitted).

44. As described above, the evidence overwhelmingly established beyond any shadow of a doubt that the 2011 map was drawn intentionally to discriminate against Democratic voters. *Supra* FOF §§ A, B, C.

B. Democratic Voters Are an Identifiable Political Group

45. In *Erfer*, the Pennsylvania Constitution rejected the "sweeping conclusion" that there is no "identifiable political class of citizens who vote for Democratic congressional candidates." 794 A.2d at 333. *Erfer* acknowledged that "future plaintiffs" might "adduced sufficient evidence to establish that such an identifiable class exists," "particularly since the field of information technology [was] advancing at breakneck speed." *Id.* *Erfer* thus "assume[d] without deciding that Petitioners ha[d] shown the existence of an identifiable political group." *Id.*

46. In the present case, the evidence at trial conclusively established that Democratic voters—that is, people likely to vote for Democratic congressional

candidates—are an identifiable political group. Dr. Chen's statistical correlation analysis confirmed that Pennsylvania voters who vote for Democratic candidates consistently do so across elections, and are likely to continue to do so in future elections. *Supra* FOF § C.4. Dr. Warshaw's testimony confirmed the point. *Id.* Neither of Respondents' experts suggested that people likely to vote for Democratic (or Republican) congressional candidates are not identifiable.

47. Dr. Chen's analysis of the Turzai data files removes any doubt that Democratic voters not only are identifiable, but they were in fact identified by the creators of the 2011 map. *Supra* FOF § C.1, C.4.

C. The 2011 Map Has an Actual Discriminatory Effect

48. An intentional partisan gerrymander has an "actual discriminatory effect" when the gerrymander "works disproportionate results at the polls; this can be accomplished via actual election results or by projected outcomes of future elections," and there is "evidence indicating a strong indicia of lack of political power and the denial of fair representation." *Erfer*, 794 A.2d at 333.

1. The Map Materially Disadvantages Democratic Voters in Electing Candidates of Their Choice

49. The evidence at trial conclusively established that the intentional gerrymandering of the 2011 map has had an "actual discriminatory effect." *Erfer*, 794 A.2d at 332. Republicans have won 13 of 18 seats—the same 13 seats—in each of the three congressional elections under the 2011 map. Republicans won

those same 13 seats irrespective of swings in the vote—and even when Democrats won a majority of votes statewide. In the 2012 congressional elections, Democrats would needed to win more than 57% of the statewide vote just to win 7 of 18 seats. *Supra* § D.1.

50. Petitioners produced extensive further evidence of adverse effects resulting from the dilution of Democratic voters' votes. Dr. Chen and Dr. Warshaw each independently concluded that the gerrymander has resulted in Republicans winning several more seats than they would have otherwise, with Dr. Chen finding that Republicans have won as many as five additional seats than they would under a non-partisan map. *Supra* FOF §§ D.1, D.2.

51. The 2011 map accomplishes these effects by wasting Democratic votes through a brutally effective cracking and packing scheme. Dr. Warshaw's Efficiency Gap analysis demonstrates as much. The Efficiency Gap under the 2011 map is an extreme outlier, unprecedented in Pennsylvania's history and among the highest in the nation, ever. *Supra* FOF § D.3.

52. The disadvantage to Democrat voters is both large and durable. *Supra* FOF § D.

2. Petitioners Need Not Show That Democratic Voters Have Been Effectively Shut Out of the Political Process

53. Because the Pennsylvania Constitution "is not easily amended and any errant interpretation is not freely subject to correction by any co-equal branch

of [the] government," the Pennsylvania Supreme Court is "not constrained to closely and blindly re-affirm constitutional interpretations of prior decisions which have proven unworkable or badly reasoned." *Holt v. 2011 Legislative Reapportionment Comm'n*, 38 A.3d 711, 759 n.38 (Pa. 2012). Rather, where a prior decision "obscured the manifest intent of a constitutional provision," "engagement and adjustment of precedent as a prudential matter is fairly implicated and salutary." *Robinson Twp., Washington Cty. v. Commonwealth*, 83 A.3d 901, 946 (Pa. 2013).

54. The Pennsylvania Supreme Court is not bound to—and should not—follow *Erfer*'s approach to the second prong of the equal protection "effects" element. *Erfer*'s approach to that second prong, under which the targeted group must show that it has "essentially been shut out of the political process," 794 A.2d at 333, has proven to be unworkable and badly reasoned.

55. *Erfer*'s approach to the second prong of the "effects" element is vague and unworkable. The Supreme Court in *Erfer* did not explain what it means for an identifiable political group to be "essentially . . . shut out of the political process." Nor did the Supreme Court identify what evidence might satisfy such a standard.

56. In holding that the *Erfer* petitioners failed to show they were effectively shut out of the political process, the Supreme Court noted only that the petitioners "ha[d] not alleged . . . that a winning Republican congressional

candidate" would "entirely ignore the[ir] interests" and that "at least five of the districts" were "safe seats" for Democrats. 794 A.2d at 334. While *Erfer* held that these facts "undermine[ed] Petitioners' claim that Democrats ha[d] been entirely shut out of the political process," *Erfer* said nothing about what facts might be sufficient for future petitioners to satisfy this standard. Without any more concrete guidance, Pennsylvania courts lack adequate guidance to evaluate whether petitioners in partisan gerrymandering cases have satisfied the second prong of the "effect" element.

57. *Erfer*'s statement that a group must have been "essentially been shut out of the political process" was also badly reasoned. The Supreme Court purported to draw this requirement from *Bandemer*, but the *Bandemer* plurality never imposed such a requirement. 478 U.S. at 127-39. Rather, the *Bandemer* plurality held that the effects test would be met when "the electoral system is arranged in a manner that will consistently degrade a voter's or group of voter's influence on the political process as a whole." *Id.* at 132; *see also id.* at 132-33 ("[T]he question is whether a particular group has been unconstitutionally denied its chance to effectively influence the political process."); *id.* at 133 ("[A]n equal protection violation may be found . . . where the electoral system substantially disadvantages certain voters in their opportunity to influence the political process effectively. . . . [S]uch a finding of unconstitutionality must be supported by

evidence of continued frustration of the will of a majority of the voters or effective denial to a minority of voters of a fair chance to influence the political process.").

58. By imposing a new "essentially shut out of the political process" requirement, *Erfer* opened the door for partisan mapmakers in the General Assembly to devise extreme gerrymanders and defend them on the ground that the minority party would still have *some* representation in the U.S. House. Legislative Respondents have made that argument in this case, asserting that the 2011 map is constitutional because Democrats have held five "safe seats." *Erfer* had it exactly backwards. The *point* of partisan gerrymandering is to pack the minority party's voters into a few "safe" districts. That is a vice, not a virtue, of a congressional districting map. If the "effects" element of an equal protection partisan gerrymandering claim cannot be met so long as the minority party holds "safe seats," then it may never be met. Any legal standard that imposes such a requirement therefore cannot be correct.

59. If this rationale from *Erfer* were correct, where would it end? Would a partisan gerrymandering claim fail at the "effects" element if it reliably and durably entrenched a 17-1 Republican majority, simply because Democrats always win one seat? That cannot be right, but it is what *Erfer* suggests.

60. Nor is it required that representatives "entirely ignore the interests" of the minority party's voters to prove an equal protection challenge to partisan

gerrymandering. It is enough that the gerrymander deliberately discriminates against the minority party's voters, artificially preventing them from electing candidates of their choice and reducing electoral incentives for representatives to serve the interests of all of their constituents.

61. For these reasons, the Pennsylvania Supreme Court should not follow *Erfer*'s "essentially shut out of the political process" requirement.

3. In Any Event Democratic Voters Have Been Effectively Shut Out of the Political Process

62. In any event, Petitioners and other Democratic voters "ha[ve] essentially been shut out of the political process" as a result of the intentional gerrymander. *Erfer*, 794 A.2d at 333. They are not "adequately represented by the winning candidate" in districts where Republicans win due to partisan gerrymandering, and they do not have "as much opportunity to influence that candidate as other voters in the district." *Id.* (quoting *Bandemer*, 478 U.S. at 132).

63. In recent years, partisan polarization has grown to unprecedented levels, amplifying the harmful consequences of a partisan gerrymander on the minority party's voters in cracked districts. *Supra* FOF § F. Representatives in Congress no longer represent the views and interest of constituents of the opposite party, but rather vote overwhelmingly if not exclusively along national party lines. *Id.* This is true regardless of the margin of victory. In districts where elections are lopsided and competitive alike, it is winner take all. *Id.* There is no overlap at all

in the ideological position of *any* Democratic and Republican candidate—the most moderate Republican representative is still far more conservative than the most moderate Democrat, and vice versa. *Id.* This was not true when *Erfer* was decided in 2002. At that time, there was still some overlap among Republicans and Democrats in Congress. Petrs. Ex. 44.

64. The national trend is no less true in Pennsylvania. The Commonwealth's representatives in the U.S. House are sharply divided along party lines, without any overlap. *Supra* FOF § F. Republicans in Pennsylvania's delegation vote with the national Republican party in virtually every roll call vote, and the same is true for Democrats. *Id.* Nor do Democratic and Republican representatives from Pennsylvania get together on issues facing Pennsylvanians. In the most recent Congresses, Democratic and Republican representatives from Pennsylvania vote together less than 10 percent of the time. *Id.*

65. In today's Congress, a Democratic voter who is artificially deprived of the ability to elect a Democratic representative effectively receives no representation in the U.S. House, lacks any influence over the views and votes of her representative, and lacks any influence over policy in the U.S. House. *Supra* FOF § F.

66. Multiple Petitioners testified that they have suffered the effects of this lack of influence and effective representation firsthand, and that they have no voice in Washington through their congressional representatives. *Supra* FOF § F.

IV. THE REMEDY

67. Petitioners are entitled to declaratory and injunctive relief invalidating the 2011 map and prohibiting its use in the 2018 primary and general congressional elections. There is "an important role for the courts when a districting plan violates the Constitution." *LULAC v. Perry*, 548 U.S. 399, 415 (2006) (opinion of Kennedy, J.). Petitioners seek the following relief:

68. A new map shall be established on an expedited schedule. Following the Supreme Court decision, Legislative Respondents and Executive Branch Respondents shall be given two weeks to enact a map using non-partisan criteria. In the event they enact a map within the two week period, the map shall be presented to the Supreme Court for review, with the assistance of a special master. Any changes ordered by the Court shall be final.

69. In the event Legislative Respondents and Executive Branch Respondents are unable to enact a map within the two week period, Petitioners request that the Supreme Court, with the assistance of a special master, adopt a map using non-partisan criteria. The map adopted by the Court shall be final.

70. Depending on the timing of the Supreme Court's decision, Petitioners may ask the Court to direct a special master to begin work on developing a new map simultaneously with Legislative Respondents' and Executive Branch Respondents' consideration of a new map, so that an alternative map is timely available in the event they are unable to enact a non-partisan and constitutionally valid map.

CONCLUSION

For the foregoing reasons, the Court should declare Pennsylvania's 2011 congressional districting map to be an unconstitutional partisan gerrymander and issue a permanent injunction preventing Respondents from conducting the 2018 primary and general congressional elections under the 2011 map.

Dated: December 18, 2017

Respectfully submitted,

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Exhibit B

Nos. 17A795, 17A802

IN THE

Supreme Court of the United States

MICHAEL C. TURZAI, ET AL.,
Applicants,
v.
LEAGUE OF WOMEN VOTERS OF PENNSYLVANIA, ET AL.,
Respondents.

BRIAN MCCANN, ET AL.,
Applicants,
v.
LEAGUE OF WOMEN VOTERS OF PENNSYLVANIA, ET AL.,
Respondents.

PLAINTIFFS-RESPONDENTS' RESPONSE IN OPPOSITION TO APPLICATIONS FOR STAY PENDING THE DISPOSITION OF PETITIONS FOR A WRIT OF CERTIORARI

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RULE 29.6 STATEMENT

The League of Women Voters of Pennsylvania is a non-profit corporation that has no parent corporation and issues no stock.

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INTRODUCTION

On January 22, 2018, the Pennsylvania Supreme Court struck down Pennsylvania's 2011 congressional map on the "sole basis" that the map violates the Pennsylvania Constitution, and ordered a remedial map for the 2018 elections. It is hornbook law that this Court cannot review decisions of state courts construing state law. State courts are "free to serve as experimental laboratories," *Arizona v. Evans*, 541 U.S. 1, 8 (1995), and "[i]t is fundamental that state courts be left free and unfettered by [this Court] in interpreting their state constitutions," *Minnesota v. Nat'l Tea Co.*, 309 U.S. 551, 557 (1940). Applicants urge this Court to cast aside these bedrock principles and intervene in this state court, state law case. The Court should not do so. There is no partisan gerrymandering exception to federalism.

Applicants' ostensible hook for federal intervention is an Elections Clause theory that this Court has squarely rejected in decisions dating back nearly a century. To accept Applicants' theory, this Court would need to overrule no fewer than six of its precedents, all upholding the power of state courts to review and remedy unconstitutional congressional districting plans. In these circumstances, Applicants cannot seriously maintain that this Court will grant certiorari or reverse. Their stay applications are just a ploy to preserve a congressional map that violates Pennsylvania's Constitution for one more election cycle.

This Court need not take our word for it. For months, Applicants in No. 17A795 ("Legislative Applicants") have been telling federal courts in separate suits challenging Pennsylvania's 2011 map that, under settled precedent, they *must* defer

to Pennsylvania state courts. They told this Court that federal courts would be "usurp[ing] the power of the Pennsylvania state courts" to review and remedy the map, and just last week they persuaded a federal court to grant a stay in deference to this state court action. Legislative Applicants cannot now obtain a stay of the state court's judgment on the theory that state courts have no power in this realm.

Legislative Applicants' warnings of "voter confusion" and "chaos" have no grounding in evidence, history, or context. In 1992, Pennsylvania implemented a court-ordered congressional map less than two months before the primary elections. And in *Growe v. Emison*, 507 U.S. 25 (1993), this Court held that state courts may properly adopt a new congressional map only two months before the primaries. There is even more time here. Under the Pennsylvania Supreme Court's order, the new map will be in place three months before the primaries and nine months before the general elections. And Pennsylvania's chief election officials have made clear that they can administer perfectly orderly elections on this schedule.

Pennsylvania's Supreme Court has held that the 2011 map "clearly, plainly and palpably" violates Pennsylvania's Constitution. It would be unprecedented for this Court to interfere with the state court's determination about its own state's law. If federalism means anything, it means that this Court should deny the stay applications.

BACKGROUND

A. Pennsylvania's 2011 Congressional Districting Map

1. In the 2010 elections, Republicans picked up 11 seats to take control of the Pennsylvania House, retained control of the Senate, and won the governorship. Leg. App'x B ¶¶ 89-92. This gave Republicans exclusive control over Pennsylvania's congressional redistricting following the 2010 census. Working in secret, Republican mapmakers in Pennsylvania's legislature used past election results to calculate partisanship scores for each precinct, municipality, and county in Pennsylvania—with higher scores for Republican-leaning areas and lower scores for Democratic-leaning areas. Pls.' Exhibit ("PX") 1 at 38-41; Trial Tr. ("Tr.") 299:10-309:21. This enabled the mapmakers to predict the partisan voting preferences of voters in potential new congressional districts. PX1 at 39-41.

Senate Bill 1249, which Republican leaders introduced on September 14, 2011, started as an empty shell—it contained no map or details. Leg. App'x B ¶¶ 98-101. On December 14, 2011, Republicans amended the bill to add, for the first time, actual descriptions of the new districts. *Id.* at ¶¶ 104, 126(b). Republican Senators suspended the ordinary rules of procedure to rush the bill through the Senate that same day. *Id.* at ¶¶ 109, 126. Less than a week later, on December 20, 2011, the House passed SB 1249, and Governor Corbett signed the bill into law two days later, as Act 131 of 2011. *Id.* at ¶¶ 117, 121-23.

2. The 2011 map "packed" Democratic voters into five districts that Democrats would win by wide margins, and "cracked" the remaining Democratic

voters by spreading them across 13 districts that would be reliably Republican. This resulted in bizarre districts that rip apart Pennsylvania's communities to an unprecedented degree. *Id.* at ¶¶ 313-39; PX53; Tr. 579:18-644:15.

By way of example, the 7th District's tortured shape has earned the moniker "Goofy Kicking Donald Duck." Leg. App'x B ¶ 323; Tr. 598:25-599:22. This district alone splits five counties and 26 municipalities. It is barely contiguous; at one point, it is the width of a medical facility, and elsewhere its only point of contiguity is the restaurant Creed's Seafood & Steaks. Leg. App'x B ¶ 323; PX53 at 32; PX81.

The 6th District is nearly as absurd as the 7th. It cobbles together pieces of multiple communities, resembling Florida "with a more jagged and elongated panhandle." Leg. App'x B ¶ 324; Tr. 616:2-617:17; PX53 at 28-29. A surgical incision carves out the Democratic stronghold of Reading, splitting it from the rest of Berks County and grouping it with far-flung communities in the Republican 16th District via a narrow isthmus that at one point is the width of a mulch store and a service center. Leg. App'x B ¶ 325; PX53 at 50-52; Tr. 618:12-620:6.

More anomalies abound. Erie County was undivided throughout modern history until the 2011 map split it, cracking its Democratic voters between the Republican 3rd and 5th Districts. Leg. App'x B ¶ 320; PX53 at 23, 27; Tr. 591:1-598:5. The map carves up the distinctive community of the Lehigh Valley for the first time in modern history to dilute its Democratic voters. Leg. App'x B ¶¶ 326-28; Tr. 623:15-625:9; PX53 at 47-48, 54. The map splits Harrisburg, cracking its

Democratic voters between the Republican 4th and 11th Districts. Leg. App'x B ¶ 330; PX53 at 25; Tr. 631:1-632:8. The record contains many more examples.

Legislative Applicants have not disputed that the anomalous districts reflect an intentional effort to disadvantage Democratic voters.

3. In each of the three election cycles under the 2011 map, Republican candidates have won 13 of Pennsylvania's 18 congressional seats—the same 13 seats each time. Leg. App'x B ¶¶ 185, 192, 198. In 2012, Republicans won those same 13 of 18 seats (72%) despite winning only a minority of the total statewide vote (49%). *Id.* at ¶¶ 183-85. The distribution of votes across districts reveals how the gerrymander worked. In 2012, 2014, and 2016, Democrats won lopsided victories in the five "packed" districts, with average vote shares of 76.4%, 73.6%, and 75.2%. Leg. App'x B ¶ 185. Republicans won their 13 "cracked" districts with closer—but still comfortable—average vote shares of 59.5%, 63.4%, and 61.8%. *Id.*

B. The Pennsylvania State Court Proceedings Below

1. Respondents the League of Women Voters of Pennsylvania and 18 individual Pennsylvania voters (Petitioners below; hereinafter "Plaintiffs") filed this action against Legislative Applicants and others in Pennsylvania Commonwealth Court on June 15, 2017. Plaintiffs challenged the 2011 map exclusively under the Pennsylvania Constitution. Count I asserted that the map violates the Pennsylvania Constitution's Free Expression and Free Association Clauses, Pa. Const. Art. I, §§ 7, 20, which provide "broader protections of expression than the related First Amendment," *DePaul v. Commonwealth*, 969 A.2d 536, 546 (Pa. 2009).

Count II asserted that the map violates the Pennsylvania Constitution's Free and Equal Clause, Pa. Const. Art. I, § 5, which requires that "elections" be "free and equal" and has no federal counterpart, as well as the Pennsylvania Constitution's equal protection guarantees, Pa. Const. Art. I, §§ 1, 26. Applicants in No. 17A802, who are Pennsylvania Republican voters, volunteers, and prospective candidates ("Intervenor Applicants"), intervened to defend the map.

2. On November 9, 2017, the Pennsylvania Supreme Court exercised "extraordinary jurisdiction" under 42 Pa. C.S. § 726 and ordered the Commonwealth Court to conduct a trial and issue findings of fact and conclusions of law.

At the weeklong trial in December 2017, Petitioners' experts demonstrated the 2011 map's extreme partisan bias. Dr. John J. Kennedy, an expert in Pennsylvania's political geography, demonstrated—without rebuttal—that partisan intent was the only explanation for the map's packing and cracking of Democratic voters, its bizarre districts, and its unprecedented division of communities. Tr. 579:22-580:1, 621:15-636:14; PX53; Leg. App'x B ¶¶ 313-39.

Petitioners' other three experts presented multiple statistical measures and models that each independently supported the conclusion that the 2011 map intentionally and effectively disadvantages Democratic voters. Using a computer simulation methodology, Dr. Jowei Chen concluded with over 99.9% statistical certainty that the 2011 plan's 13-5 Republican advantage would never have emerged from a districting process that adhered to traditional principles. Tr. 203:14-204:2; Leg. App'x B ¶¶ 238-47. Dr. Chen concluded that extreme partisan

intent subordinated traditional districting principles in the 2011 plan. Leg. App'x B ¶ 268. As a result, Republicans have won 4 to 5 more seats than they would have under a plan that followed only traditional principles. *Id.* ¶ 267; Tr. 204:16-205:6.

Dr. Wesley Pegden, a mathematician at Carnegie Mellon University, demonstrated to a mathematical certainty that the 2011 map was intentionally drawn to maximize partisan advantage. PX117 at 1-2; Tr. 1384:22-1386:12. Using a computer algorithm that generated hundreds of billions of maps, he showed that the 2011 map is so carefully engineered to advantage Republicans that its partisan bias immediately evaporates when tiny random changes are made to the district boundaries. Leg. App'x B ¶¶ 342-43, 358-59.

Dr. Christopher Warshaw, an expert in political representation, public opinion, and elections, demonstrated that, under the "Efficiency Gap" measure, the three congressional elections held under the 2011 map have produced historically extreme levels of pro-Republican bias. PX35 at 5-15; Leg. App'x B ¶ 364.

3. On December 29, 2017, the Commonwealth Court issued recommended findings of fact and conclusions of law. The court found that the evidence "established intentional discrimination." Leg. App'x B ¶ 51. As the court stated, "it is clear that the 2011 Plan was drawn through a process in which a particular partisan goal—the creation of 13 Republican districts—predominated." *Id.* at ¶ 291. The court nevertheless recommended upholding the 2011 map.

4. At oral argument before the Pennsylvania Supreme Court, Legislative Applicants' counsel conceded that "[v]oters were classified and placed into districts

based upon the manner in which they voted in prior elections." Oral Argument Video at 1:54:33-44. Counsel did not deny that this was done "to punish" Democratic voters "by placing them into a district where their vote isn't going to carry equal weight." *Id.* at 1:53:20-1:54:20. Legislative Applicants' other counsel stated that if the map were struck down, the legislature wanted "at least three weeks" to enact a new map, *id.* at 1:45:53-1:46:13, and agreed that the traditional districting criteria of compactness, contiguity, and avoiding splitting political subdivisions were appropriate for congressional plans under the Pennsylvania Constitution, *id.* at 1:29:41-1:30:21, 1:32:18-47.

5. On January 22, 2018, the Pennsylvania Supreme Court issued an order, with opinion to follow, holding that the 2011 map "clearly, plainly and palpably violates the Constitution of the Commonwealth of Pennsylvania, and, on that sole basis, we hereby strike it as unconstitutional." Leg. App'x A2. The court ordered that the map's "further use in elections for Pennsylvania seats in the United States House of Representatives, commencing with the upcoming May 15, 2018 primary, is hereby enjoined." *Id.*

As a remedy, the Pennsylvania Supreme Court gave the General Assembly three weeks—until February 9, 2018—to pass a new districting plan, and gave the Governor until February 15 to sign or veto it. *Id.* If the General Assembly and Governor are unable to enact a new plan, the court will "proceed expeditiously to adopt a plan based on the evidentiary record developed in the Commonwealth Court." *Id.* The court accordingly invited all parties to submit "proposed remedial

districting plans on or before February 15, 2018." *Id.* at A2-A3. The court directed that, "to comply with this Order, any congressional districting plan 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." *Id.* at A3.

The court advised that "a congressional districting plan will be available by February 19, 2018," and directed the "Executive Branch Respondents"— the Governor, the Secretary of the Commonwealth, and the Commissioner of the Bureau of Elections—to "take all measures, including adjusting the election calendar if necessary, to ensure that the May 15, 2018 primary election takes place as scheduled." *Id.*

Writing separately, Justice Baer concurred in the court's holding that the 2011 map violates the Pennsylvania Constitution and the court's "invitation to the Legislature and Governor to craft constitutional maps" in the first instance. Leg. App'x A5. He dissented solely with respect to ordering a remedial plan for the 2018 rather than 2020 elections. *Id.* at A5-A7. Chief Justice Saylor and Justice Mundy separately dissented. They expressed "substantial concerns as to the constitutional viability of Pennsylvania's current congressional districts," but objected to the timing of the decision and the court's remedy. *Id.* at A9-A13.

On January 25, 2018, the state high court denied Applicants' requests for a stay pending appeal to this Court. *Id.* at D2. Subsequently, the court appointed

Nathaniel Persily to serve "as an advisor to assist the Court in adopting, if necessary, a remedial congressional redistricting plan." Order at 2 (Jan. 26, 2018).

6. On January 26, 2018, Legislative Applicants and Intervenor Applicants asked this Court to stay the Pennsylvania Supreme Court's decision pending resolution of forthcoming petitions for certiorari. Thereafter, one of the Legislative Applicants, Senator Scarnati, advised the state court by letter that the legislature has begun "advancing bills aimed at creating an alternative map" under the timeline the court prescribed.[1] In the same letter, he asserted that the state court's orders were unconstitutional and stated that he would not comply with the court's directive to turn over data relating to Pennsylvania's geographic boundaries.

REASONS TO DENY THE STAY APPLICATIONS

To grant a stay pending the disposition of a petition for certiorari, there must be "(1) a reasonable probability that this Court will grant certiorari, (2) a fair prospect that the Court will then reverse the decision below, and (3) a likelihood that irreparable harm will result from the denial of a stay." *Maryland v. King*, 133 S. Ct. 1, 2 (2012) (Roberts, C.J., in chambers) (internal quotation marks and alterations omitted). The Court may not grant a stay unless the balance of the equities supports it. *Philip Morris USA Inc. v. Scott*, 131 S. Ct. 1, 4-5 (2010) (Scalia, J., in chambers). There is no basis for a stay here.

[1] Ltr. from Brian S. Paszamant to Justices of the Supreme Court of Pennsylvania, Jan. 31, 2018, https://www.brennancenter.org/sites/default/files/legal-work/LWV_v_PA_Scarnati-Response-to-01.26.18-Order.pdf/

I. The Court Is Exceedingly Unlikely to Grant Certiorari and Applicants Have No Chance of Success on the Merits

A. The State Court's Ruling that the Map Violates the State Constitution Is Unreviewable and Cannot Be Stayed

The portion of the Pennsylvania Supreme Court's order that strikes down the 2011 map as a matter of state law is not reviewable by this Court, and accordingly this Court lacks jurisdiction to stay that portion of the order. The Pennsylvania Supreme Court made clear that its decision to invalidate the map rested solely on state constitutional grounds: "[T]he Court finds as a matter of law that the Congressional Redistricting Act of 2011 clearly, plainly and palpably violates the Constitution of the Commonwealth of Pennsylvania, and, *on that sole basis*, we hereby strike it as unconstitutional." Leg. App'x A2 (emphasis added).

Nothing in the Elections Clause, U.S. Const. Art. I, § 4, alters the state court's unreviewable authority to invalidate the 2011 map—a state law passed by the state legislature—for violating the state constitution. Nearly a century ago, in *Smiley v. Holm*, 285 U.S. 355 (1932), this Court explained that the Elections Clause does not "render[] inapplicable the conditions which attach to the making of state laws." *Id.* at 365. The Clause does not "endow the Legislature of the state with power to enact laws in any manner other than that in which the Constitution of the state has provided that laws shall be enacted." *Id.* at 368. Congress has codified this requirement, providing that congressional districting plans are not valid unless they are adopted "in the manner provided by [state] law." 2 U.S.C. § 2a(c); *see Ariz. State Legislature v. Ariz. Indep. Redistricting Comm'n*, 135 S. Ct. 2652, 2670 (2015).

In Pennsylvania, one of the conditions that attaches to the making of any state law—including a law that establishes congressional districts—is compliance with the Pennsylvania Constitution, as interpreted by the Pennsylvania Supreme Court. *Emerick v. Harris*, 1 Binn. 416, 1808 WL 1521 (Pa. 1808); *Fillman v. Rendell*, 986 A.2d 63, 75 (Pa. 2009). Here, the Pennsylvania Supreme Court has held that Pennsylvania's Act 131 of 2011, which enacted the 2011 map, does not comply with the Pennsylvania Constitution. This Court is, "of course, bound to accept the interpretation of [state] law by the highest court of the State." *Hortonville Joint Sch. Dist. No. 1 v. Hortonville Educ. Ass'n*, 426 U.S. 482, 488 (1976). This Court lacks jurisdiction to review or stay any aspect of a decision that is based on state law. 28 U.S.C. §§ 1257(a), 2101(f).

Intervenor Applicants argue that the Pennsylvania Supreme Court made no "plain statement" that its decision rests upon state-law grounds. Int. Appl. 11. This argument is frivolous in light of the court's plain statement that state constitutional grounds were the "sole basis" for its ruling. Even Legislative Applicants do not dispute that the court below made sufficiently clear that the map was invalid exclusively as a matter of state law.

Legislative Applicants instead declare that the Pennsylvania Supreme Court engaged in "judicial activism" and "not interpretation at all, but rank legislation." Leg. Appl. 2, 11. But inflammatory rhetoric does not transform a state court's interpretation of the state's own constitution into a federal question. Nor do *ad hominem* attacks against individual state supreme court justices. *Id.* at 5-6 n.1.

In any event, Legislative Applicants' intemperate portrayal of the decision does not accord with reality. Pennsylvania's Supreme Court has consistently and repeatedly held that excessive partisan gerrymandering offends the Pennsylvania Constitution and that such claims are justiciable under Pennsylvania law. *In re 1991 Pennsylvania Legislative Reapportionment Comm'n*, 609 A.2d 132, 141-42 (Pa. 1992); *Erfer v. Commonwealth*, 794 A.2d 325, 331 (Pa. 2002).[2] The state high court has consistently and repeatedly held that the Pennsylvania Constitution provides "broader protections of expression than the related First Amendment," including for political speech. *DePaul*, 969 A.2d at 546; *see Pap's A.M. v. City of Erie*, 812 A.2d 591 (Pa. 2009). Pennsylvania's constitutional guarantee that "elections" must be "free and equal," Pa. Const. Art. I, § 5, has no federal counterpart. And the Pennsylvania statute under which the state high court exercised jurisdiction authorizes the court to assume "plenary jurisdiction" of any matter and "enter a final order or otherwise cause right and justice to be done," "[n]otwithstanding any other provision of law." 42 Pa. C.S. § 726. Pennsylvania's Supreme Court has been invoking this provision for decades in the congressional redistricting context. *E.g.*, *Erfer*, 794 A.2d at 328; *Mellow v. Mitchell*, 607 A.2d 204, 206 (Pa. 1992). Judicial review here was not some invention for this case only.

In light of the overwhelming evidence and Applicants' admission at oral

[2] Legislative Applicants' citation to *Erfer* for the proposition that "no [Pennsylvania] state constitutional requirements apply to congressional district maps," Leg. Appl. 12, is puzzling. *Erfer* "reject[ed]" the "radical conclusion that our Commonwealth's Constitution is nullified in challenges to congressional reapportionment plans," 794 A.2d at 331, and evaluated the 2002 map under state constitutional provisions.

argument that the map was drawn to discriminate on the basis of prior political expression, it is no surprise that the Pennsylvania Supreme Court concluded that this map, unlike prior Pennsylvania maps, crossed the line. Applicants say it is "untenable" that Pennsylvania's Free Expression and Association Clauses prohibit partisan gerrymandering, as if such a holding were somehow outside the mainstream. Leg. Appl. 12. But a Justice of this Court has explained that partisan gerrymandering may violate the First Amendment, which provides less expansive protections than Pennsylvania's free expression guarantee. *Vieth v. Jubelirer*, 541 U.S. 267, 315 (2004) (Kennedy, J. concurring). And the fact that federal law is unsettled, Int. Appl. 13-14, does not counsel in favor of federal intervention. Quite the opposite. Federalism encourages state supreme courts to interpret their own constitutions independent of federal law.

B. There Is No Possibility That This Court Will Review or Reverse the State Court's Remedy Under the Federal Elections Clause

Legislative Applicants argue that the word "Legislature" in the Elections Clause, U.S. Const. art. I, § 4, forbids state courts from taking steps to remedy a state legislature's violation of the state constitution. Leg. Appl. 9. That argument has been rejected time and again by this Court and does not warrant review. There is no likelihood of certiorari, and zero likelihood of reversal. This Court would have to overturn at least six of its decisions spanning almost a century to hold, as Legislative Applicants propose, that the Elections Clause precludes state courts from setting criteria for, or adopting, remedial congressional maps.

In two companion cases decided the same day as *Smiley*, this Court expressly

affirmed state courts' implementation of remedial congressional districting plans after those courts invalidated prior plans under the state constitution. *Carroll v. Becker*, 285 U.S. 380, 381-82 (1932); *Koenig v. Flynn*, 285 U.S. 375, 379 (1932). In *Koenig*, the New York Court of Appeals struck down the state's congressional districting law because it violated "the requirements of the Constitution of the state in relation to the enactment of laws," and the state court ordered the election to proceed under a remedial plan. 285 U.S. at 379. Relying on *Smiley*'s holding that the Elections Clause does not empower state legislatures to violate state constitutions, this Court affirmed the decision and the state court's authority to impose a remedial plan. *Id.*; *see also Carroll*, 285 U.S. at 382 (same as to congressional districting plan imposed by Missouri Supreme Court).

More recently, in *Growe v. Emison*, 507 U.S. 25 (1993), this Court held that federal courts must *defer* to state courts in congressional redistricting—and upheld a state court's power to draw a remedial map using traditional districting criteria. After invalidating Minnesota's prior congressional map, a Minnesota state court "adopted final criteria for congressional plans and provided a format for submission of plans in the event the legislature failed to enact a constitutionally valid congressional apportionment plan." *Cotlow v. Growe*, C8-91-985 (Minn. Spec. Redis. Panel Apr. 15, 1992).[3] Two months later, a federal court enjoined the state court from adopting any new plan and then adopted its own remedial plan. *Growe*, 507 U.S. at 30-31. The state court subsequently released a provisional remedial plan,

[3] *Available at* https://www.senate.mn/departments/scr/REDIST/COTLO415.HTM.

subject to the federal injunction, that used the criteria of "minimiz[ing] the number of municipal and county splits" and promoting "compactness." *Cotlow*, C8-91-985, *supra*. Because of the federal court injunction, however, the 1992 congressional elections proceeded under the federal court plan.[4]

This Court reversed the federal court's injunction. Writing for a unanimous Court, Justice Scalia explained that "[t]he District Court erred in not deferring to the state court's efforts to redraw Minnesota's … federal congressional districts." *Growe*, 507 U.S. at 42. This Court stated over and over and over again that state courts have the power to review and remedy congressional districting plans and that federal courts must not interfere:

- "In 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." 507 U.S. at 33 (emphasis in original).

- "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." *Id.* (internal quotation marks omitted).

- "[T]he Constitution leaves with the States primary responsibility for apportionment of their federal congressional and state legislative districts. We say once again what has been said on many occasions: reapportionment is primarily the duty and responsibility of the State through its legislature or other body, rather than of a federal court. Absent evidence that these state branches will fail timely to perform that duty, a federal court must neither affirmatively obstruct state reapportionment nor permit federal litigation to be used to impede it." *Id.* at 34 (quotations omitted).

[4] *Minnesota Redistricting Cases: the 1990s*, https://www.senate.mn/departments/scr/REDIST/Redsum/mnsum.htm.

- "[T]he District Court's December injunction of state-court proceedings … was clear error. It seems to have been based upon the mistaken view that federal judges need defer only to the Minnesota Legislature and not at all to the State's courts. Thus, the January 20 deadline the District Court established was described as a deadline for the legislature, ignoring the possibility and legitimacy of state judicial redistricting. And the injunction itself treated the state court's provisional legislative redistricting plan as 'interfering' in the reapportionment process. But the doctrine of *Germano* prefers both state branches to federal courts as agents of apportionment." *Id.* at 34.

- "The Minnesota [court's] issuance of its plan (conditioned on the legislature's failure to enact a constitutionally acceptable plan in January), far from being a federally enjoinable 'interference,' was precisely the sort of state judicial supervision of redistricting we have encouraged." *Id.* at 34.

- "The District Court erred in not deferring to the state court's timely consideration of congressional reapportionment." *Id.* at 37.

Following this Court's decision in *Growe*, the state court's remedial plan—which was drawn using the traditional criteria of compactness and minimizing political subdivision splits—governed the 1994 congressional elections.[5]

The Pennsylvania Supreme Court proceeded here in precisely the way *Growe* "encouraged": it gave the state legislature a chance to enact a new plan and "conditioned" the adoption of a state court plan on the "legislature's failure to enact a constitutionally acceptable plan." *Growe*, 507 U.S. at 34. Yet without even citing *Growe*, Legislative Applicants effectively urge this Court to overturn it. Under their view, state courts would not only lose their primacy in addressing congressional districting challenges, but would be rendered powerless in this area. Stays are for cases where there is a probability of certiorari and a prospect of reversal, not for theories that are squarely foreclosed by this Court's longstanding precedent.

[5] *Minnesota Redistricting Cases: the 1990s*, *supra* note 4.

Nothing in *Arizona State Legislature* suggests that state courts lack power to review and remedy state congressional maps. *Cf.* Leg. Appl. 9, 14-15. To the contrary, this Court upheld against an Elections Clause challenge the power of states to assign congressional redistricting to an independent commission. In so holding, the Court reaffirmed that redistricting must be "performed in accordance with the State's prescriptions for lawmaking." *Ariz. State Legislature*, 135 S. Ct. at 2668. The Court *rejected* the notion that the "Elections Clause renders the State's representative body the sole component of state government authorized to prescribe regulations for congressional redistricting." *Id.* at 2673 (quotations and alterations omitted). "Nothing in that Clause instructs, nor has this Court ever held, that a state legislature may prescribe regulations on the time, place, and manner of holding federal elections in defiance of provisions of the State's constitution." *Id.* Legislative Applicants make no effort to reconcile their radical interpretation of the Elections Clause with that decision from just three years ago.

It is not only that this Court has repeatedly rejected the notion that the reference to "Legislature" in the first part of the Elections Clause precludes state courts from enforcing state constitutions. The second part of the Elections Clause allows Congress "at any time" to alter state laws related to congressional redistricting, U.S. Const. Art. I, § 4, and this Court held in *Branch v. Smith*, 538 U.S. 254 (2003), that Congress has validly done so by conferring remedial authority on state courts. *Branch* held that 2 U.S.C. § 2c authorizes both state and federal courts to "remedy[] a failure" by the state legislature "to redistrict constitutionally,"

and "embraces action *by state and federal courts* when the prescribed legislative action has not been forthcoming." *Id.* at 270, 272 (emphasis added). "[Section] 2c is as readily enforced by courts as it is by state legislatures, and is just as binding on courts—federal or state—as it is on legislatures." *Id.* at 272. Legislative Applicants apparently would have this Court overturn *Branch*, but they do not even cite it.

The plurality portion of *Branch* explained that another federal statute, 2 U.S.C. § 2a(c), also recognizes state courts' power to adopt congressional redistricting plans pursuant to state law. Section 2a(c) prescribes procedures that apply "[u]ntil a State is redistricted in the manner provided by [state] law." The plurality explained that the "[u]ntil a State is redistricted" language in this provision "can certainly refer to redistricting by courts as well as by legislatures," and that "when a court, *state or federal*, redistricts pursuant to § 2c, it necessarily does so 'in the manner provided by state law.'" *Id.* at 274 (emphasis added; bracketing omitted). The dissent disagreed with the plurality not on the theory that state courts lack authority to impose a redistricting plan, but because the dissent thought that *only* state courts (and not federal courts) may undertake an initial redistricting. *Id.* at 277. But every Justice agreed that, as compared to federal courts, it is "preferable for the State's legislature to complete its constitutionally required redistricting … or for the state courts to do so if they can." *Id.* at 278.

The majority in *Arizona State Legislature* upheld this interpretation. Under § 2a(c), "Congress expressly directed that when a State has been redistricted in the manner provided by state law—whether by the legislature, *court decree*, or a

commission established by the people's exercise of the initiative—the resulting districts are the ones that presumptively will be used to elect Representatives." 135 S. Ct. at 2670 (emphasis added) (quotations and alterations omitted). Legislative Applicants thus are wrong that, in *Arizona State Legislature*, "[n]o Justice suggested that state courts might share in" the redistricting function. Leg. Appl. 9.

In short, while Legislative Applicants argue that the authority of state courts to consider congressional reapportionment "present[s] an issue of federal law long overdue for definitive resolution by this Court," Leg. Appl. 8-9, they ignore at least six decisions of this Court—*Growe*, *Smiley*, *Koenig*, *Carroll*, *Branch*, and *Arizona State Legislature*—definitively resolving the question against them. In these circumstances, Applicants cannot demonstrate a "reasonable probability" that this Court will grant certiorari, and they certainly cannot demonstrate a "fair prospect" that a majority of this Court would vote to reverse.[6]

It would be remarkable for this Court to intrude upon state sovereignty by entering a stay under these circumstances, and the sprinkling of dissents and concurrences Applicants cite hardly counsel otherwise. Applicants repeatedly cite a dissent from denial of certiorari in *Colorado General Assembly v. Salazar*, 541 U.S.

[6] Legislative Applicants' view that the Elections Clause "vests [redistricting] authority" exclusively in state legislatures and Congress, Leg. Appl. 9, would seemingly require this Court to overrule *Wesberry v. Sanders*, 376 U.S. 1 (1964). There, the Court rejected the plurality opinion in *Colgrove v. Green*, 328 U.S. 549 (1946)—which had concluded that the Elections Clause's reference to "Congress" deprives *federal* courts of power to review congressional maps. *Wesberry*, a foundational redistricting decision, explained: "[N]othing in the language of [the Elections Clause] gives support to a construction that would immunize state congressional apportionment laws … from the power of courts to protect the constitutional rights of individuals from legislative destruction." 376 U.S. at 6-7.

1093 (2004), but that concerned the very different question whether a state court could *prohibit* the legislature from redistricting. The petitioners there did "not disput[e] state courts' remedial authority to impose temporary redistricting plans 'so long as the legislature does not fulfill its duty to redistrict'" in a lawful manner. *Id.* at 1094. Here, the state high court has given the legislature the opportunity to redistrict in a constitutional manner and will step in only if the legislature fails to do so—again, precisely the procedure this Court unanimously blessed in *Growe*.

Similarly, no part of the three-Justice concurrence in *Bush v. Gore*, 531 U.S. 98 (2000), which concerned *presidential* elections, suggests that the Court should overrule decades of precedent confirming that state courts have power to remedy unconstitutional congressional districting statutes. *Cf.* Leg. Appl. 14. And in *Ohio ex rel. Davis v. Hildebrant*, 241 U.S. 565 (1916) (cited at Leg. Appl. 15), the Court *rejected* any notion that a congressional districting plan that was contrary to "the Constitution and laws of the state was yet valid and operative." *Id.* at 568.

C. The Remedy the Pennsylvania Supreme Court Ordered Is Consistent With Precedent in Pennsylvania and Other States

Nothing about the particular criteria the Pennsylvania Supreme Court adopted in fashioning a remedy in this case warrants this Court's intervention, and Legislative Applicants have waived any contrary argument. The court instructed the legislature, in drawing a remedial map, to follow traditional districting criteria, namely, equalizing population, maximizing compactness, ensuring contiguity, and minimizing political subdivision splits. Leg. App'x A3. Applicants claim that the Pennsylvania Supreme Court "wove" these criteria "from whole cloth," Leg. Appl.

10-11, but that is not true.

More than 25 years ago, in *Mellow v. Mitchell*, 607 A.2d 204 (Pa. 1992), the Pennsylvania Supreme Court adopted a remedial congressional map using these very criteria. The Pennsylvania Supreme Court picked among competing plans proposed by the parties based on criteria including "avoid[ing] splitting of political subdivisions and precincts," "preserv[ing] communities of interest," and "compactness." *Id.* at 208, 215-25. Two decades later, the court reaffirmed that "compactness, contiguity, and respect for the integrity of political subdivisions not only have deep roots in Pennsylvania constitutional law," but also "represent important principles of representative government." *Holt v. 2011 Legislative Reapportionment Comm'n*, 38 A.3d 711, 745 (Pa. 2012).

At oral argument before the Pennsylvania Supreme Court, Legislative Applicants' counsel acknowledged that "compactness[] and avoiding splitting political subdivisions were things that this court identified in *Mellow* when this court identified what criteria it was going to use when adopting a map." Oral Argument Video at 1:29:49-1:30:21. Subsequently, counsel confirmed that the criteria were valid criteria for evaluating the constitutionality of congressional districts in Pennsylvania. *Id.* at 1:32:18-47.

In short, these criteria are well-established in Pennsylvania, and Legislative Applicants have waived any challenge to their use in this case. That waiver precludes the Court from granting a stay on the basis of an objection to the Pennsylvania Supreme Court's remedial choices.

What is more, disagreement with the criteria the Pennsylvania Supreme Court imposed would not present a basis for a stay even absent the waiver. Legislative Applicants make no serious argument that it offends the *federal constitution* for a state to require congressional districts to be compact and to avoid splitting political subdivisions, much less as part of a remedial measure. This Court has repeatedly recognized these criteria as valid. *E.g.*, *Reynolds v. Sims*, 377 U.S. 533, 578 (1964); *Shaw v. Reno*, 509 U.S. 630, 646 (1993).

In *Growe*, the state court used compactness and avoiding subdivision splits as criteria in drawing its own plan, and this Court forbade federal courts from interfering. *Supra* § I.B. And state courts around the country routinely use these very criteria in ordering or generating remedial congressional districting plans where an existing plan violates the state or federal constitution.[7] Like the Pennsylvania Supreme Court, none of these courts were engaging in "judicial activism" or "rank legislation." Leg. Appl. 2, 11, 14. They were doing what courts do: fashioning an appropriate equitable remedy to redress a constitutional violation. Nothing about the Pennsylvania Supreme Court's order warrants a stay any more than it did in these cases dating back decades.

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[7] *See, e.g.*, *League of Women Voters v. Detzner*, 179 So.3d 258, 288-89 (Fla. 2015); *Beauprez v. Avalos*, 42 P.3d 642, 652 (Colo. 2002); *Hall v. Moreno*, 270 P.3d 961, 966 (Colo. 2012); *In re Apportionment Comm'n*, 36 A.3d 661 (Conn. 2012); *Zachman v. Kiffmeyer*, at *15, 2002 Minn. LEXIS 884 (Minn. Spec. Redis. Panel Mar. 19, 2002); *Hippert v. Ritchie*, 813 N.W.2d 391, 395 (Minn. Spec. Redis. Panel 2012); *In re 2003 Apportionment of the State Senate and U.S. Congressional Districts*, 827 A.2d 844, 847 (Maine 2003); *Jepsen v. Vigil-Giron*, 2002 WL 35459962 (N.M. Dist. Jan. 8, 2002); *Alexander v. Taylor*, 51 P.3d 1204, 1211 (Okla. 2002); *Wilson v. Eu*, 823 P.2d 545, 549-50 (Cal. 1992); *Legislature v. Reinecke*, 516 P.2d 6, 10, 13 (Cal. 1973).

Applicants argue that allowing state courts to enforce state constitutions means that "no reins would exist" to restrain state courts, that "any state-court created criteria are possible," and that state courts could require the legislature to "favor one political party or interest group" or require "at large" elections or "proportional representation." Leg. Appl. 16-17. Not so. As just noted, state courts have been enforcing state constitutions in the context of congressional redistricting for a century without any calamitous result or violation of federal law.

Applicants attempt to distinguish the decision below from some other state court cases reviewing congressional districting maps under state constitutions, arguing that in other cases a state "statutory or constitutional provision plainly empowered such review." Leg. Appl. 10 n.6. Such a distinction appears nowhere in the Elections Clause and is not enforceable by this Court. A holding that this Court must decide in every congressional apportionment case whether a state constitutional provision "plainly empowers" state court review would effect an unprecedented intrusion upon state sovereignty and a radical rewriting of centuries worth of precedent establishing that this Court lacks the power to review decisions of a state high court interpreting state constitutional law. In any event, Pennsylvania's Constitution "plainly empowers" judicial review, including the Pennsylvania Supreme Court's authoritative interpretation of the state constitutional provisions at issue here.

D. Legislative Applicants Are Estopped From Asserting an Elections Clause Challenge and Intervenor Applicants Waived Any Such Challenge

There is a further, dispositive vehicle problem that will prevent this Court from granting certiorari: Legislative Applicants are judicially estopped from asserting their Elections Clause argument in this Court. That alone provides sufficient basis to deny their request for a stay.

To determine if a party is judicially estopped under federal law, courts consider whether (1) the party's position is "clearly inconsistent with its earlier position"; (2) "the party has succeeded in persuading a court to accept that party's earlier position"; and (3) "the party seeking to assert an inconsistent position would derive an unfair advantage ... if not estopped." *New Hampshire v. Maine*, 532 U.S. 742, 750-51 (2001) (internal quotation marks omitted). All three factors are met here. Indeed, it is difficult to imagine a clearer case where estoppel is warranted "to prevent improper use of judicial machinery." *Id.*

1. Legislative Applicants advanced the opposite of their current position in separate federal litigation. On October 16, 2017, in a federal lawsuit challenging the 2011 map, Legislative Applicants asked the federal court to stay or abstain based on this state court action. *Agre v. Wolf*, No. 17-4392, ECF No. 45-2 (E.D. Pa. Oct. 2, 2017). Citing *Growe*, they argued that under "long-accepted and well-settled principles of abstention," the federal court was "required" to defer to the state court. *Id.* at 24-25 (capitalization omitted). Under *Growe*, they argued, a state's "judicial

branch" is a valid and preferable "agent[] of apportionment" with respect to congressional redistricting. *Id.* at 25.

When the district court denied the motion, Legislative Applicants sought emergency mandamus relief in this Court. They explained that, under this Court's precedent and "principles of federalism," "federal judges are '**required** … 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.'" Emergency Mandamus Pet'n 13-14, *In re Michael C. Turzai*, No. 17-631 (2017) (quoting *Growe*, 507 U.S. at 33) (emphasis by Legislative Applicants). In a section titled "The District Court Usurped the Power of the Pennsylvania State Courts," Legislative Applicants wrote:

> [T]here can be no question that the Pennsylvania state courts have already begun the "highly political task" of addressing the challenges to the 2011 Plan. Because federal courts are **required** to defer adjudication of a redistricting matter that a state legislative or judicial branch is already considering, the District Court usurped the power of the Pennsylvania appellate courts[.]

Id. at 18-19.

While this Court denied mandamus, Legislative Applicants have now succeeded in persuading a lower federal court to enter a stay on the basis of this exact same argument. On November 20, 2017, in a second federal lawsuit challenging Pennsylvania's 2011 map, Legislative Applicants again argued that the federal court was "required" to defer to the Pennsylvania state courts, because state courts are valid and preferable "agents of apportionment." *Diamond v. Torres*, No. 5:17-cv-5054, ECF No. 26-4 at 23-26 (E.D. Pa.). The federal court granted an initial

stay on November 22, and subsequently extended the stay through January 8, 2018 on the basis of this state court action. *Diamond*, ECF Nos. 40, 48.

After the stay expired, Legislative Applicants filed a new stay motion, again asserting that the "legislative *or* judicial branch" of a state has authority to review and remedy congressional districting plans. *Diamond*, ECF No. 69-2 at 16 (emphasis in original). Legislative Applicants also noted that, in *Scott v. Germano*, 381 U.S. 407, 409 (1965), this Court expressed "the preference to have state legislatures and state courts, rather than federal courts, address reapportionment." *Diamond*, ECF No. 69-2 at 16.

On January 22, 2018—just days before filing their stay application in this Court—Legislative Applicants filed a reply brief in *Diamond* again asserting that the federal court had to defer to the Pennsylvania Supreme Court. *Diamond*, ECF No. 81. They argued that the *Diamond* court was "required to defer to Pennsylvania's legislative, executive and judicial branches" under the "plain language of *Growe*." *Id.* at 2, 5. On January 23, the *Diamond* court stayed the case indefinitely "upon consideration of Legislative Defendants' motion to stay (Doc. No. 69), as well as the *per curiam* order entered by the Supreme Court of Pennsylvania on January 22, 2018 in *League of Women Voters of Penn. v. Commw. of Penn.*" *Diamond*, ECF No. 84.

Under these circumstances, there can be no dispute that Legislative Applicants have taken inconsistent positions across these cases. In their stay application to this Court, Legislative Applicants argue that the federal Elections

Clause "vests authority" over congressional redistricting *only* in state legislatures and Congress, and "[s]tate courts enjoy none of this delegated authority." Leg. Appl. 9. But Legislative Applicants said the opposite to the *Diamond* court, not to mention to this Court in requesting the extraordinary relief of a writ of mandamus. They asserted in the federal lawsuits that state courts are "agents of apportionment" whose authority to review congressional plans is so unquestioned that federal courts are "required" to defer. *Diamond*, ECF No. 69-2 at 16, No. 81 at 2.

2. Legislative Applicants "succeeded" in making this argument to the federal *Diamond* court. *New Hampshire*, 532 U.S. at 750-51. The *Diamond* court has now granted a full and indefinite stay based on Legislative Applicants' argument that state courts have authority and primacy in addressing congressional redistricting challenges. *Diamond*, ECF No. 84. Legislative Applicants have accrued and will continue to accrue significant benefits from this stay: it will allow them to avoid discovery and trial in federal court and preclude the *Diamond* plaintiffs from obtaining relief from the federal court in time for the 2018 elections.

3. Judicial estoppel is necessary to prevent Legislative Applicants from "deriv[ing] an unfair advantage" and abusing the "judicial machinery." *New Hampshire*, 532 U.S. at 750-51. If this Court were to grant a stay, Legislative Applicants will have obtained two *simultaneous* stays in two different courts based on diametrically opposed positions: (1) a stay in *Diamond* based on the argument that state courts have primary authority to review and remedy congressional

districting challenges; and (2) a stay in this Court based on the argument that state courts have no authority to review and remedy congressional districting plans. The judicial estoppel doctrine exists precisely to prevent such results.

The separate application for a stay by the Intervenor Applicants does not avoid this vehicle problem. Intervenor Applicants did not raise an Elections Clause (or any federal law argument) during the state court proceedings below, and they have therefore waived the argument. *Sprietsma v. Mercury Marine*, 537 U.S. 51, 56 n.4 (2002). Because Legislative Applicants are judicially estopped from pursuing the argument and Intervenor Applicants did not raise it below, there is no proper party to raise the argument before this Court. *See FTC v. Phoebe Putney Health Sys., Inc.*, 568 U.S. 216, 226 n.4 (2013).[8]

II. There Is No Likelihood of Irreparable Harm and the Balance of Equities Weighs Against a Stay

It is in no party's interest to stay the order in this case. Applicants' objections to the court-ordered remedial process are insubstantial and ignore the facts and the law. Pennsylvania and other states around the country have implemented remedial congressional maps in less time than is available here. The new map will be in place well before the primary and general elections, and the

[8] Legislative Applicants' Elections Clause argument is also judicially estopped under Pennsylvania law. *In re Adoption of S.A.J.*, 838 A.2d 616, 620 (Pa. 2003). The possibility that the Pennsylvania Supreme Court will so hold could create an adequate and independent state ground that precludes this Court's review. *See Smith v. Texas*, 550 U.S. 297, 325 (2007) (Alito, J., dissenting) ("[I]n cases in which this Court has reversed a state-court decision based on a possible federal constitutional violation, it is not uncommon for the state court on remand to reinstate the same judgment on state-law [procedural] grounds" such as waiver.).

Pennsylvania Supreme Court gave Legislative Applicants what they asked for—three weeks—to draw a new map. And even if Applicants were right that there is insufficient time to implement a new map, federal law would dictate at-large elections, not the reinstatement of Pennsylvania's unconstitutional 2011 map. Finally, the balance of equities is not even close given the extreme and irreparable harm of forcing millions of Pennsylvania voters to choose their members of Congress based on a map that the state's highest court has declared invalid under the state's own constitution.

1. Legislative Respondents assert that "irreparable injury is certain" because the Pennsylvania Supreme Court has enjoined a state statute "'enacted by representatives of [Pennsylvania's] people.'" Leg. Appl. 18 (quoting *Maryland v. King*, 133 S. Ct. 1, 3 (2012)). But, as the Pennsylvania Supreme Court held in an unreviewable ruling, this particular state statute violates the state constitution. An inability to enforce an unconstitutional law is not a cognizable injury.

Legislative Respondents assert that adopting a new map for 2018 will cause irreparable harm because it will cause "voter confusion" and "depress turnout." Leg. Appl. 19. They put on no evidence of this below, and bare speculation cannot support a stay. *See Winter v. Nat. Res. Def. Council*, Inc., 555 U.S. 7, 22 (2008). There will be three months between the adoption of the new map in mid-February and the May 15 primaries, and nine months until the general elections in November. Unlike the Secretaries of State *amici* from other jurisdictions, the officials actually charged with administering elections in Pennsylvania—the

Executive Branch Defendants—have made clear that there will be no difficulty educating voters and administering orderly elections in this timeframe.

In fact, Pennsylvania voters will have almost as much time to become "familiar" with the new district boundaries and candidates as they did following enactment of the 2011 map itself. Leg. Appl. 18-19. The 2011 map was signed into law on December 22, 2011 and used in the primaries four months later, on April 24, 2012. Here, a new map will be in place by February 19, 2018, three months before the May 15, 2018 primaries. There is zero indication that Pennsylvanians had any difficulty learning the "facts, issues, and players" in the four months from December 2011 to April 2012. Leg. Appl. 19. Applicants offer no reason to believe that the three months from February to May 2018 will be any different.

What is more, the Commonwealth of Pennsylvania has successfully implemented court-ordered congressional plans in *less* time than it has here. In *Mellow*, the Pennsylvania Supreme Court adopted a new map on March 10, 1992, and that map was used at the April 28, 1992 primary elections, just a month and a half later. 607 A.2d at 206, 225. That is *half* the time available here. The *Mellow* court also gave candidates nine days to circulate and file nominating petitions, *id.* at 244, also less time than the 15 days they will have here. This Court denied review in *Mellow*. *See* 506 U.S. 828 (1992). Thus, the Commonwealth of Pennsylvania has implemented new congressional district boundaries for an upcoming election before without incident, and it will do it again here.

This Court similarly has held that state courts may properly adopt a new congressional districting map *less than two months* before the elections. In *Growe*, the Minnesota state court planned to adopt a new congressional map in early March 1992, less than two months before primary elections in late April and early May 1992. 507 U.S. at 31, 37 n.2. In holding that the federal court had improperly enjoined the state court's adoption of a new plan on this schedule, this Court rejected the view that "the state court was … unable to adopt a congressional plan in time for the elections." *Id.* at 37. With almost two months to go, there was no need for a "last-minute federal-court rescue of the Minnesota electoral process." *Id.*

Courts typically have stayed orders affecting elections only when those orders were entered much closer to the election at issue. In *Purcell v. Gonzalez*, 549 U.S. 1 (2006) (cited at Leg. Appl. 3, 18-19; Int. Appl. 2, 15, 20), this Court blocked a lower court's order enjoining enforcement of Arizona's voter-identification law barely four weeks before the 2006 general elections. By contrast, here, the May 2018 primaries are still almost four months away. The state agencies charged with implementing the new plan have concluded that adopting a new plan by February 19 will not "compromis[e] the election process in any way." Leg. App'x B ¶¶ 35, 448-51.

Nor does this Court's order deny the political branches a "genuine opportunity" to enact legislation creating a new map, as Legislative Applicants claim. Leg. Appl. 20. Legislative Applicants waived any such argument when they told the Pennsylvania Supreme Court at oral argument that they "would like at least three weeks." Oral Argument Video at 1:46:05-1:46:13. The state high court's

order gives them what they asked for—19 days for the General Assembly to pass a bill (including 15 business days) and six days after that for the Governor to sign or veto it. This is at least as much time as it took to enact the 2011 map. Republicans in the General Assembly first revealed the 2011 map on December 14, 2011, and within eight days the bill had been passed and signed into law.

Legislative Applicants' contention that the General Assembly has "*no* guidance" on how to draw a valid map is simply wrong. Leg. Appl. 13; *accord id.* at 20. The Pennsylvania Supreme Court's order is clear as day: the remedial map must have "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." Leg. App'x A3. With this guidance, Legislative Applicants' position that they cannot figure out how to draw a map that passes constitutional muster is hardly credible.[9]

Intervenor Applicants contend that adopting a new map for 2018 will cause them irreparable harm because it will harm the "exercise of their constitutional rights to participate in the political process" by forcing them to "start anew" in their campaigning activities. Int. Appl. 16. But they have never relied on any federal

[9] The Pennsylvania Supreme Court required districts to be drawn as nearly equal in population as is practicable (Leg. Appl. 20) because that is the language from this Court's precedent and because Pennsylvania's 2010 census population is not evenly divisible by 18, not because the state court was sanctioning unconstitutional population inequality. As for the Voting Rights Act, of course federal law is a backstop and nothing in the state high court's order suggests otherwise. And the court's decision to retain authority to review the legislature's remedial map (Leg. Appl. 20) for constitutionality is standard practice.

constitutional provision in this case, nor have they identified a cognizable constitutional "right" to perpetuate unconstitutional congressional districts.

2. Applicants' *Purcell* argument also rests on the false premise that if there is insufficient time to implement a remedial map, the 2018 elections will go forward under the 2011 map. In fact, if there were not enough time to implement a new map, then a federal statute would provide the remedy. As this Court has explained, 2 U.S.C. § 2a(c)(5) prescribes mandatory procedures where (i) a state lost a congressional seat from the prior decade's reapportionment (as occurred in Pennsylvania); (ii) the state does not have a congressional plan enacted "in the manner provided by the law thereof"; and (iii) "there is no time for either the State's legislature or the courts to develop one." *Branch*, 538 U.S. at 275 (plurality opinion); *see Ariz. State Legislature*, 135 S. Ct. at 2670. In those circumstances, § 2a(c)(5) requires at-large elections for a state's entire congressional delegation.

Applicants' supposition that the 2018 elections should proceed under the 2011 map if there is not time to implement a new map is therefore wrong. Section 2a(c)(5) bars the use of a congressional plan that was not enacted "in the manner provided by state law," and the Pennsylvania Supreme Court has held that the 2011 map was not enacted in the manner provided by Pennsylvania law. *See Arizona State Legislature*, 135 S. Ct. at 2670 ("Section 2a(c) sets forth congressional-redistricting procedures ... if the State, 'after any apportionment,' ha[s] not redistricted 'in the manner provided by state law.'" (bracketing omitted)); *Branch*, 538 U.S. at 274 (plurality opinion) (same). Thus, if this Court were to grant a stay

on Applicants' theory that there is not enough time, then § 2a(c)(5) would require 18 at-large elections in 2018.

But there is no reason to resort to § 2a(c)(5)'s procedures. The Pennsylvania Supreme Court set forth an orderly process to develop a remedial plan—exactly in the way the majority portion of *Branch* held that 2 U.S.C. § 2c directs. This remedial process is consistent with the congressionally-prescribed scheme, with longstanding Pennsylvania precedent, and with remedial plans that state courts have implemented across the country. *See, e.g.*, *Favors v. Cuomo*, 2012 WL 928223, at *1 n.4, 3 (E.D.N.Y. Mar. 19, 2012) (adopting remedial congressional plan drawn by special master Nathaniel Persily to avoid at-large elections under § 2a(c)(5)).

3. Legislative and Intervenor Applicants note that this Court granted stays in *Whitford v. Gill*, No. 16-1161, and *Rucho v. Common Cause*, No. 17A745. But those cases involve federal constitutional claims brought in federal courts that were subject to direct review in this Court. This case involves exclusively state constitutional claims decided by the state's highest court. The Pennsylvania Supreme Court has already held that the 2011 map violates the Pennsylvania Constitution regardless of what this Court says in the pending federal cases.

4. On the balance of equities, Legislative Applicants stunningly suggest that this case involves only the "paltriest" of rights to which Plaintiffs do not attach any real "significance." Leg. Appl. 20-21. Voting is a "fundamental political right" because it is "preservative of all rights." *Reynolds*, 377 U.S. at 562. "[O]nce a State's legislative apportionment scheme has been found to be unconstitutional, it

would be the unusual case in which a court would be justified in not taking appropriate action to insure that no further elections are conducted under the invalid plan." *Id.* at 585. Plaintiffs and millions of other Pennsylvanians have an overwhelming interest in participating in fair elections under a valid map.

Legislative Applicants argue that their constitutional violation was "not severe." Leg. Appl. 21. The 2011 map is the worst partisan gerrymander in Pennsylvania's history and among the worst in American history. In each of the three election cycles under the 2011 map, Republicans won up to five seats more than they would have under a non-partisan plan, including in 2012 when they won 13 of 18 seats with only a minority of the statewide vote.

Legislative Applicants argue that adopting a new map for 2018 will undermine the "integrity" of the elections. Leg. Appl. 3, 18. But nothing has done more damage to the integrity of Pennsylvania's elections than Legislative Applicants' historically extreme gerrymander. Gerrymandering undermines citizens' trust in government and strikes at the foundation of representative democracy. Forcing Pennsylvanians to vote in districts that their state's highest court has declared invalid under the state constitution would cause lasting damage.

Federal and the integrity of Pennsylvania's elections will be best served by denying a stay and allowing the Commonwealth of Pennsylvania to adopt a new map that comports with the Pennsylvania Constitution.

CONCLUSION

The applications for a stay should be denied.

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Respectfully submitted,

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Exhibit C

IN THE SUPREME COURT OF PENNSYLVANIA

No. 159 MM 2017

LEAGUE OF WOMEN VOTERS OF PENNSYLVANIA, *et al.*,

Petitioners,

v.

THE COMMONWEALTH OF PENNSYLVANIA, *et al.*,

Respondents.

PETITIONERS' OPENING BRIEF (PUBLIC VERSION)

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INTRODUCTION

In a representative democracy, voting is the highest act of political self-expression. It is how Pennsylvanians give voice to their deepest convictions about the laws under which we all must live and the policies that shape our nation. Under our system of government, the core way that Pennsylvanians translate their views into law is by electing candidates who share those views. But in a partisan gerrymander, the government manipulates the boundaries of legislative districts to prevent voters of one party from electing candidates of their choice, diminishing those voters' political voice. This practice strikes at the foundation of representative democracy. And it violates the Pennsylvania Constitution.

Pennsylvania's congressional districting map is among the most extreme partisan gerrymanders in American history. In 2011, acting in secret, Republicans in the General Assembly drew a map designed to maximize the political advantage of Republicans and diminish the representational rights of Democratic voters. They deliberately sorted Democratic voters into particular districts on the basis of their political views and their votes. They sought to predetermine the outcome of congressional elections for a decade.

The 2011 map "packed" Democratic voters into five overwhelmingly Democratic districts. It "cracked" the remaining Democratic voters, spreading them across the other 13 districts while ensuring a reliable majority of Republican

voters in each. And it worked: Without fail, the 2011 map has given Republicans 13 of 18 seats—the same 13 seats—in all three congressional elections in which the map has been used. These results held even when Democratic candidates won a majority of votes statewide. The map is impervious to the will of voters.

Petitioners' experts established that, by a host of mathematical and statistical measures, the 2011 map's extreme partisan bias is an outlier that could only be the product of partisan intent. But it doesn't take an expert to see this map for what it is. The districts are ridiculous. The 12th District resembles the Boot of Italy. The 6th could be mistaken for the State of Florida with a longer and more jagged Panhandle. And the 7th has been dubbed "Goofy kicking Donald Duck." The map is a mockery of representative government in plain view for all the nation to see.

Worse, the map rips apart Pennsylvania's communities to an unprecedented degree. It carves the Democratic stronghold of Reading out of Berks County and appends it via a narrow land bridge to the reliably Republican 16th District. It splits the Democratic voters of Erie, Harrisburg, and the Lehigh Valley between several Republican districts to deny these voters an opportunity to win any district. And it excises Democratic river communities from the 12th District and packs them into 14th by extending a tentacle up the Allegheny River. Respondents offered no non-partisan explanation for the map's myriad anomalies.

The 2011 map violates the Pennsylvania Constitution. Under the Free Expression and Free Association Clauses, the government cannot discriminate or retaliate against protected political expression and association. That is exactly what the map does. It deliberately places Democratic voters into particular districts to minimize their electoral and political influence, impermissibly burdening their expressive conduct on the basis of their political views. The map independently violates Pennsylvania's equal protection guarantees by intentionally and successfully discriminating against Democratic voters. These are judicially manageable standards that courts routinely apply.

The Commonwealth Court did not deny that the map discriminates against Democratic voters based on their political views—the court in fact found that the map "was intentionally drawn so as to give Republican candidates an advantage." But the court suggested that, unlike in any other context, such discrimination is permissible in redistricting. The court reasoned that mapmakers have long sought partisan advantage in drawing districts. But a historical pedigree is no reason to perpetuate invidious discrimination. For centuries, politicians handed out government jobs based on politics, until courts prohibited it. Mapmakers devalued votes by creating districts of unequal population, until courts prohibited it. And legislatures engaged in racial gerrymandering, until courts prohibited that too. Pennsylvania's Constitution doesn't have a grandfather clause for discrimination.

There is no other context in which courts ask "how much discrimination is too much," as the Commonwealth Court did. Any discrimination on the basis of viewpoint is too much. Sorting citizens into legislative districts based on their political views serves no good purpose and offers no societal benefit. It furthers no legitimate interest. Although the U.S. Supreme Court has been unwilling thus far to stop partisan gerrymandering, this Court should. Pennsylvania's constitutional protections for free expression are broader than the First Amendment. "Pennsylvania citizens should not have the contours of their fundamental rights under our charter rendered uncertain, unknowable, or changeable, while the U.S. Supreme Court struggles to articulate a standard to govern a similar federal question." *Pap's A.M. v. City of Erie* ("*Pap's II*"), 812 A.2d 591, 611 (Pa. 2002).

In any event, the 2011 map falls on the wrong side of any conceivable line distinguishing unconstitutional gerrymandering from purportedly permissible partisanship. The evidence of its extreme partisan intent and effect is damning and incontrovertible. No map in Pennsylvania's history has come close. The map denies millions of Pennsylvanians the opportunity to elect candidates who will represent their views and focus on their communities. Partisan gerrymandering is undermining people's trust and confidence in government. And it needs to stop.

This Court should declare that the 2011 map violates the Pennsylvania Constitution and enjoin its further use.

STATEMENT OF JURISDICTION

On November 9, 2017, this Court assumed original plenary jurisdiction over this matter pursuant to 42 Pa. C.S. § 726.

ORDER IN QUESTION

This is an original jurisdiction matter. The Commonwealth Court submitted Recommended Findings of Fact ("FOF") and Conclusions of Law ("COL") on December 29, 2017 (Attachment A). This Court should reverse the Commonwealth Court's dismissal of the League of Women Voters of Pennsylvania as a Petitioner (Attachment B), and its rulings on legislative privilege (Attachment C and oral rulings at trial).

SCOPE AND STANDARD OF REVIEW

The scope of review is plenary, and the standard is de novo. *Erfer v. Commonwealth*, 794 A.2d 325, 329 (Pa. 2002).

QUESTION INVOLVED

Whether Pennsylvania's 2011 congressional districting map, which discriminates against Democratic voters by sorting them into districts based on their political views, violates the free expression, free association, and equal protection provisions of the Pennsylvania Constitution.

STATEMENT OF THE CASE

A. Pennsylvania's 2011 Congressional Districting Map Was Created in Secret and Enacted in a Highly Unusual and Partisan Manner

In the 2010 elections, Republicans picked up 11 seats to take control of the Pennsylvania House, retained control of the Senate, and won the governorship. FOF ¶¶89-92. This gave Republicans exclusive control over Pennsylvania's congressional redistricting following the 2010 census.

Republicans in the General Assembly set to work redrawing the congressional map—in secret—to entrench Republican dominance in Pennsylvania's congressional delegation for the next decade. FOF ¶¶97-128. Senate Bill 1249, which Republican Senate leaders introduced on September 14, 2011, started as an empty shell—it contained no map or details. FOF ¶¶98-101. Instead, the bill described each district as follows: "The [Number] District is composed of a portion of this Commonwealth." *Id.* The same was true at the bill's second reading. FOF ¶¶102-03.

On the morning of December 14, 2011, Republicans amended the bill to add, for the first time, actual descriptions of the new districts. FOF ¶¶104, 126(b). Democrats immediately decried the map's partisan bent and Republicans' lack of transparency. "[W]e have a map that not one Democrat had anything to do with on this side of the aisle." 2011 S. Leg. J. 195-74, at 1409-10 (Pa. 2011); *see* FOF ¶¶107, 125-28.

Republican Senators suspended the ordinary rules of procedure to rush the bill through. FOF ¶¶126(c), 126(d). Later the same day, just hours after the new districts were revealed, the Senate passed SB 1249 by a vote of 26-24. FOF ¶109. No Democratic Senator voted for it. FOF ¶110.

Just days later, on December 15 and 19-20, 2011, the Pennsylvania House of Representatives considered SB 1249. FOF ¶¶113-16. Democratic representatives denounced the map as a "cynical attempt to institutionalize a Republican majority of congressional seats in Pennsylvania," and "the worst case of gerrymandering in Pennsylvania in living memory." 2011 H. Leg. J. 195-88, at 2730-33 (Pa. 2011).

On December 20, 2011, the House passed SB 1249 by a vote of 136-61, and Governor Corbett signed the bill into law two days later, as Act 131 of 2011. FOF ¶¶117, 121-23. Of the 36 House Democrats who voted for SB 1249, at least 33 represented legislative districts that were part of the map's five "packed" Democratic congressional districts, FOF ¶¶119, 185, meaning the Democrats who represented them would enjoy "safe" seats, PX178 at 62; PX179 at 47:3-49:12.

Although Legislative Respondents fought to conceal how the 2011 map was drawn, the court in a federal lawsuit challenging the map ordered production of the "facts and data considered in creating the 2011 Plan." Order ¶2, *Agre v. Wolf*, No. 2:17-cv-4392, ECF No. 76 (E.D. Pa. Nov. 9, 2017). In response, Speaker Turzai produced 13 shapefiles showing that the mapmakers used past election results to

measure the partisan performance of every precinct, municipality, and county in Pennsylvania. PX1 at 38-41 (Chen Report); Tr.301:11-302:19; 308:1-309.[1] These files contain election results for each precinct, municipality, and county for every statewide, legislative, and congressional election in Pennsylvania between 2004 and 2010. PX1 at 38-41; Tr.299:10-309:21. The files then use these election results to calculate ten different partisanship scores for each precinct, municipality, and county—with higher scores for Republican-leaning areas and lower scores for Democratic-leaning areas. *Id.* These partisan indices represented a significant effort to predict the partisan voting preferences of voters in potential new districts. PX1 at 39-41.

Speaker Turzai also produced draft maps showing [redacted] PX140.[2]

[1] The Commonwealth Court permitted Petitioners' expert Dr. Jowei Chen to testify about his analysis of the shapefiles, FOF ¶307, but erroneously refused to admit the files themselves into evidence. *Infra* n.7.

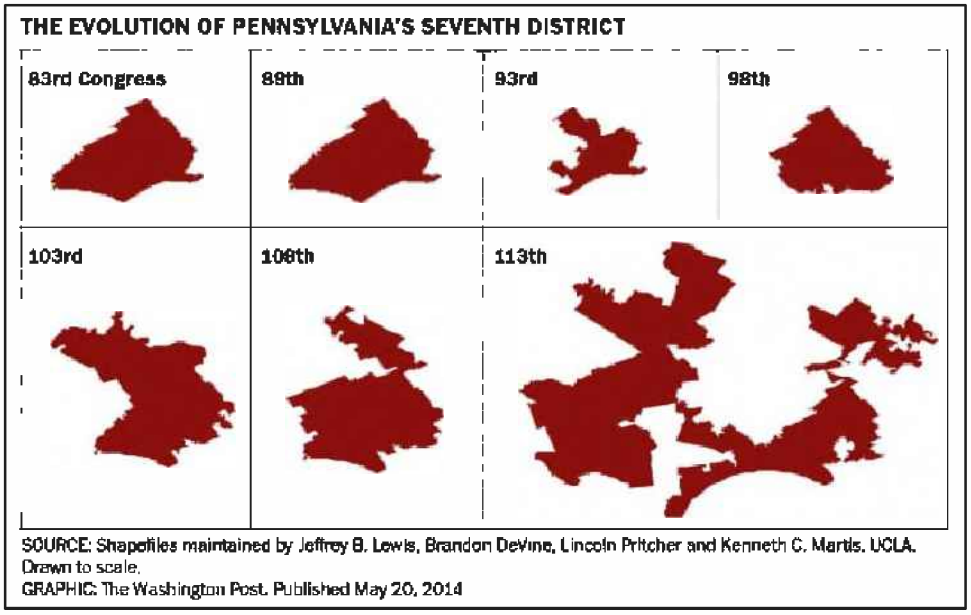
[2] The Commonwealth Court declined to admit this document, but transmitted it to this Court under seal. Tr.1061:6-15. The court ruled that, even though the document was admitted and discussed extensively at the federal trial, Petitioners had not laid a sufficient foundation for its admission here. This was error. There is no dispute as to the document's authenticity, the document is an admission of a party-opponent, and its contents speak for themselves. Tr.1046:2-1057:23.

B. The 2011 Map Packs and Cracks Democratic Voters, Creating Contorted Districts and Dividing Communities

Petitioners' expert Dr. John J. Kennedy, an expert in Pennsylvania's political geography, explained how the 2011 map "packed" Democratic voters into five districts that Democrats would win by overwhelming margins, and "cracked" the remaining Democratic voters by spreading them across 13 other districts that would be reliably Republican. PX53; Tr.579:18-644:15; FOF ¶¶313-39. Dr. Kennedy further explained how this packing and cracking results in bizarre districts that rip apart Pennsylvania's communities. *Id.* The Commonwealth Court found Dr. Kennedy's testimony credible. FOF ¶339. His report describes the packing and cracking in all 18 districts. PX53. We discuss a few below.

Pennsylvania's 7th District is widely known as "one of the most gerrymandered districts in the country," earning the moniker "Goofy Kicking Donald Duck." FOF ¶323; Tr.598:25-599:22. Historically based in Delaware County, the 7th District now fans out in two divided branches, snaking through Montgomery County to the northeast and Berks and Lancaster Counties to the west. PX53 at 30; Tr.599:11-25. In all, the district splits five counties and 26 municipalities. FOF ¶¶136, 323; PX53 at 30.

Over the past half century, the 7th District has devolved from a highly compact district to its ridiculously contorted shape today:

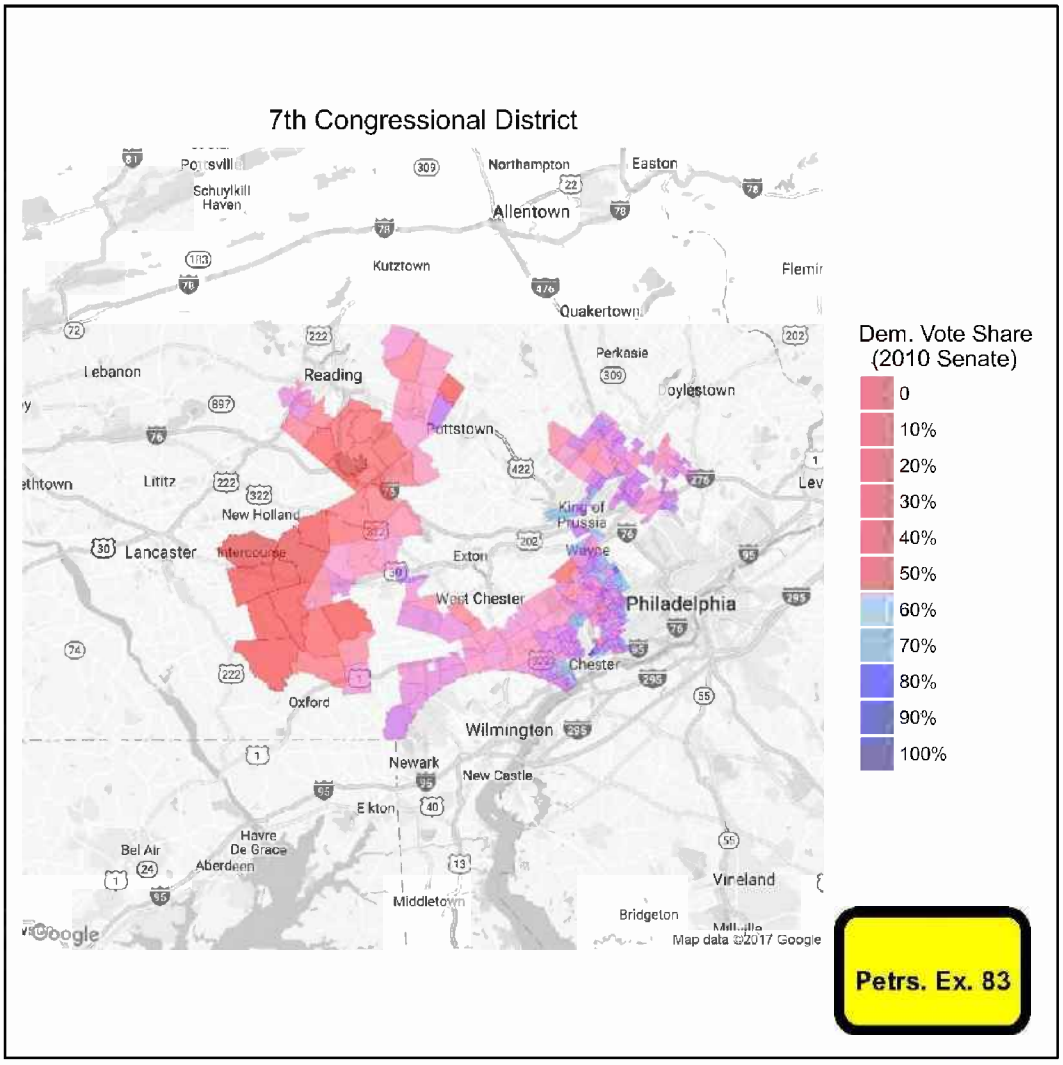


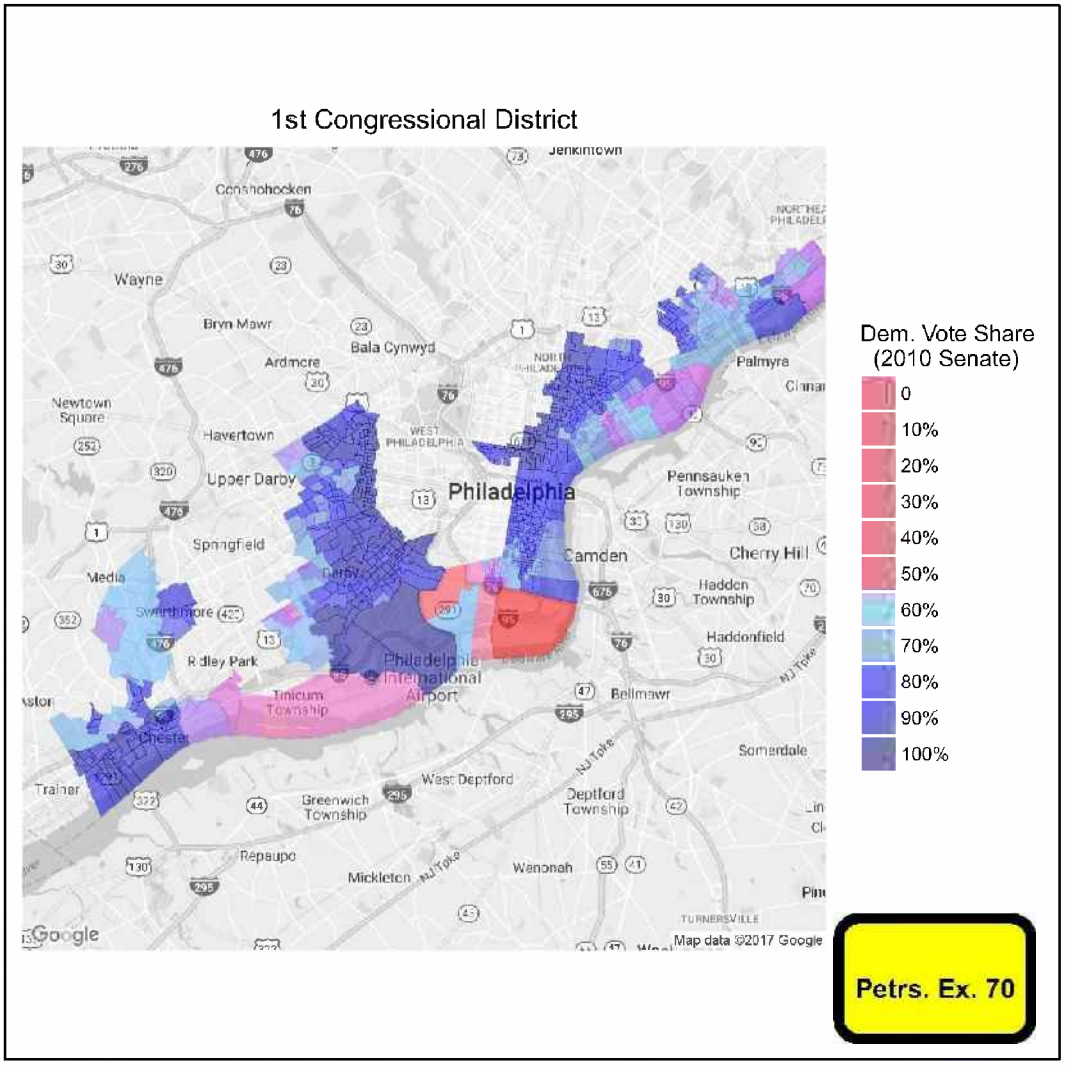
JX24.

The 7th District is barely contiguous. At the point where its eastern and western halves connect, it is the width of a medical facility. FOF ¶323; PX53 at 32. This narrow passage avoids the Democratic-leaning municipalities of Downingtown and Exton to the north and Coatesville to the south, splitting Democratic voters there from their communities and moving them into the Republican 16th and 6th Districts. PX53 at 32. In the 7th District's northeast half, the only point of contiguity is the restaurant Creed's Seafood & Steaks. FOF ¶323; PX81; Tr.602:16-20. Northeast of this point is the Democratic-leaning area of Upper Merion, which is cut out of the 7th District and placed into the packed Democratic 13th District. PX53 at 31.

There is a gap in the 7th District's southeastern portion that splits the heavily Democratic City of Chester and cuts out deep-blue Swarthmore. FOF ¶322;

Tr.605:19-608:15; PX53 at 20. These voters are packed into the southwestern portion of the heavily Democratic 1st District. *Id.*

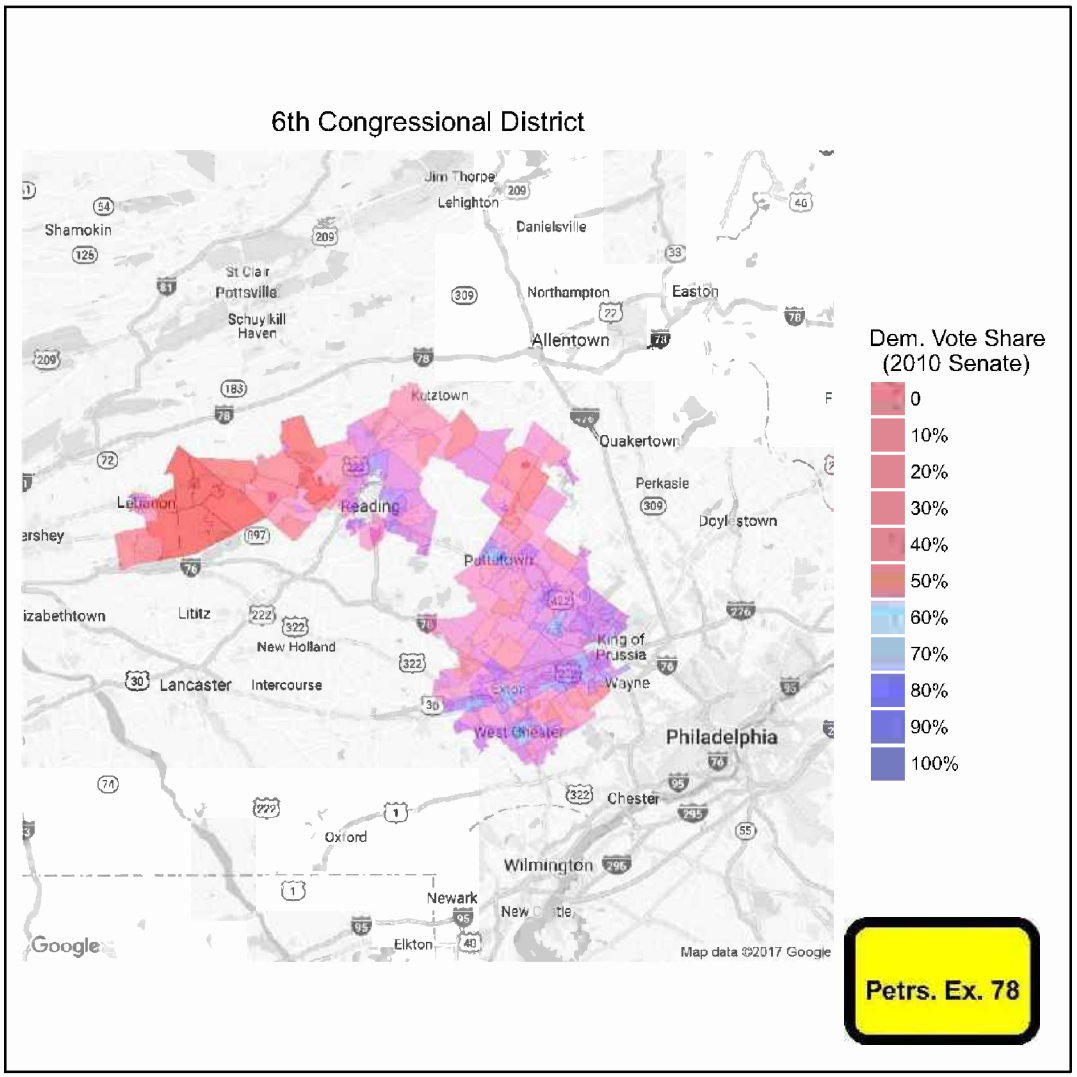


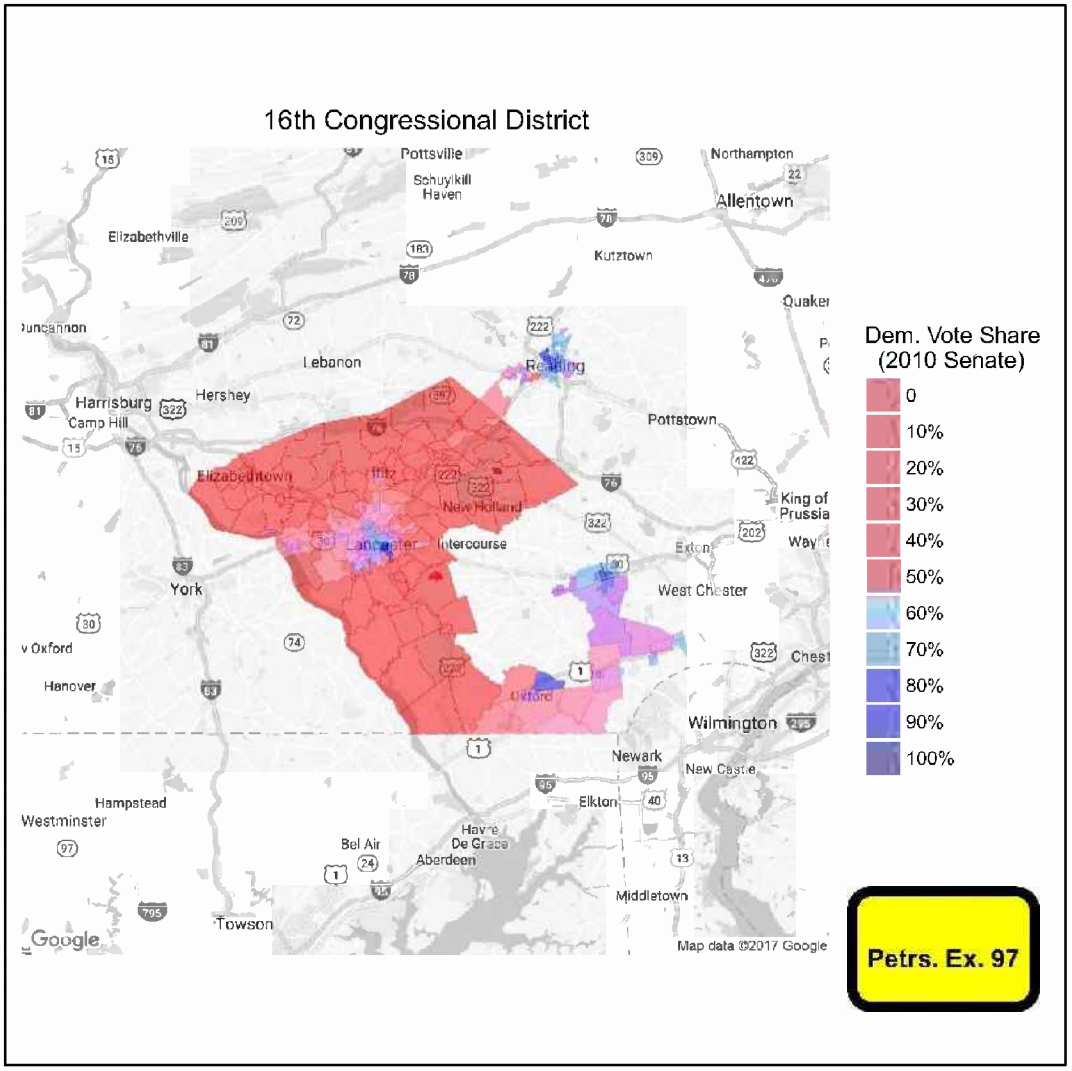


The 6th District is nearly as absurd as the 7th. It begins in Chester County but extends northward into Montgomery County, before jetting west to include parts of Berks and Lebanon Counties. FOF ¶324; Tr.616:2-617:17; PX53 at 28-29. It spans multiple communities but contains only pieces of each, resembling Florida "with a more jagged and elongated panhandle." *Id.*

A small incision in the 6th District's northwestern portion carves out the Democratic stronghold of Reading, splitting it from the rest of Berks County, even

though Reading is the county seat. *Id.* Reading is instead grouped with far-flung communities in the Republican 16th District via a narrow isthmus that at one point is the width of a mulch store and a service center. FOF ¶325; PX53 at 50-52; Tr.618:12-620:6.

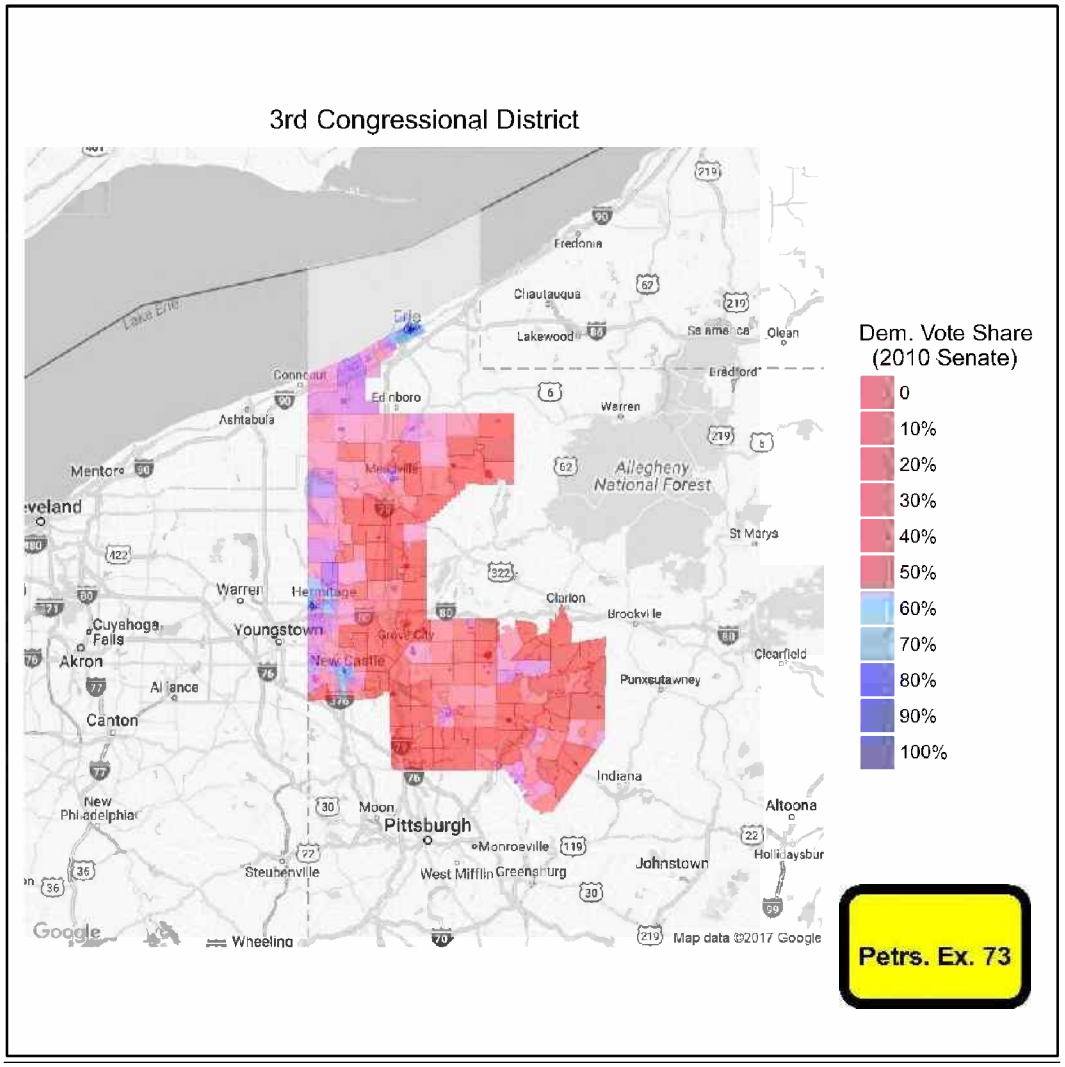




The 16th District also cracks the predominantly Democratic voters in the Coatesville area, in the 16th District's southeastern appendage, removing them from the 6th District. FOF ¶325; Tr.618:18-622:10. This cracking of Democratic voters in Reading and Coatesville places them into a heavily Republican district that they have no chance of influencing. *Id.*

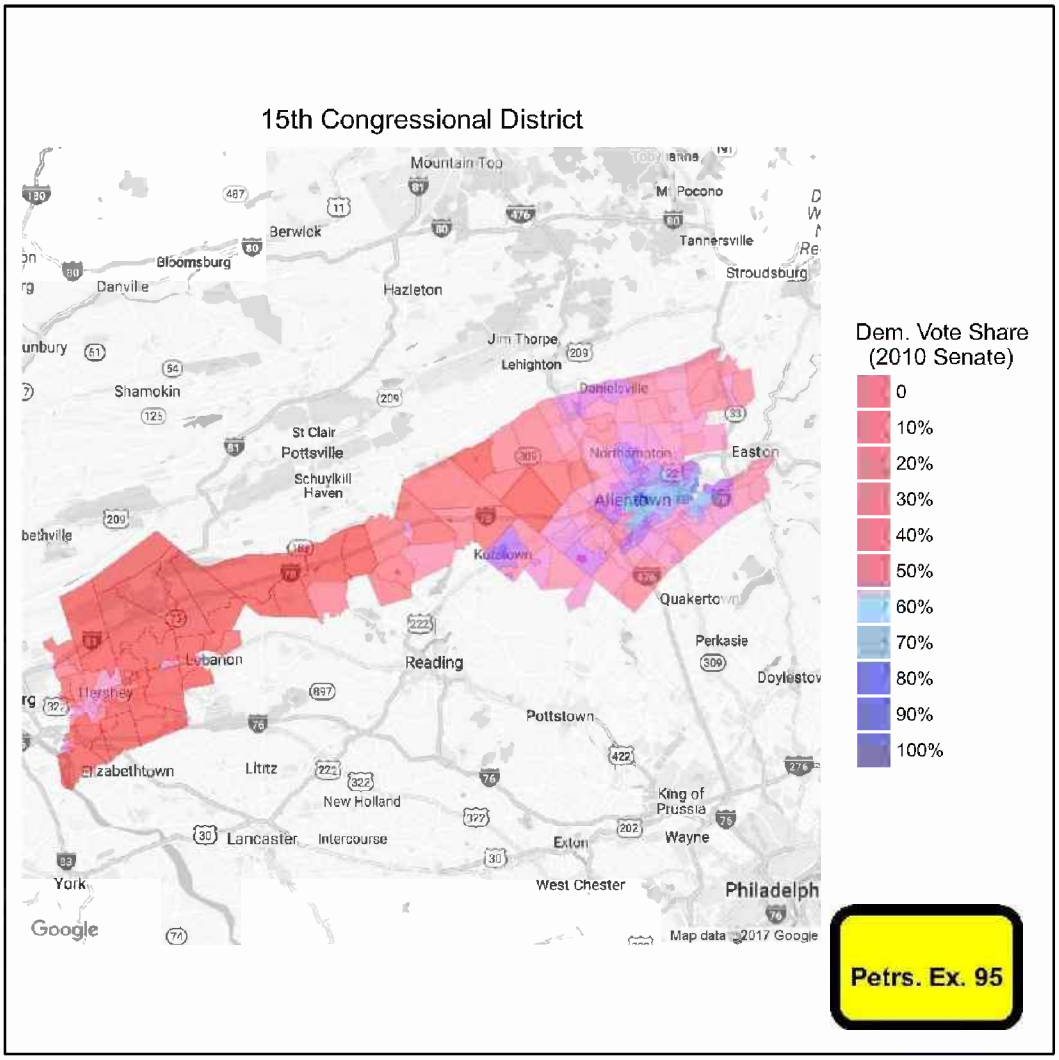
The 3rd District likewise divides communities to disadvantage Democratic voters. Erie County was undivided throughout Pennsylvania's modern history

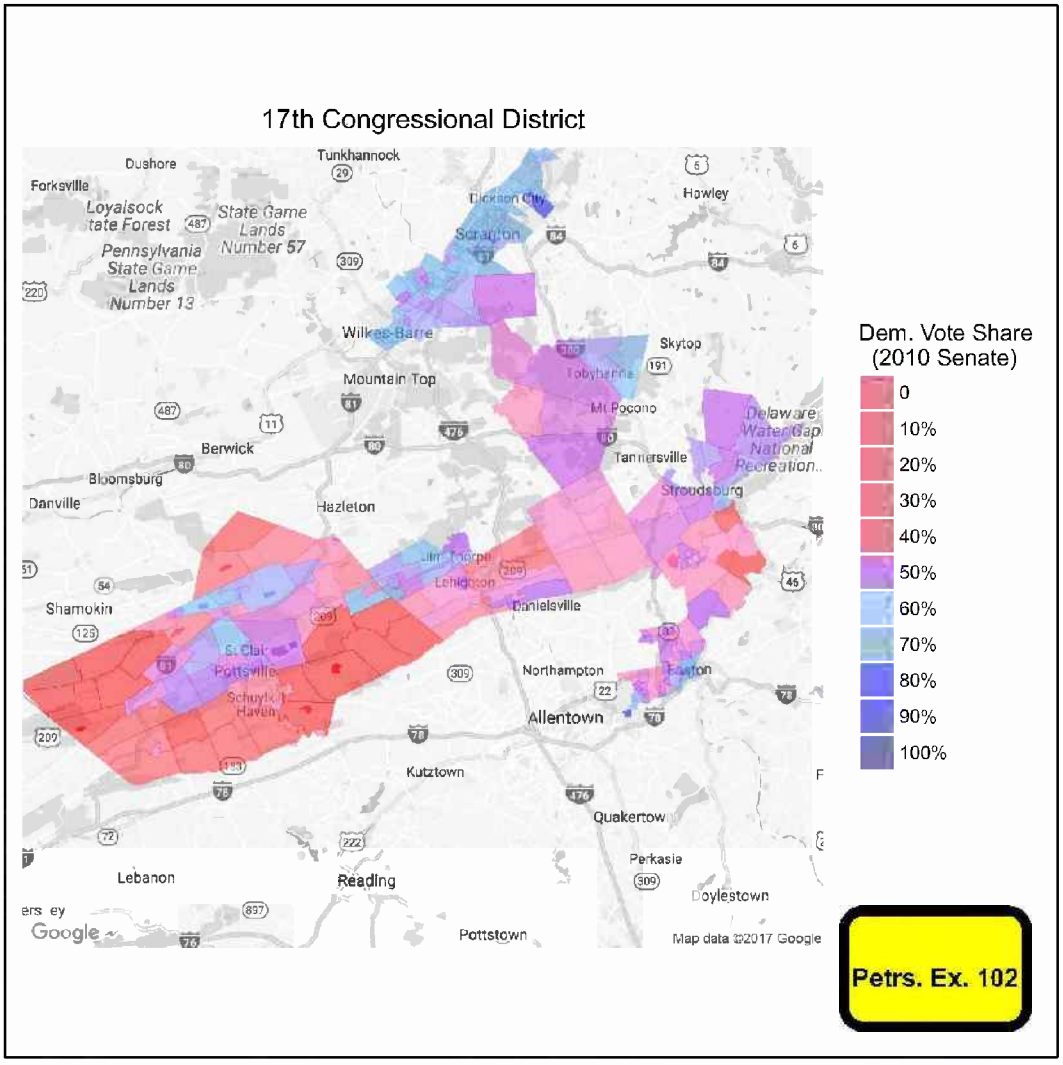
until the 2011 map split it, cracking its Democratic voters between the Republican 3rd and 5th Districts. FOF ¶320; PX53 at 23, 27; Tr.591:1-598:5.



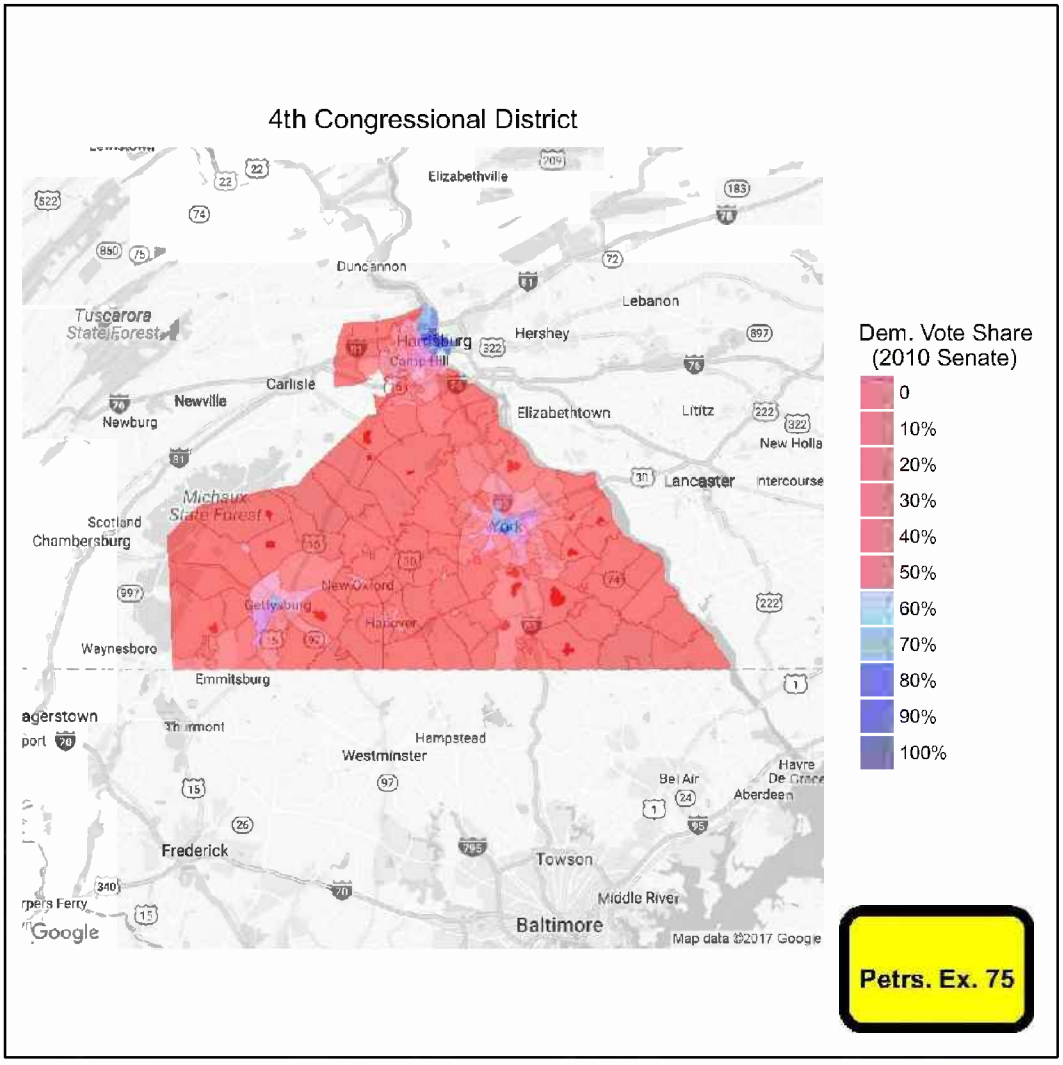
The 15th District historically was a Lehigh Valley-based district; from 1971 until 2011, Northampton and Lehigh Counties were substantially together and undivided. FOF ¶¶326-28; Tr.623:15-625:9; PX53 at 47-48, 54. But the 2011 map moves the mostly Democratic voters residing in Northampton County's seat (Easton) and largest city (Bethlehem) from the 15th District into the packed

Democratic 17th District. *Id.* The 2011 map thus carves up the distinctive community of the Lehigh Valley to dilute Democratic voters. *Id.*



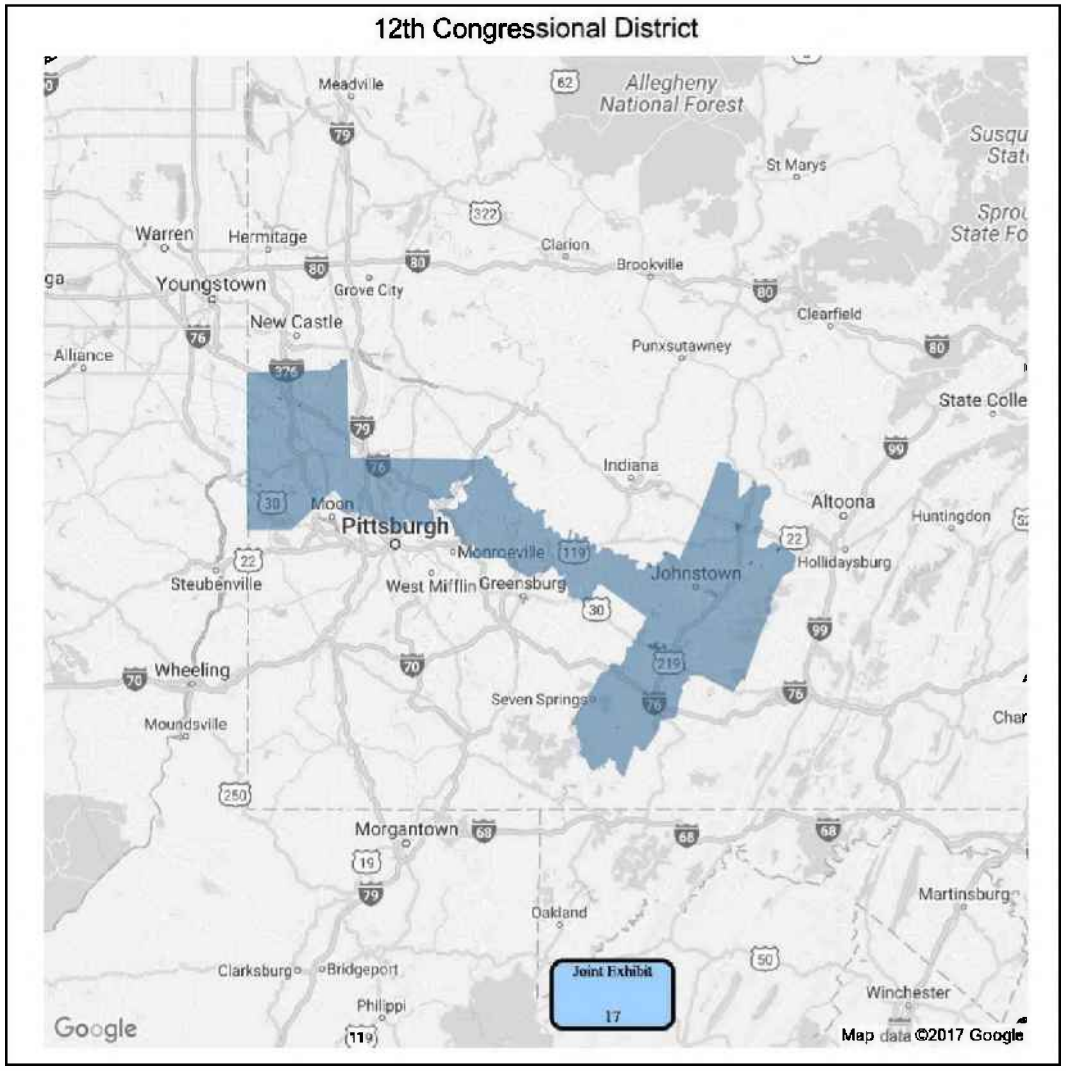


The 2011 map also splits Harrisburg, cracking its Democratic voters between the Republican 4th and 11th Districts. FOF ¶330; PX53 at 25; Tr.631:1-632:8.

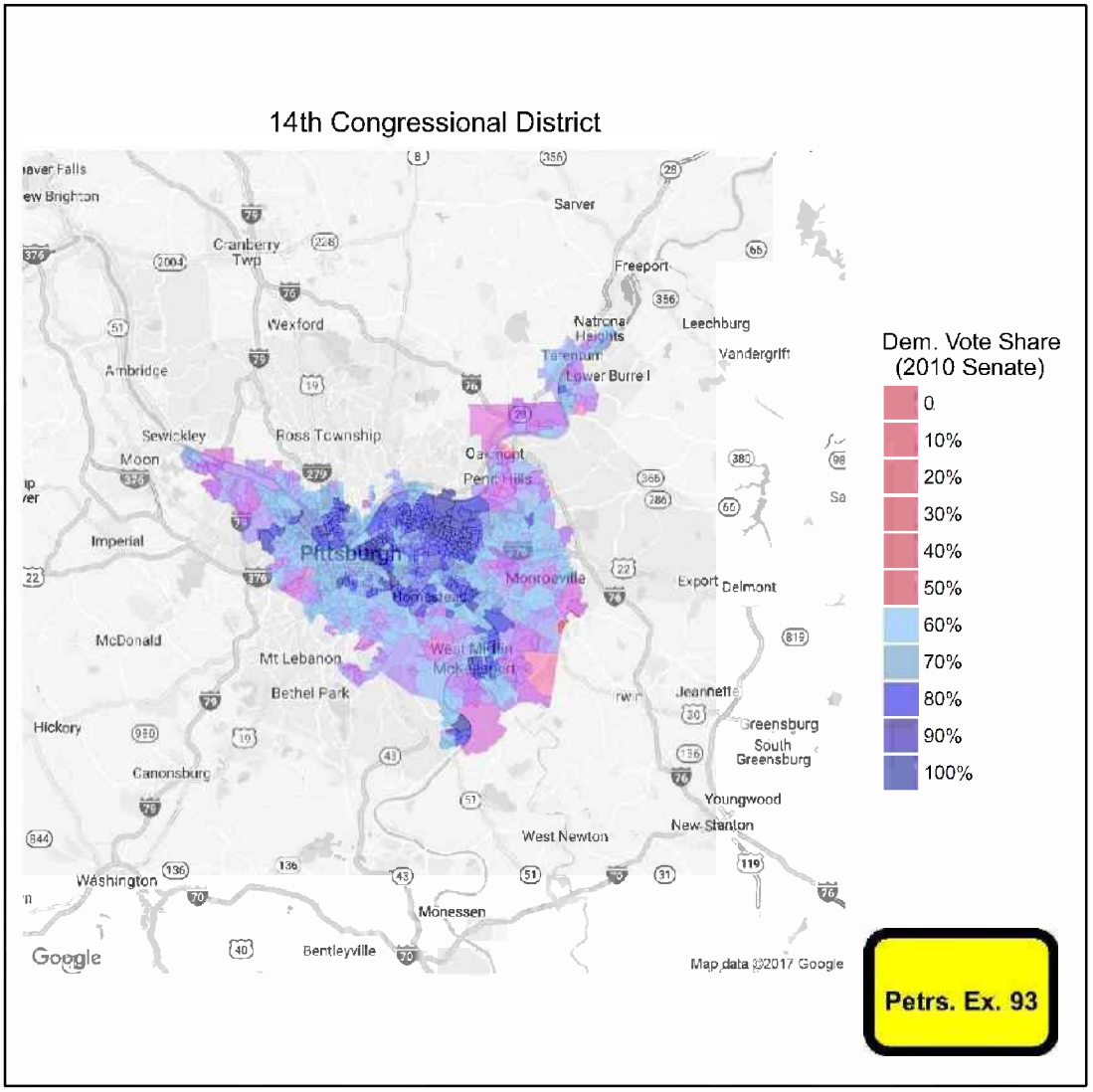


To create the current 12th District, the map merged the previous 4th and 12th districts, which had been represented by Democrats Jason Altmire and Mark Critz. FOF ¶333. To accomplish this pairing, the 12th District stretches over 120 miles from the Ohio and West Virginia border across Lawrence, Beaver, Allegheny, and Westmoreland Counties, before jetting outward in Cambria and Somerset Counties. FOF ¶142, 333; PX53 at 42. In this new district, Critz defeated Altmire in the 2012 Democratic primary, before losing to the Republican

candidate in the general election—a two-seat swing for Republicans. FOF ¶¶179-80; PX53 at 42.



Critz's loss was made more probable by the anomalous, tentacle-shaped gap in the 12th District that runs northeast of Pittsburgh along the Allegheny River. FOF ¶334; Tr.633:18-636:14; PX53 at 45. This tentacle encompasses Democratic river communities, moving them from the 12th District into the already heavily-Democratic 14th District. *Id.*



As Dr. Kennedy explained, the 2011 map splits 28 of Pennsylvania's 67 counties, and 68 municipalities. PX56; FOF ¶¶149-51. In contrast, the 1990s map split just 19 counties and 14 municipalities. *Id*. The 2011 map also splits an unprecedented 19 census blocks, more than triple the 2002 map and more than six times the 1990s map. FOF ¶¶150, 336; PX57; Tr.642:15-19.

The 2011 map splits some counties across so many different districts that there is no realistic prospect of effective representation. PX53 at 5-6, 16-19.

Montgomery County is splintered between five districts—and none of those five congressmen resides in Montgomery County. FOF ¶337; Tr.643:20-644:4; PX53 at 17. Berks and Westmoreland Counties are each split across four districts. *Id.*

Dr. Kennedy explained that partisan intent was the only explanation for the packing and cracking of Democratic voters. Tr.579:22-580:1, 591:12-20, 621:15-636:14; PX53 at 6, 23-29, 47-50, 54. Legislative Respondents offered no rebuttal, nor any non-partisan explanation for the many anomalies and community splits Dr. Kennedy identified.

C. The 2011 Map Produced a Durable 13-Seat Republican Majority

In each of the three congressional elections under the 2011 map, Republican candidates have won 13 of Pennsylvania's 18 congressional seats—the same 13 seats each time. FOF ¶¶185, 192, 198.

In 2012, Republicans won a minority of the total statewide vote (49%), but still won 13 of 18 seats (72%). FOF ¶¶183-85. The distribution of votes across districts reveals how this occurred. Democrats won lopsided victories in the five "packed" districts, with an average vote share of 76.4%. FOF ¶185. Republicans won their 13 "cracked" districts with a closer—but still comfortable—average vote share of 59.5%. *Id.*

To win a majority of the seats in 2012, Democrats would have needed to win a striking 58% of the statewide congressional vote. PX35 at 13; Tr.896:24-897:25;

PX-41. If Democrats had won 57% of the statewide vote, they would have won only six seats (33%). Tr.897:17-898:8.

In 2014 and 2016, Republicans won 55.5% and 54.1% of the statewide vote and won the same 13 seats (72%). FOF ¶¶188-89, 192-95, 198-201. That Republicans gained no additional seats in 2014 and 2016 compared to 2012, despite winning five to six percentage points more of the statewide vote, demonstrates the durability of the 13-5 Republican split. *Id.*

In 2014 and 2016, as in 2012, the margin of victory in Democratic districts was far larger than in Republican districts. The average vote shares for winning Democratic candidates in 2014 and 2016 were 73.6% and 75.2%, compared to 63.4% and 61.8% for winning Republican candidates. FOF ¶¶192, 198.

D. Mathematical and Statistical Measures Establish That the 2011 Map Discriminates Against Democratic Voters

Petitioners' other three experts presented multiple statistical measures and models that each independently support the conclusion that the 2011 map intentionally and effectively disadvantages Democratic voters.

1. Dr. Chen Established That Partisan Intent Predominated in Drawing the 2011 Map, Flipping Up to Five Seats

Petitioners' expert Dr. Jowei Chen analyzed the partisan intent and effects of the 2011 plan by using a computer algorithm to create simulated districting plans that adhere to traditional districting criteria. FOF ¶¶238-47; Tr.166:1-8. He

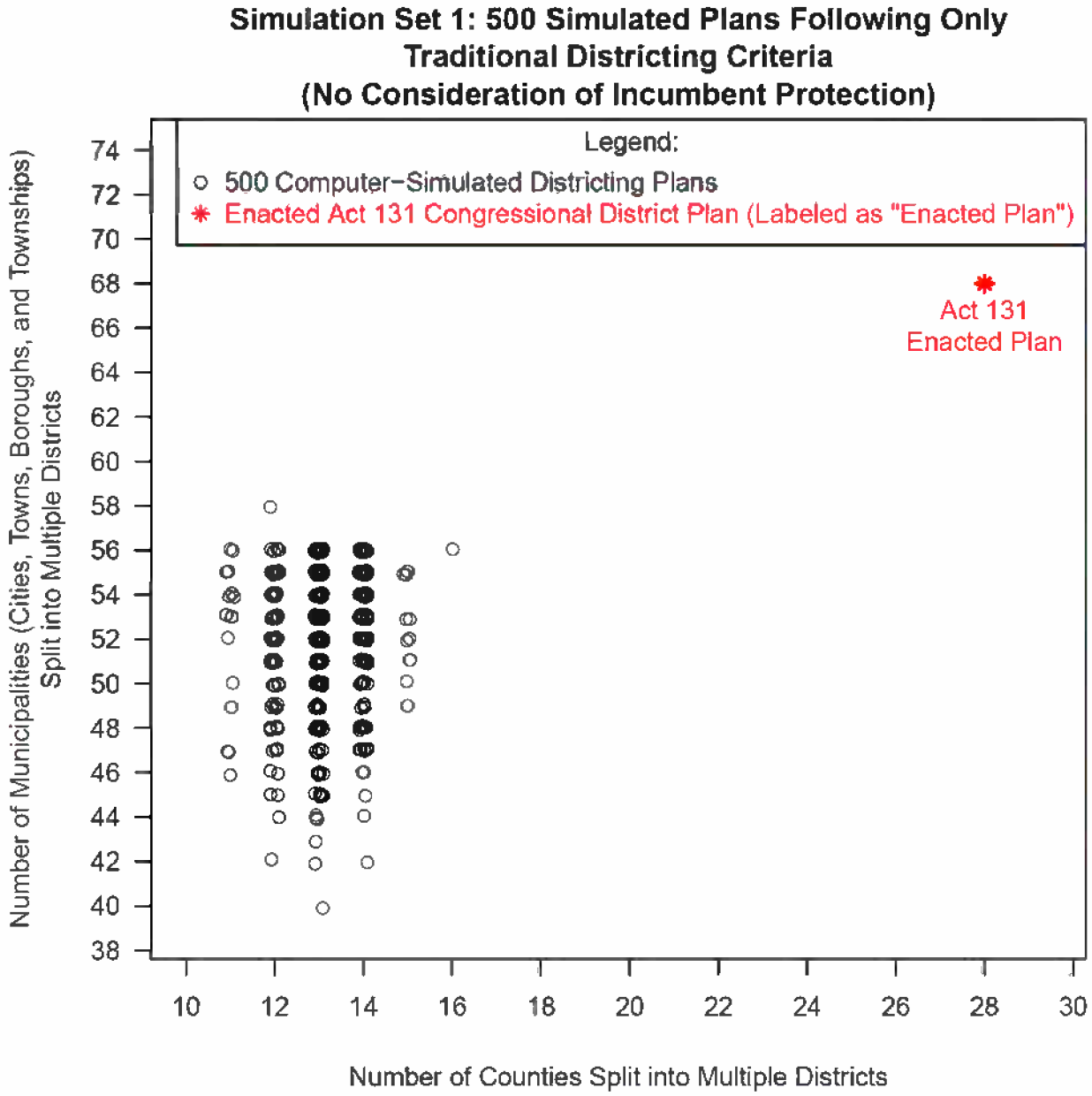
concluded with over 99.9% statistical certainty that the 2011 plan's 13-5 Republican advantage would never have emerged from a districting process that adhered to traditional principles. Tr.203:14-204:2. Dr. Chen thus concluded that extreme partisan intent predominated over, and subordinated, traditional districting principles in the 2011 plan. FOF ¶268. As a result, Republicans have won 4-5 more seats under the 2011 plan than they would have under a plan that followed only traditional principles. FOF ¶267; Tr.204:16-205:6.

The Commonwealth Court found that Dr. Chen's testimony was credible and "established that the General Assembly included factors other than nonpartisan traditional districting criteria in creating the 2011 plan in order to increase the number of Republican-leaning Congressional voting districts." FOF ¶¶308-09.[3]

Dr. Chen simulated 1,000 total plans. In Simulation Set 1, he randomly generated 500 plans that follow the traditional districting principles of equal population, contiguity, minimizing county splits, minimizing municipality splits, and compactness. FOF ¶¶243-52; Tr.166:25-168:23; PX1 at 7-8. While the enacted plan splits 28 counties, the 500 Set 1 plans split between 11 and 16 counties. FOF ¶255. The enacted plan's splitting of 28 counties could not have emerged from a districting process that prioritized traditional criteria. PX1 at 17.

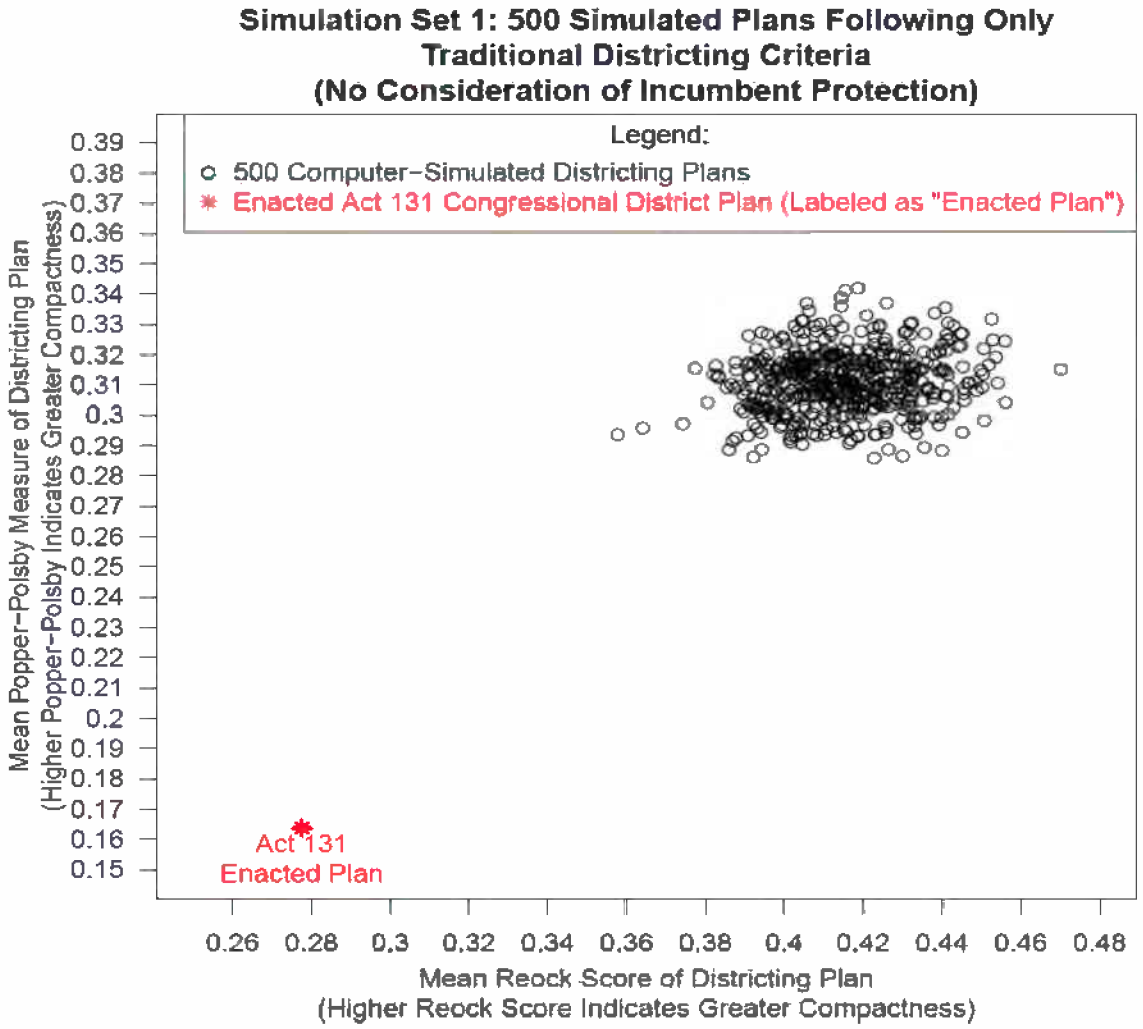
[3] Other courts likewise have accepted Dr. Chen's simulation methodology as reliable and persuasive. *Raleigh Wake Citizens Ass'n v. Wake Cty. Bd. of Elections*, 827 F.3d 333, 344-45 (4th Cir. 2016); *City of Greensboro v. Guilford Cty. Bd. of Elections*, 251 F. Supp. 3d 935, 943-48 (M.D.N.C. 2017).

Similarly, while the enacted plan splits 68 municipalities, the Set 1 plans split only 40 to 58 municipalities. FOF ¶256.



PX4.

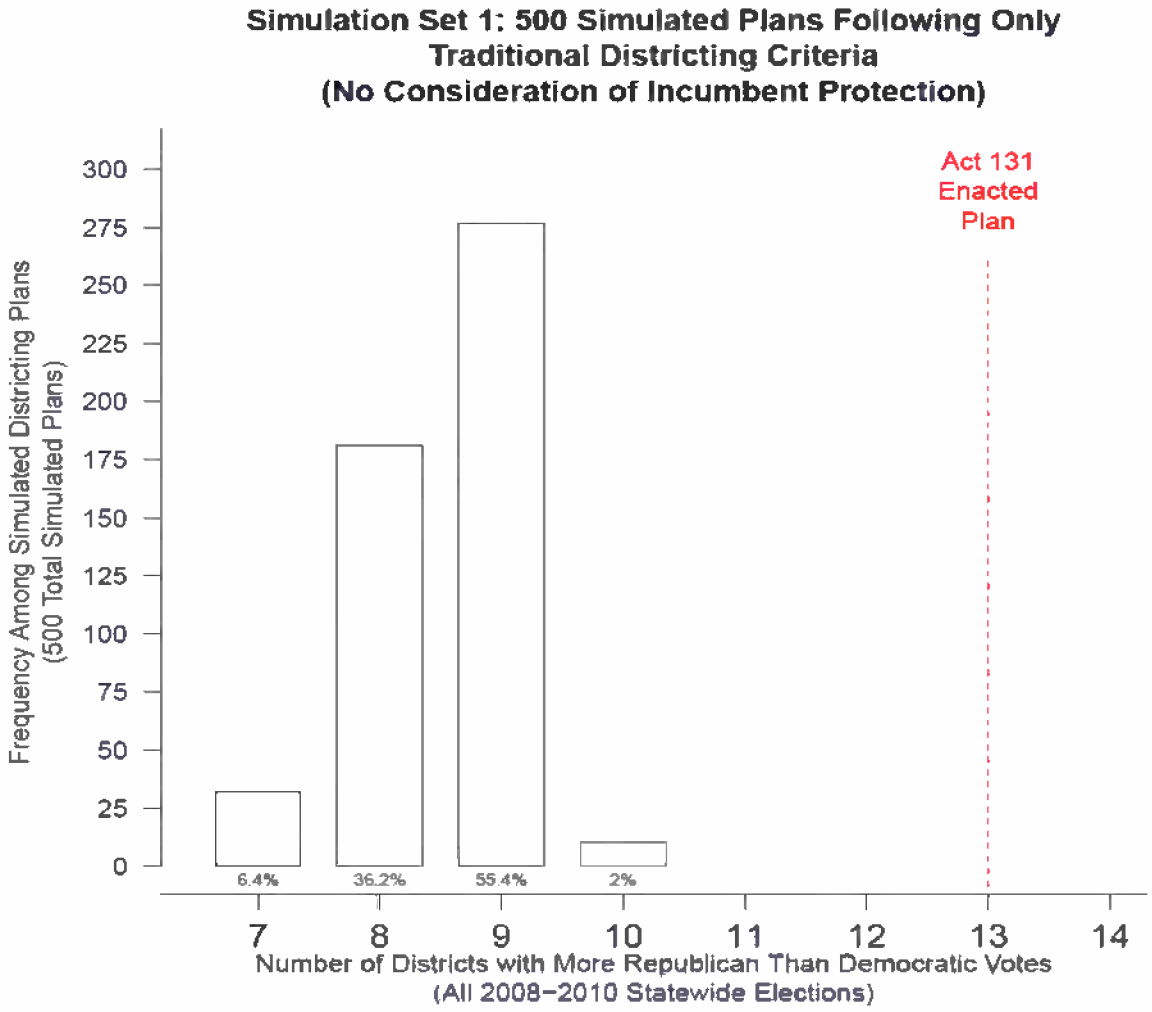
Using standard measures of compactness, the districts in all 500 Set 1 plans are far more compact than the enacted plan. FOF ¶¶253, 258.



PX5.

Based on a prediction methodology that the Commonwealth Court accepted as accurate and reliable, FOF ¶¶262-63, 409, Dr. Chen concluded that the Set 1 plans produced 7 to 10 Republican districts, FOF ¶264. A majority of those 500 plans produce nine Republican districts—an even 9-9 split. PX1 at 15-16; Tr.199:2-200:24. Most of the remaining plans produce eight Republican

districts—a 10-8 Democratic advantage. *Id.* None produces 13 Republican districts, or even 12 or 11. FOF ¶264.[4]



PX6.

[4] Dr. Chen estimated the partisan outcome of his simulated districts based on actual voting results in the set of precincts that comprise a simulated district. FOF ¶¶259-62; Tr.184:22-198:22. He used the results of the six statewide elections in Pennsylvania in 2008 and 2010. *Id.*

This analysis underpinned Dr. Chen's conclusion that partisan intent predominated in the creation of the 2011 plan, resulting in 4-5 additional Republican seats. Tr.204:16-205:6; FOF ¶267.

Dr. Chen also determined that the 2011 plan's partisan bias could not be explained by an effort to protect incumbents. In Simulation Set 2, Dr. Chen randomly generated 500 more plans following the same traditional districting criteria plus avoiding pairing 17 of the 19 incumbents at the time of the 2011 redistricting. FOF ¶¶244-46. Every Set 2 plan splits fewer counties and municipalities, and is more compact, than the enacted plan. FOF ¶¶286-89; Tr.215:7-220:2; PX1 at 24-26. Based on Dr. Chen's prediction methodology, the most common outcomes in Set 2 plans were 9 or 10 Republican districts. PX1 at 27-28; Tr.221:21-222:15. Not a single Set 2 plan produced 13 Republican districts. FOF ¶290.

Dr. Chen's testimony also established that the 2011 plan's pairing of Democrats Jason Altmire and Mark Critz in the same district was itself partisan. None of the 500 random, non-partisan plans in Set 2 pairs Altmire and Critz, because they lived nowhere near each other. FOF ¶¶296-97; PX1 at 30-31; Tr.225:19-227:14.

Nor can the 2011 plan's partisan bias be explained by Pennsylvania's political geography, meaning the geographic locations of Republican and

Democratic voters. Tr.251:16-256:24. Dr. Chen's simulations capture any Republican advantage attributable to clustering of Democratic voters in large cities. FOF ¶247; PX1 at 5-6; Tr.253:7-19. Employing a standard measure known as the "mean-median gap," Dr. Chen demonstrated that, while Republicans have a small natural advantage due to clustering of Democratic voters, geography cannot explain the 2011 plan's extreme Republican bias, FOF ¶¶269, 277; PX1 at 21-22, 29-30; Tr.256:25-264:17.

Dr. Chen also concluded that the 2011 plan's partisan bias directly prevented specific Petitioners from electing candidates of their choice. Four Petitioners (Lisa Isaacs, Thomas Ulrich, Beth Lawn, and Robert Smith) who currently reside in Republican districts would be in a Democratic district in a majority or even an overwhelming majority, of the 1,000 simulated non-partisan plans. Tr.268:21-280:19; PX18; PX1 at 35-38. Isaacs would be in a Democratic district in over 99% of all 1,000 simulated plans, and Ulrich would be in a Democratic district in over 99% of Set 1 plans and 90% of Set 2 plans. *Id.*

Dr. Chen's testimony separately established that Democratic voters in Pennsylvania are an identifiable group. He analyzed Pennsylvania elections results over the last 10 years and found a nearly perfect correlation (90-95%) in the level of support for Democratic candidates across elections. Tr.310:10-311:12. Given this correlation, it is "very easy" to identify particular geographic units, all the way

down to the precinct level, that are likely to vote for Democratic candidates in future elections. Tr.315:6-317:15.

2. Dr. Pegden Established That the Map Was Carefully Crafted to Ensure a Republican Advantage

Dr. Wesley Pegden, a mathematician at Carnegie Mellon University, testified as an expert in mathematical probability. FOF ¶¶342-43. Using an algorithm that generates hundreds of billions of maps, Dr. Pegden demonstrated to a mathematical certainty that the 2011 map was created with partisan intent. PX117 at 1-2; Tr.1384:22-1385:4, 1385:23-1386:12. He showed that the map is so carefully engineered to advantage Republicans that making miniscule random changes to the district boundaries immediately causes the map's partisan bias to evaporate. FOF ¶¶358-59. The Commonwealth Court found Dr. Pegden's testimony credible. FOF ¶360.

Dr. Pegden's algorithm takes the enacted map as a starting point and makes tiny random changes to the district boundaries. FOF ¶¶347, 350; Tr.725:10-738:18, 762:1-762:23; PX117 at 4. The intuition—and mathematics—behind this methodology is that, if the 2011 map was *not* intentionally drawn to maximize a Republican advantage, then making small random changes would not significantly decrease the map's Republican bias. FOF ¶¶345, 354-56. Dr. Pegden ran his algorithm eight times, each with a different set of constraints. In all runs, he required each map produced by the algorithm to have contiguous districts that are

roughly equal in population and at least as compact as the 2011 map. Tr.726:5-728:14, 742:15-745:19; PX117 at 3-4, 9-10. In some runs, he avoided splitting counties not split under the 2011 map, or kept the 2nd District intact. *Id.*

In all eight runs, the 2011 map's Republican bias evaporated when these tiny random changes were made. FOF ¶¶354-56. After running for just *one second*, the algorithm never again encountered a districting map as favorable for Republicans as the 2011 map. Tr.765:12-17, 1377:24-1378:18. In the fourth run, every map encountered in the trillion steps of the algorithm exhibited less partisan bias than the 2011 map. Tr.752:14-753:23. In the sixth run, only 97 out of 100 billion maps were as biased as the 2011 map—and again, none after the very first second of running the algorithm. Tr.746:23-747:20; PX117 at 8.

Applying a mathematical theorem that he developed and published in a peer-reviewed journal before this case, Dr. Pegden calculated the probability that a map randomly chosen from the entire universe of possible maps meeting the constraints for a particular run (referred to as the "bag of districtings") would be as biased as the 2011 map. Tr.747:23-752:12, 1306:19-25. Dr. Pegden reported this probability as a "p value." In the sixth run, for example, the p-value was 0.000045, meaning there is only a 0.0045% probability that a randomly selected districting would exhibit partisan bias as extreme as the 2011 map's. PX122; Tr.748:10-752:21. In other words, there is an over 99.995% probability that the 2011 map's

partisan bias would not have occurred at random. *Id.* For comparison, the FDA can approve a new drug at a p-value of 0.05 (95%). Tr.1307:7-13.

Based on Dr. Pegden's methodology, it is mathematically impossible that political geography or traditional districting criteria could explain the 2011 map's extreme partisan bias. FOF ¶¶356-58; Tr.755:19-763:8; PX117 at 2, 5. The only conceivable explanation is that the map was intentionally drawn to maximize partisan advantage. FOF ¶359; Tr.1384:22-1386:12.

3. Dr. Warshaw Established That the 2011 Map's Pro-Republican Advantage Is Historically Extreme

Dr. Christopher Warshaw testified as an expert in political representation, public opinion, elections, and polarization. FOF ¶364. Dr. Warshaw demonstrated that, under a measure known as the "Efficiency Gap," the three congressional elections held under the 2011 map have shown historically extreme levels of pro-Republican bias. PX35 at 5-15. The Commonwealth Court found him credible. FOF ¶389.

The Efficiency Gap compares each party's "wasted votes," defined as all votes cast for the party in districts the party loses (*e.g.*, cracked districts), and all excess votes above those needed to win in districts the party wins (*e.g.*, packed districts). FOF ¶369; PX35 at 4-6; Tr.841:2-10. This measure captures in a single number the way partisan gerrymanders operate: wasting one party's votes through cracking and packing, enabling the advantaged party to translate its votes into seats

as efficiently as possible. Tr.839:6-841:24, 852:15-853:6; PX35 at 4-6. Because the Efficiency Gap is calculated as a percentage of total votes cast, it is comparable across both time and states. Tr.842:15-853:20.

Dr. Warshaw explained that Pennsylvania's pro-Republican Efficiency Gaps under the 2011 map—24% in 2012, 15% in 2014, and 19% in 2016—were historical outliers. Tr.871:3-25. Before the 2011 map, Pennsylvania never once had an Efficiency Gap of 15% or greater, and only one time had an Efficiency Gap of even 10%. Tr.872:1-10. In the 2012 congressional elections alone, Democrats wasted well over a million more votes than Republicans. PX35 at 12.

The 2011 map's partisan bias is also extreme relative to the country as a whole. Tr.865:2-866:10; PX35 at 7-8; PX37. Pennsylvania's 24% Efficiency Gap in 2012 was the largest in the country that year in states with more than 6 seats, and *the second largest in modern history*. Tr.874:11-16, 876:2-8; PX42; FOF ¶380. Pennsylvania's average Efficiency Gap across the three elections—19%—was second only to North Carolina, by 1%. Tr.876:17-877:16.

As this chart below shows, Pennsylvania's Efficiency Gap (1) has not always favored Republicans; (2) has often been close to 0%, meaning it favored neither party; (3) has not always been an outlier compared to other states; and (4) grew dramatically from the 2010 election to 2012, *i.e.*, the first election under the 2011 map. PX42; PX35 at 14-15; Tr.865-880, 884-886. All of this undercuts

any notion that something unique about Pennsylvania's political geography results in the current extreme pro-Republican Efficiency Gap. Tr.878:10-880:10.

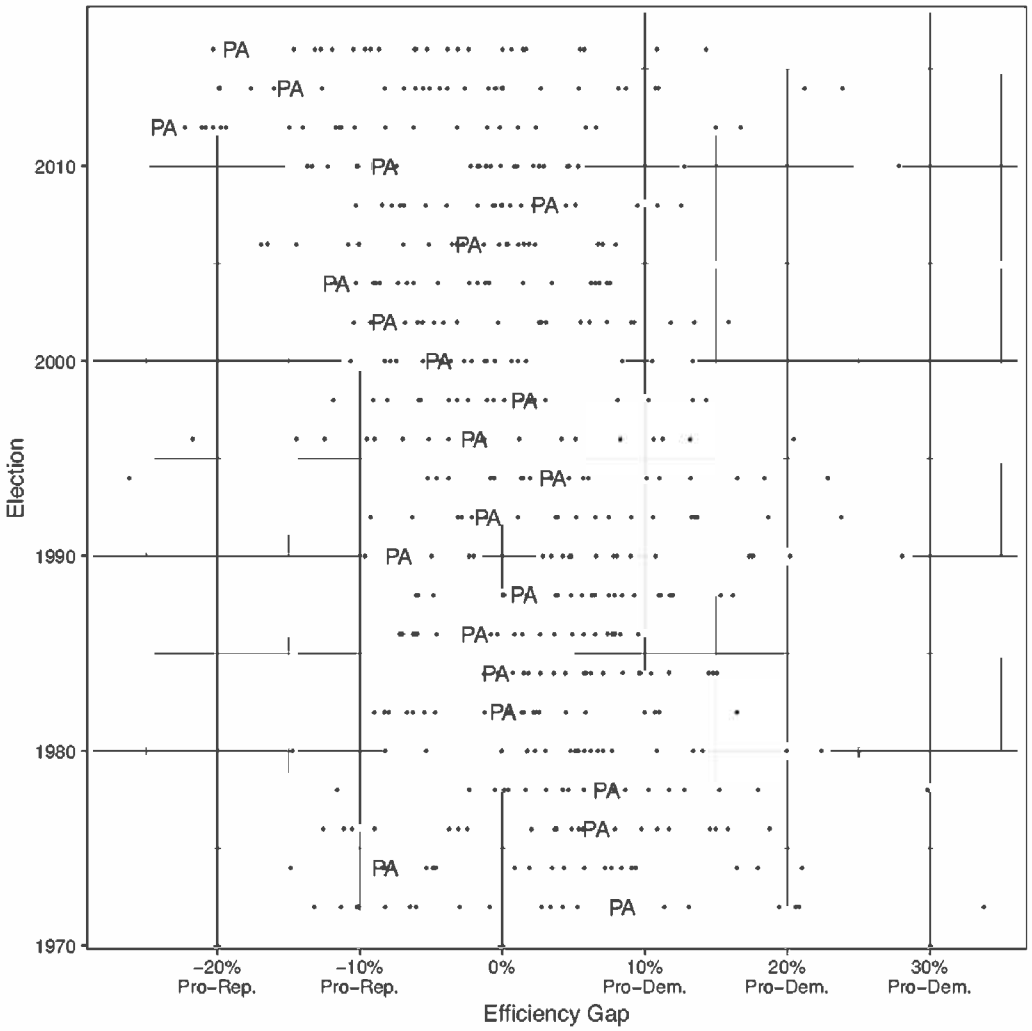


Figure 5: Efficiency Gap in Pennsylvania Relative to Other States. The dots represent the Efficiency Gaps in individual states. The Efficiency Gaps in Pennsylvania are labelled to distinguish them from other states.

PX42.

Dr. Warshaw also estimated that Pennsylvania's pro-Republican Efficiency Gaps in 2012, 2014, and 2016 gave Republicans an average of 3-4 additional seats per election. Tr.873:9-22.

Dr. Warshaw further demonstrated the 2011 map's pro-Republican partisan bias is durable and unlikely to be remedied through the normal electoral process. Tr.836:18-21, 987:11-20. He found statistically that Efficiency Gaps in 2012 "are extremely predictive" of Efficiency Gaps in 2016, nationally and in Pennsylvania. Tr.889:14-891:4; PX39; PX35 at 11.

4. The Commonwealth Court Found That Legislative Respondents' Experts Were "Not Credible"

Legislative Respondents offered no affirmative defense of the 2011 map. They presented two experts, Dr. Wendy Cho and Dr. Nolan McCarty, solely to criticize Petitioners' experts. Neither offered any "opinion on whether or not Pennsylvania's map is a gerrymandered map." Tr.1417:17-21 (Dr. McCarty); *see* Tr.1324:7-1328:3 (Dr. Cho).

The Commonwealth Court found that Dr. Cho's and Dr. McCarty's testimony was "not credible," and did not "lessen the weight" given to Petitioners' experts. FOF ¶¶398-400, 409-412, 415. Among many shortcomings, Dr. Cho failed to review Dr. Chen's and Dr. Pegden's code and algorithms, leading her to give "inaccurate" testimony. FOF ¶¶395-97; Tr.1224:8-1225:20, 1295:18-1296:19. And Dr. McCarty employed a convoluted methodology that was wrong 97% of the time in predicting the number of seats Republicans would win under the 2011 map. Tr.1421:6-1431:3, 1451:18-1452:1, 1517:3-11, 1677:15-1681:4; LRX17 at 11.

E. The 2011 Map Harms Petitioners and Other Democratic Voters

1. The Petitioners

Petitioners are 18 Pennsylvania voters, one from each congressional district. All are registered Democrats who consistently vote for Democratic congressional candidates. FOF ¶¶1-18, 23-24.

Thirteen Petitioners live in cracked districts and have been artificially deprived of the chance to elect Democratic candidates. For example, Beth Lawn lives in "Goofy's finger" in the 7th District. Tr.134:24, 138:1. Under the prior map, Ms. Lawn was in the 1st district, where she could elect a Democrat. Tr.138:20-24, 139:6-12. Now she is in a safe Republican district where "the Democratic candidate doesn't really have a chance." Tr.140:8-18, 148:8-18. Election outcomes are likewise a "fait accompli" in Lisa Isaacs' 8th District. PX170 at 29:6-7. In the 6th District, the 2011 map "has unfairly eliminated [Tom Rentschler's] chance of getting to vote and actually elect a Democratic candidate just by the shape and design of the district." Tr.673:25-674:9. Other petitioners in cracked districts gave similar testimony. PX163-77.

Some districts are so reliably Republican that no Democrat bothers running. The 2011 map led to uncontested elections in the 3rd, 15th, and 18th Districts, denying Petitioners Petrosky, Ulrich, and Greiner an opportunity even to cast a ballot for the candidate of their choice. FOF ¶¶191, 197, 233; PX171 at 41:22-

43:6, 84:1-10; PX168 at 17:5-10, 21:25-23:11. Ulrich explained: "I still could vote, but there was nobody there to vote for." PX177 at 49:15-50:1.

Even where Democrats field candidates, the gerrymander can reduce their quality. Democratic State Representative Greg Vitali contemplated running in the 7th District in 2012, but decided against it after he "saw the lines and analyzed the data and [saw] that it was no longer a competitive seat." PX179 at 34:23-35:9. And in the 5th District, Petitioner Gretchen Brandt explained, "the Democratic Party produc[es] unqualified candidates because the Democratic Party knows that a Democrat will not win." PX165 at 14:19-21, 34:22-35:25.

Some Petitioners lack a congressperson focused on their community. John Greiner (3rd) testified that, with the 2011 map's unprecedented split of Erie County, no congressperson needs "to pay close attention to the constituents in Northwestern Pennsylvania." PX168 at 14:12-13, 17:22-19:10. The map splits Tom Rentschler (6th) from Reading, which is two miles from his house and the seat of Berks County, instead joining him with communities in eastern Lebanon County with which he has no connection. Tr.681:9-682:4; *see, e.g.*, PX167 at 36:5-36:9, 40:5-16 (Comas).

Other representatives are nonresponsive, don't hold town meetings, and don't respond to phone calls because they hold safe Republican seats. Tr.116:15-117:11 (Marx). As Don Lancaster put it: Congressman Shuster "doesn't have to

listen. He doesn't have to respond." PX164 at 33:13-15; *see, e.g.*, PX176 at 23:22-24:5 (Smith); Tr.145:22-146:2 (Lawn).

Although the five Petitioners in packed Democratic districts have Democratic representatives, the 2011 map dilutes their vote. The 2011 map has "taken away any chance of having a Democratic majority Congressional delegation." Tr.113:16-22. The "overabundance of Republican[s] elected … drowns out the Democratic message," PX173 at 7:5-20, 66:8-67:3 (McNulty); *see, e.g.*, PX172 at 33:19-34:8 (Lichty); PX163 at 9:7-8, 34:6-36:13, 41:14-19 (Febo San Miguel); PX169 at 7:2-22, 21:2-22:11 (Solomon); PX174 at 7:6-18, 13:7-13:10, 18:19-18:20 (Mantell).

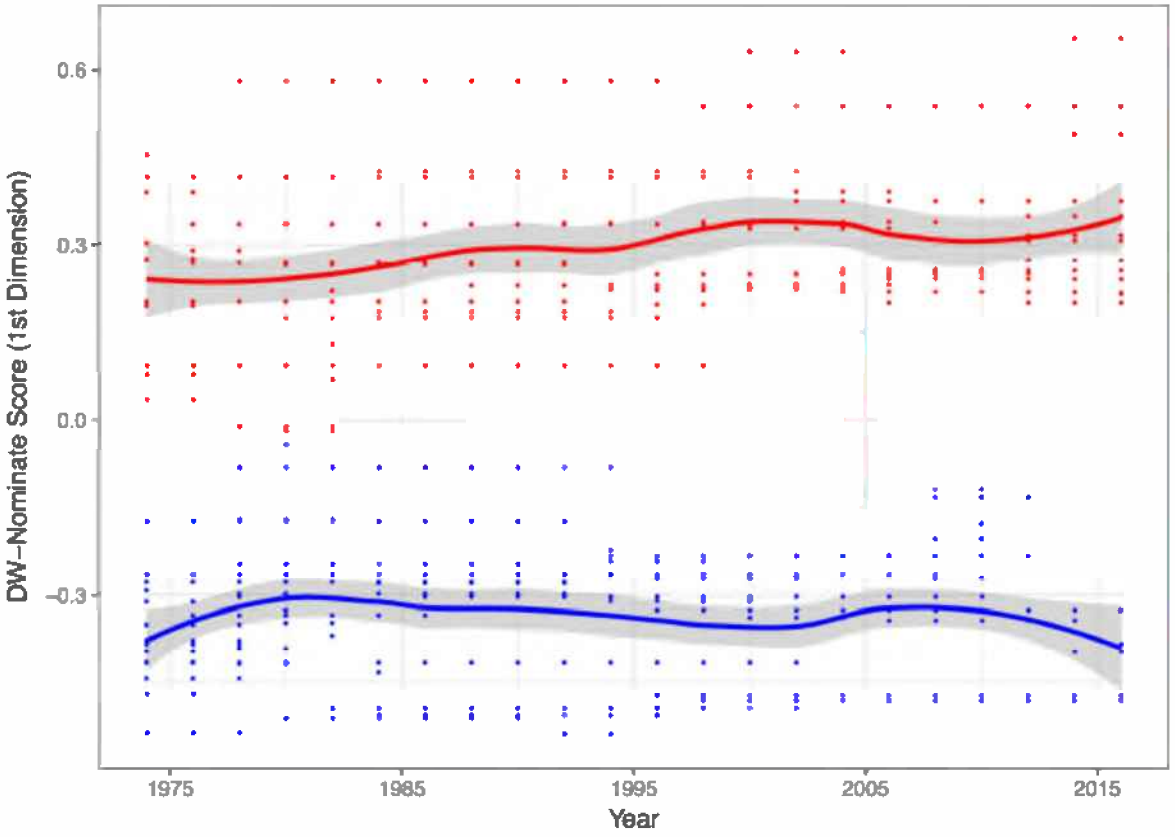
2. Statistical Evidence Shows that the Map Denies Democratic Voters an Effective Voice in the Political Process

Dr. Warshaw described how the extreme polarization in Congress magnifies the representational consequences of Pennsylvania's partisan gerrymander. Tr.899:23-946:23. Democratic voters who are artificially prevented from electing a Democratic representative effectively have no voice in Congress; as a statistical matter, a Republican representative will virtually never represent the views of a Pennsylvania Democrat. Tr.837:21-838:1, 933:18-936:10, 942:20-948:3.

Dr. Warshaw demonstrated through unrebutted statistical proof how polarization in Congress has increased dramatically over the past 50 years. PX43; Tr.900:9-903:20. He further demonstrated, without rebuttal, that every single

Republican congressperson is now substantially more conservative than the most conservative Democrat, and vice versa. Tr.904:9-912:19; PX44. Thus, if a particular district elects a Republican, there is a 100% chance that the Republican will vote much more conservatively than the Democrat who would have represented the same district. Tr.911:14-20. That was not true in the early 2000s, where there was still some overlap nationally between the parties. Tr.913:1-14; PX44. The representational consequences of partisan gerrymandering are far greater than ever before.

The national trend of extreme polarization holds true in Pennsylvania. Today, there is no ideological overlap among Pennsylvania's Democratic and Republican representatives. Tr.922:1-925:4. The gap between them is wider than ever before, as depicted in Dr. Warshaw's graph representing the voting activity of Pennsylvania's congressional delegation over time (each dot is a Pennsylvania representative; higher scores reflect more conservative voting activity):



PX46.

Dr. Warshaw demonstrated that consensus among Pennsylvania's representatives has also reached historic lows. PX35 at 20. In the past, Pennsylvania's congressional delegation voted together as often as 40% of the time, but today they vote together less than 10% of the time. Tr.927:7-928:11. Pennsylvania's representatives no longer vote together on issues specific to the needs of the Commonwealth. Instead, they vote with the majority of their respective parties almost all the time, in 93% of roll call votes. Tr.930:5-932:24; PX48. That is so regardless of whether the representative's district is more or less

competitive. Tr.917:2-921:3. In 2012, Congressman Rothfus won the only competitive congressional election in three cycles under the 2011 map, but he still votes with the Republican party 96% of the time. Tr.934:12-935:9; PX41; PX48.

Dr. Warshaw's conclusion that polarization magnifies the representational consequences of gerrymandering holds true for the most important issues of the day. Democratic voters in gerrymandered Republican districts do not see their preferences translated into action in Congress on major bills. PX35 at 24. For example, in states like Pennsylvania with congressional maps gerrymandered to favor Republicans, as measured by the Efficiency Gap, Republican voters are much more likely than Democratic voters to agree with their representatives' votes on Affordable Care Act repeal. Tr.945:18-24; PX50.

Multiple petitioners testified that they suffer exactly the representational consequences that Dr. Warshaw demonstrated statistically. Tr.113:23-114:2; Tr.675:22-676:14; PX166; PX168; PX170-71; PX175-76. It was "hard for" Gretchen Brandt "to think of an issue where … [her congressman] voted … the way I would have wanted him to vote." PX165 at 40:18-21.

3. Partisan Gerrymandering Undermines Trust in Government

Dr. Warshaw offered unrebutted testimony that partisan gerrymandering undermines citizens' faith in democracy and government. Tr.838:17-21, 953:9-19. He found a strong statistical relationship between partisan bias in a state's

congressional delegation, as measured by the Efficiency Gap, and citizens' trust in government. Tr.949:5-952:23; PX35 at 26. The same was true in Pennsylvania: Democratic voters were much less likely to trust their representatives than Republican voters. PX35 at 27.

Petitioners' testimony bore this out. Bill Marx, a former Army helicopter pilot turned high school civics teacher, explained that when he discusses the 2011 map with his students, "you just see these 18-year-olds, before I send them out to the world, before they even have experience—they just ask me questions, like, Well, then, why should we vote? Why does this matter? I'm not going to make a difference. Why should I care?" Tr.124:15-125:3. "This is causing people to distrust our Government, … [a]nd it's wrong and it needs to change." Tr.126:1-9.

F. Procedural History

Petitioners filed this lawsuit on June 15, 2017, challenging the 2011 map exclusively under the Pennsylvania Constitution. On November 9, 2017, this Court exercised plenary jurisdiction and ordered the Commonwealth Court to conduct a trial and issue findings of fact and conclusions of law.

On November 13, the Commonwealth Court dismissed the League of Women Voters of Pennsylvania as a Petitioner for lack of standing.[5] On

[5] This was error and this Court should reinstate the League. The League has associational standing because its members are Pennsylvania voters, "particularly in lawsuits brought to challenge state laws affecting voters." *Applewhite v.*

November 22, the court granted motions by Speaker Turzai, Senator Scarnati, and the General Assembly ("Legislative Respondents") to quash Petitioners' discovery requests. The court concluded that Pennsylvania's Speech and Debate Clause provides "absolute legislative immunity" from discovery into the creation of the 2011 map—including Legislative Respondents' communications with third parties like the Republican National Committee, and even communications *between* third parties that could bear on Legislative Respondents' "intentions, motivations, or activities." 11/22/17 Order at 6, 11-12.

The court held a trial from December 11-15, 2017, and issued Recommended Findings of Fact and Conclusions of Law on December 29.

SUMMARY OF ARGUMENT

The 2011 map violates Pennsylvania's Free Expression and Free Association Clauses. Those clauses provide greater protection for speech and associational rights than the First Amendment. Under the Pennsylvania Constitution, voting for the candidate of one's choice is core protected political expression. Placing Democratic voters in particular districts to minimize the effectiveness of their votes burdens their expressive conduct, and it does so on the basis of the voters' political views. This viewpoint discrimination triggers strict scrutiny, which the 2011 map

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Commonwealth, 2014 WL 184988, at *7 (Pa. Commw. Ct. Jan. 17, 2014). While the Commonwealth Court cited this Court's dismissal of the Democratic Committee as a petitioner in *Erfer*, the Democratic Committee was not asserting associational standing. 794 A.2d at 330.

cannot satisfy. This Court should expressly hold that the map runs afoul of Pennsylvania law irrespective of federal law.

The map also impermissibly retaliates against protected political expression and association. The mapmakers used past voting histories to subject Democratic voters to disfavored treatment, causing them serious harm that would not have occurred absent this partisan intent. For example, at least four Petitioners would be in a Democratic rather than a Republican district but for the intentional discrimination.

The map independently violates Pennsylvania's equal protection guarantees. As the Commonwealth Court found, Petitioners "established intentional discrimination." This discrimination targeted an identifiable political group, namely Democratic voters. And the partisan gerrymander caused an actual discriminatory effect by costing Democratic voters three to five seats that they otherwise would have won. This Court should jettison any additional requirement to show that Democratic voters have been essentially shut of out the political process. In any event, they have been. Due to the unprecedented polarization in Congress today, Democratic voters artificially deprived of the ability to elect a Democratic representative receive essentially no representation at all.

ARGUMENT

I. The 2011 Map Violates the Pennsylvania Constitution's Free Expression and Free Association Clauses, Irrespective of Federal Law

The Pennsylvania Constitution guarantees the rights of free expression and free association. Article I, Section 7 provides in relevant part: "free communication of thoughts and opinions is one of the invaluable rights of man, and every citizen may freely speak, write and print on any subject, being responsible for the abuse of that liberty." Pa. Const. Art. I, § 7. Article I, Section 20 provides: "citizens have a right in a peaceable manner to assemble together for their common good." Pa. Const. Art. I, § 20. The 2011 map impermissibly discriminates and retaliates against Democratic voters on the basis of their political views and their past votes, in violation of both provisions.

A. Pennsylvania's Constitution Provides Greater Protection for Speech and Associational Rights Than the First Amendment

The rights of free expression and free association were a vital part of Pennsylvania's political identity long before the enactment of the federal Bill of Rights in 1791. In 1682, William Penn drafted his "Frame of Government," a social contract granting eligible residents the right to vote and liberty of conscience. Frederick D. Rapone, Jr., *Article I, Section 7 of the Pennsylvania Constitution and the Public Expression of Unpopular Ideas*, 74 Temp. L. Rev. 655, 659-60 (2001). Freedom of expression became etched into the fabric of the Commonwealth. In 1737, a 31-year old Benjamin Franklin wrote in the

Pennsylvania Gazette that "[f]reedom of speech is a principal pillar of a free government; when this support is taken away, the constitution of a free society is dissolved, and tyranny is erected on its ruins." Benjamin Franklin, *On Freedom of Speech and the Press*, *reprinted in* The Works of Benjamin Franklin 285 (1840).

Pennsylvania's Constitution, enacted in 1776, was the first to explicitly protect rights "to freedom of speech" and "to assemble together." Seth F. Kreimer, *The Pennsylvania Constitution's Protection of Free Expression*, 5 U. Pa. J. Const. L. 12, 15 & n.7 (2002). Pennsylvania's Constitutional Convention of 1790 consolidated the free expression provisions into "the lineal ancestors" of their current form. *Id.* at 17-18.

This Court has recognized that "freedom of expression has special meaning in Pennsylvania given the unique history of [the] Commonwealth." *Pap's II*, 812 A.2d at 604. "The protections afforded by Article I, § 7 … are distinct and firmly rooted in Pennsylvania history and experience. The provision is an ancestor, not a stepchild, of the First Amendment." *Id.* at 605. Indeed, "the Pennsylvania Declaration of Rights was the 'direct precursor' of the freedom of speech and press" in the federal Bill of Rights. *Commonwealth v. Edmunds*, 586 A.2d 887, 896 (Pa. 1991).

Accordingly, Pennsylvania courts have been called upon to interpret the Pennsylvania Constitution's Free Expression Clause since "long before … the First

Amendment [applied] against the states." *Pap's II*, 812 A.2d at 605-06. As a result, Pennsylvania courts have forged an "independent constitutional path" in analyzing freedom-of-expression issues. *Id.* at 606.

Key here, Pennsylvania courts have established that the Pennsylvania Constitution provides "greater protection of speech and associational rights than does its federal counterpart." *Working Families Party v. Commonwealth*, 169 A.3d 1247, 1262 (Pa. Commw. Ct. 2017). This Court repeatedly has emphasized that "Article I, Section 7 provides broader protections of expression than the related First Amendment." *DePaul v. Commonwealth*, 969 A.2d 536, 546 (Pa. 2009); *accord Pap's II*, 812 A.2d at 605. Applying these broader Pennsylvania protections, this Court has invalidated speech restrictions under Article I, § 7, irrespective of whether a restriction also violated the First Amendment. *E.g.*, *Ins. Adjustment Bureau v. Ins. Comm'r for Commonwealth of Pa.*, 542 A.2d 1317, 1324 (Pa. 1988); *Commonwealth v. Tate*, 432 A.2d 1382, 1387-90 (Pa. 1981); *Goldman Theatres v. Dana*, 173 A.2d 59, 61 (Pa. 1961).

In *Pap's II*, this Court invalidated a law under Pennsylvania's Free Expression Clause even where the law did not violate the First Amendment. The U.S. Supreme Court had held that a public indecency ordinance survived the intermediate-scrutiny test applicable under the First Amendment. *City of Erie v. Pap's A.M.*, 529 U.S. 277, 283 (2000). On remand, this Court rendered an

"independent judgment as a matter of distinct and enforceable Pennsylvania constitutional law." *Pap's II*, 812 A.2d at 607. The "state of flux" under federal law "afford[ed] insufficient protection to fundamental rights guaranteed under Article I, § 7." *Id.* at 607, 611. This Court held that, under Pennsylvania's Constitution, strict scrutiny applies to laws restricting "expressive conduct." *Id.* at 611-12.

Here, Petitioners assert that the 2011 map unconstitutionally discriminates against their expressive conduct under the Free Expression and Free Association Clauses of the Pennsylvania Constitution—not the First Amendment. Accordingly, although this Court's analysis may be "guided by the teachings of the United States Supreme Court," *Working Families Party*, 169 A.3d at 1262, this Court should hold "clearly and expressly" that the map violates the Pennsylvania Constitution, "separate … and independent" of federal law, *Michigan v. Long*, 463 U.S. 1032, 1040-41 (1983). The Pennsylvania Constitution's text, the Commonwealth's unique history, and sound policy all support an independent judgment that the 2011 map violates Pennsylvania law. *Edmunds*, 586 A.2d at 894-95.

B. Voting for the Candidate of One's Choice Constitutes Core Protected Political Expression

Voting is core political expression protected by Article I, § 7. "The act of voting is a personal expression of favor or disfavor for particular policies,

personalities, or laws." *Commonwealth v. Cobbs*, 305 A.2d 25, 27 (Pa. 1973). "Each individual voter as he enters the booth is given an opportunity to freely express his will." *Oughton v. Black*, 61 A. 346, 348 (1905). Indeed, if "political contributions are a form of non-verbal, protected expression" under Article I, Section 7, as this Court held in *DePaul*, 969 A.2d at 542, 548, voting for a candidate necessarily constitutes protected expressive conduct as well.

Voting, even more so than campaign donations, provides citizens a direct means of "express[ing] … support for [a] candidate and his views." *Id.* at 547 (quotations omitted). Voting provides "opportunities [for] all voters to express their own political preferences." *Norman v. Reed*, 502 U.S. 279, 288 (1992); *accord Anderson v. Celebrezze*, 460 U.S. 780, 806 (1983).

Voting, moreover, merits special protection because the "expression … is political." *DePaul*, 969 A.2d at 548. "No right is more precious in a free country than that of having a voice in the election of those who make the laws." *Wesberry v. Sanders*, 376 U.S. 1, 17 (1964). Accordingly, "political belief and association constitute the core of those activities protected by" the freedoms of speech and association. *Elrod v. Burns*, 427 U.S. 347, 356 (1976). "[A]n individual's right to participate in the public debate through political expression and political association" safeguards the most "basic [right] in our democracy"—namely "the right to participate in electing our political leaders." *McCutcheon v. FEC*, 134 S.

Ct. 1434, 1440-41, 1448 (2014) (plurality opinion). Where, as here, political expression is at stake, the "guarantee of free speech has its fullest and most urgent application." *Commonwealth v. Wadzinski*, 422 A.2d 124, 129 (Pa. 1980) (quotations omitted).

C. The 2011 Map Is Subject to Strict Scrutiny Because It Burdens Protected Expression and Association Based on Viewpoint

Laws that discriminate against or burden protected expression based on its content or viewpoint are subject to strict scrutiny. *See Pap's II*, 812 A.2d at 611-12. The guarantee of free expression "stands against attempts to disfavor certain subjects or viewpoints." *Citizens United v. FEC*, 558 U.S. 310, 340 (2010).

Rendering speech less *effective* is a cognizable burden, even if the speech is "not banned altogether." *Ins. Adjustment Bureau*, 542 A.2d at 1323-24. "Lawmakers may no more silence unwanted speech by burdening its utterance than by censoring its content." *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 566 (2011). "It is thus no answer to say that petitioners can still be 'seen and heard'" if the burdens placed on their speech "have effectively stifled [their] message." *McCullen v. Coakley*, 134 S. Ct. 2518, 2537 (2014). For example, *McCullen* invalidated a law imposing a buffer zone around abortion clinics. The law did not prevent the plaintiffs, who sought to counsel women on alternatives to abortion, from speaking and promoting their message. *Id.* at 2527. But the law "impose[d]

serious burdens on [their] speech," which had been "far less successful since the buffer zones were instituted." *Id.* at 2535-37.

These principles apply equally to burdens on political expression. In *Davis v. FEC*, 554 U.S. 724 (2008), the U.S. Supreme Court struck down a law that disfavored candidates who self-financed their campaigns. Even though the law did not limit how much money self-financing candidates could spend, it unconstitutionally "diminish[ed] the effectiveness of [their] speech." *Id.* at 736; *see also Randall v. Sorrell*, 548 U.S. 230, 248-49 (2006) (invalidating limit on campaign donations that made such donations less "effective"). Likewise with voting: the government may not "burden[] the right of qualified voters ... 'to cast their votes effectively.'" *Shapiro v. McManus*, 203 F. Supp. 3d 579, 598 (D. Md. 2016) (quoting *Anderson*, 460 U.S. at 787).

A burden on speech is impermissibly viewpoint-discriminatory if it targets speech conveying a "particular point of view," *FCC v. League of Women Voters of California*, 468 U.S. 364, 383-84 (1984), *i.e.*, "because of disagreement with the message [the speech] conveys," *Sorrell*, 564 U.S. at 566 (quotations omitted). The government may not "burden[] a form of protected expression" by certain disfavored speakers, while leaving "unburdened those speakers whose messages are in accord with its own views." *Id.* at 580.

The government thus engages in a "form of viewpoint discrimination" where it "intentionally tilts the playing field" by "reducing the effectiveness of a [disfavored] message," even without "repressing it entirely." *Ridley v. Mass. Bay Transp. Auth.*, 390 F.3d 65, 88 (1st Cir. 2004). A law may not "diminish the effectiveness of" speech by "disfavored speakers." *Sorrell*, 564 U.S. at 564-65.

Viewpoint discrimination is particularly insidious where the targeted speech is political in nature. "[I]n the context of political speech, … [b]oth history and logic" demonstrate the perils of permitting the government to "identif[y] certain preferred speakers" while burdening the speech of "disfavored speakers." *Citizens United*, 558 U.S. at 340-41; *see also Wadzinski*, 422 A.2d at 131 (invalidating a law that, in "practical operation," favored "a particular kind of political discourse"). The government may not burden the "speech of some elements of our society in order to enhance the relative voice of others" in electing public officials. *McCutcheon*, 134 S. Ct. at 1450.

The 2011 map is textbook viewpoint discrimination. The Commonwealth Court's recommendations confirm as much. The court found that the map "was drawn to give Republican candidates an advantage in certain districts." COL ¶52. "[I]t is clear that the 2011 Plan was drawn through a process in which a particular partisan goal—the creation of 13 Republican districts—predominated." FOF ¶291. The mapmakers accomplished this partisan goal by "distribut[ing] voters across

congressional voting districts in such a way that most districts are significantly more Republican leaning …, while Democratic voters are more heavily concentrated in a minority of the congressional voting districts." FOF ¶272. In other words, based on their political viewpoint, Democratic voters were placed into districts where it would be harder for them to elect candidates of their choice, and to diminish the effectiveness of the votes of all Democratic voters statewide.

This viewpoint discrimination is clear from the districts themselves, the election results, and expert statistical measures. As for the districts themselves, the map cracks Democratic strongholds like Erie County, Harrisburg, and Reading, splitting these communities to ensure that their Democratic voters cannot elect a candidate of their choice. The map packs Democratic municipalities like Swarthmore, Easton, Bethlehem, Scranton, Wilkes-Barre, and the Allegheny River valley into already Democratic districts, removing them from their broader communities to dilute the weight of their citizens' votes. The 6th, 7th, and 12th Districts knit together disparate Republican precincts while excising Democratic strongholds, diminishing the representational rights of both the packed and cracked Democrats. The 12th District was patently designed to pair two Democratic incumbents in a reliable Republican district. *Supra* pp.18-19, 27.

As for election results, Democrats won only 5 of 18 seats in 2012 even though they won a *majority* of the statewide congressional vote, and they

continued to win only 5 seats in 2014 and 2016, despite winning nearly half the vote. It doesn't take an expert to see that these lopsided results were caused by packing a disproportionate number of Democratic voters into five districts with overwhelming Democratic majorities, while cracking the remaining Democrats across 13 districts with closer, but reliable, Republican majorities. *Supra* pp.21-22.

And as for experts, they demonstrated, using objective measures, the extent to which the map targets Democratic voters for disfavored treatment. Dr. Chen demonstrated that the 2011 map is an extreme outlier that can only be explained by partisan intent to disadvantage Democratic voters, and that has given Republicans an additional 4-5 seats. *Supra* pp.22-26. This Court has recognized that "alternative plan[s]" like Dr. Chen's are "powerful evidence." *Holt v. 2011 Legislative Reapportionment Comm'n*, 38 A.3d 711, 756-57 (Pa. 2012). Dr. Warshaw showed that the map wastes over a million more Democratic votes than Republican votes, producing a historically extreme Efficiency Gap both in Pennsylvania and nationally, with an estimated effect of 3-4 additional seats. *Supra* pp.31-33. Dr. Pegden showed that the map was so carefully constructed to disadvantage Democratic voters that the partisan bias evaporates when tiny random changes are made to district boundaries. *Supra* pp.29-31.[6]

[6] The Commonwealth Court hypothesized that considerations like candidate quality could affect the Efficiency Gap, FOF ¶389, but there was no evidence that this happened. The court likewise hypothesized that competitive districts could

The evidence shows that the 2011 map "single[s] out [Democratic voters] for disfavor based on the views expressed." *Matal v. Tam*, 137 S. Ct. 1744, 1766 (2017) (Kennedy, J., concurring). The map makes it exceedingly difficult, if not impossible, for cracked Democratic voters to be "successful" in electing a Democratic candidate. *McCullen*, 134 S. Ct. at 2537. In packed districts, the 2011 map "[d]ilut[es] the weight of [Democratic] votes." *Reynolds v. Sims*, 377 U.S. 533, 566 (1964). And statewide, the 2011 map "diminish[es] the effectiveness of" all Democratic voters by minimizing their electoral and therefore political influence. *Sorrell*, 564 U.S. at 564-65. It is difficult to imagine a clearer case of impermissible viewpoint discrimination.

D. The 2011 Map Fails Strict Scrutiny and Indeed Any Scrutiny

To satisfy strict scrutiny, the government must prove that the challenged law was "narrowly drawn to accomplish a compelling government interest." *Pap's II*, 812 A.2d at 612. At trial, Legislative Respondents made no effort to satisfy strict

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lead to misleadingly large Efficiency Gaps, FOF ¶390, but nobody gerrymanders by creating competitive districts, and Pennsylvania's elections under the 2011 map have not been competitive. Tr.1034:10-1035:11; FOF ¶¶185, 192, 198. The court also stated, without explanation, that across-state comparisons have "limited value" because some states may have districting commissions or unspecified laws. FOF ¶391. No such evidence or criticism was presented at trial. And the fact that states with independent commissions produce less biased plans, as measured by the Efficiency Gap, PX35 at 9-10, only bolsters the conclusion that the Efficiency Gap is a good measure of partisan bias.

scrutiny. They offered no non-partisan justification for the map, instead choosing to withhold any and all information about the creation of the map.

Nor could the map satisfy strict scrutiny, or any scrutiny. Drawing congressional district boundaries to disadvantage Democratic voters does not serve any legitimate government interest, much less a compelling interest.

E. The Free Expression and Association Clauses Provide Judicially Manageable Standards to Evaluate Partisan Gerrymandering

The Commonwealth Court did not address whether the 2011 map constitutes viewpoint discrimination, nor did the court apply any measure of judicial scrutiny, strict or otherwise, to assess whether the map passes constitutional muster under Article I, §§ 7 and 20. Instead, the court concluded that there is no right to a "nonpartisan, neutral redistricting process," and that "partisanship can and does play a role" historically in drawing districts. COL ¶¶30-31. In the court's view, Petitioners failed to "articulate a judicially manageable standard by which a court can determine that partisanship crossed the line into an unconstitutional infringement on Petitioners' free speech and associational rights." COL ¶31.

The Commonwealth Court had it wrong. The constitutional prohibition against viewpoint discrimination, and the application of strict scrutiny, are manageable standards that courts routinely apply. And courts apply modern constitutional principles to invalidate practices with long historical pedigrees. *Elrod*, for example, held that the First Amendment prohibited the government from

"dismissing employees on a partisan basis." 427 U.S. at 353. The Court accepted that political patronage dated back "at least since the Presidency of Thomas Jefferson," but noted that "it is the practice itself," not its history, "the unconstitutionality of which must be determined." *Id.* at 353-54. Likewise, *Reynolds* invalidated the longstanding practice of drawing legislative districts with unequal population, ruling that "history alone provided an unsatisfactory basis for differentiations relating to legislative representation." 377 U.S. at 579 n.61. "Citizens, not history …, cast votes." *Id.* at 580.

The government cannot discriminate against citizens on the basis of their political expression and viewpoints in drawing legislative districts, full stop. That is not to say that the government can never "tak[e] *any* political consideration into account in reshaping its electoral districts." *Shapiro*, 203 F. Supp. 3d at 597. There is a difference between political considerations and partisan intent—the former may be permissible so long as it does not subordinate traditional districting principles or target voters of a particular party for disfavored treatment. *See id.* For instance, it is inherently political for the legislature to identify and prioritize "communities of interest" that should be kept intact under a districting plan. *See id.* What is not constitutionally permissible, however, is for the General Assembly to act with partisan intent to "mak[e] it harder for a particular group of voters to achieve electoral success." *Id.*

Thus, to suggest that districting "inevitably has and is intended to have substantial political consequences," COL ¶11 (quoting *Gaffney v. Cummings*, 412 U.S. 735,753 (1973)), is not an endorsement of sorting one party's voters into particular districts to disadvantage them. Moreover, none of the cases the Commonwealth Court cited on this point involved a free speech or association claim, COL ¶11; all were equal protection cases. This Court distinguished equal protection from free speech-based gerrymandering challenges in *Erfer*, 794 A.2d at 328 n.2. The U.S. Supreme Court has held that a free speech-based partisan gerrymandering claim is "uncontradicted by the majority in any of [its] cases." *Shapiro v. McManus*, 136 S. Ct. 450, 456 (2015). While Justice Kennedy stated in *Vieth* that political classifications are "generally permissible" under *equal protection* principles, COL ¶11, he also stated that free speech principles prohibit the use of "political classifications … to burden a group's representational rights," *Vieth v. Jubelirer,* 541 U.S. 267, 315 (2004) (concurrence).

In any event, any precedent suggesting that some degree of partisan viewpoint discrimination is permissible "cannot bear scrutiny." *William Penn Sch. Dist. v. Pa. Dep't of Educ.*, 170 A.3d 414, 456 (Pa. 2017). Partisan gerrymandering serves no good purpose and offers no societal benefit. There is no reason to allow just a little of it.

But even if some consideration of partisanship were permissible, the Free Expression and Association Clauses prohibit the 2011 map's extreme and obvious viewpoint discrimination. The existence of some uncertainty about line-drawing cannot justify judicial abdication. Courts are in the business of striking down unconstitutional laws even where there is no clear, much less objective, standard. "Courts give meaning routinely to all manner of amorphous constitutional concepts, including those that lie at the intersection of legislative prerogative and judicial review." *William Penn*, 170 A.3d at 455. In *Randall,* the Supreme Court invalidated an extreme limit on campaign donations even though the Court could not "determine with any degree of exactitude the precise restriction" that would have been constitutional. 548 U.S. at 248; *accord Caperton v. A.T. Massey Coal Co.*, 556 U.S. 868, 879 (2009) (adjudicating due process claim that could not "be defined with precision"). The evidence that partisan considerations infect the 2011 map is overwhelming. This is not a close case.

This Court should hold that Pennsylvania's Constitution categorically prohibits viewpoint discrimination in the districting process. But alternatively, at a minimum, the Constitution must prohibit mapmakers from *subordinating* traditional districting criteria to their attempt to disadvantage one party's voters based on their political beliefs, as occurred here. Tr.166:10-17; *supra* pp.22-31. These traditional principles "have deep roots in Pennsylvania constitutional law"

and "represent important principles of representative government." *Holt*, 38 A.3d at 745; *see Mellow v. Mitchell*, 607 A.2d 204, 215 (Pa. 1992) (applying these principles to congressional districts).

F. The 2011 Plan Impermissibly Retaliates Against Democratic Voters Based on Their Voting Histories and Party Affiliations

Pennsylvania's Constitution independently prohibits retaliation based on individuals' protected expression. *Uniontown Newspapers, Inc. v. Roberts*, 839 A.2d 185, 192-93, 198-99 (Pa. 2003); *Southersby Dev. Corp. v. Twp. of South Park*, 2015 WL 1757767, at *8-9 (W.D. Pa. Apr. 17, 2015).

Key here, the government may not retaliate against protected expression and association by using "data reflecting citizens' voting history and party affiliation" to "mak[e] it harder for a particular group of voters to achieve electoral success because of the views they had previously expressed." *Shapiro v. McManus*, 203 F. Supp. 3d 579, 597 (D. Md. 2016). This practice "implicates the ... well-established prohibition against retaliation" by "penaliz[ing] voters for expressing certain preferences" *Id.* at 595.

The elements of any free-speech retaliation claim are "intent, injury, and causation." *Id.* at 597. In the redistricting context, a petitioner must prove that (1) mapmakers intended to burden the petitioner and similarly situated citizens "because of how they voted or the political party with which they were affiliated";

(2) the petitioner suffered a "tangible and concrete adverse effect"; and (3) the retaliatory intent was a "but for" cause of the petitioner's injury. *Id.* at 596-98.

Petitioners proved all three elements. *First*, Drs. Kennedy, Chen, and Pegden established that, through packing and cracking, the mapmakers used these past voting histories to subject Democratic voters to disfavored treatment. *Supra* pp.9-31. This is visually evident just from the red-blue district maps in Dr. Kennedy's expert report, which show how the district lines track Democratic and Republican voting concentrations in 2010. *Supra* pp.10-20. And the materials that Speaker Turzai produced in the federal litigation are *direct, conclusive* evidence that the mapmakers drew district boundaries to disadvantage Democratic voters *specifically* based on their voting histories, which the mapmakers measured for every precinct, municipality, and county in Pennsylvania.

Second, the 2011 map diluted the votes of Petitioners and other Democratic voters to such a degree that it resulted in a "tangible and concrete adverse effect." *Shapiro*, 203 F. Supp. 3d at 597. It has "real world consequences—including, most notably, ... actually alter[ing] the outcome of an election" for some Petitioners. *Id.* Four Petitioners currently residing in Republican districts—Beth Lawn, Lisa Isaacs, Robert Smith, and Thomas Ulrich—would live in Democratic-leaning districts under a non-partisan map. *Supra* p.28. The 2011 map injures

these Petitioners by instead placing them into a district where they cannot elect a candidate of their choice.

Other Petitioners suffered other concrete harms, such as splitting of their communities (*e.g.*, Rentschler, Greiner, Comas, and Lancaster), being placed in a packed district where their vote carries less weight (Febo San Miguel, Solomon, Lichty, Mantell, and McNulty), or being placed in a district so uncompetitive that no Democrat will run (Ulrich, Petrosky, and Greiner). *Supra* pp.35-37. And Legislative Respondents' retaliatory intent has had adverse effects on Democratic voters statewide, as Democrats would have won at least several more seats statewide absent the retaliation. *Supra* pp.25-27, 33.

Finally, these adverse effects would not have occurred but for the intent to burden Petitioners and other Democratic voters based on their past voting histories. For example, but for the packing and cracking, Petitioners Lawn, Isaacs, Smith, and Ulrich would have been in Democratic-leaning districts and other Petitioners would not have experienced the other harms just described. *Supra* p.28.

The Commonwealth Court suggested, without explanation, that a retaliation test is not "judicially manageable." COL ¶31. But courts throughout the country have applied retaliation frameworks, in speech and other contexts, for decades. *E.g.*, *Uniontown Newspapers*, 839 A.2d at 192-93, 198-99; *Shapiro*, 203 F. Supp. 3d at 597.

The Commonwealth Court alternatively suggested that a retaliation claim failed under the second and third elements of *Uniontown Newspapers*, requiring that "the defendant's action … would likely chill a person of ordinary firmness from continuing to engage in that activity" and "was motivated at least in part as a response to the exercise of the plaintiff's constitutional right." *Id.* at 198; *see* COL ¶32-36.

This was error. The essential elements for any constitutional retaliation claim are intent, injury, and causation. *See Hartman v. Moore*, 547 U.S. 250, 259-60 (2006); *Shapiro*, 203 F. Supp. 3d at 597. *Uniontown Newspaper* focused on chilling because it was the only injury *alleged* for purposes of the retaliation claim, not because it is the only cognizable injury. 839 A.2d at 192-93, 198-99. "Chilling is required to be alleged only in cases where a plaintiff states no harm independent of the chilling of speech." *Puckett v. City of Glen Cove*, 631 F. Supp. 2d 226, 239 (E.D.N.Y. 2009). "[W]here the retaliation is alleged to have caused an injury separate from any chilling effect, such as a job loss or demotion, an allegation as to a chilling effect is not necessary." *Id.* "Chilled speech is not the *sine qua non*" of a retaliation claim. *Dorsett v. Cty. of Nassau*, 732 F.3d 157, 160 (2d Cir. 2013).

Here, as described above, Petitioners have suffered multiple concrete harms independent of any chilling. That suffices. *Shapiro*, 203 F. Supp. 3d at 596-98.

Regardless, Petitioners were also chilled. The Commonwealth Court reasoned that Petitioners still vote, COL ¶34, but the question is not whether the plaintiffs have refrained from speaking, but whether the retaliation "objective[ly]" could deter "a person of ordinary firmness" from speaking. *Bennett v. Hendrix*, 423 F.3d 1247, 1250-54 (11th Cir. 2005). The 2011 map's creation of uncompetitive districts clearly would deter many "ordinary" persons from voting. *E.g.*, FOF ¶¶191, 197, 233; Tr.124:3-125:16, 140:8-18, 145:13-146:2, PX165 at 14:7-25, 34:22-35:25; PX177 at 49:14-50:4.

The Commonwealth Court equally erred in suggesting that the General Assembly lacked retaliatory motive. COL ¶¶35-37. The court's reasoning—that "it is difficult to assign a singular and dastardly motive to" the General Assembly, COL ¶36—is entirely inconsistent with the overwhelming evidence and with the court's finding that "Petitioners have established intentional discrimination," COL ¶51. Indeed, partisanship was the predominant consideration. *Supra* p.23.

While the Commonwealth Court suggested that the General Assembly did not "pass[] the 2011 Plan ... as a response to actual votes cast by Democrats in prior elections," COL ¶37, the shapefiles produced by Speaker Turzai *conclusively* establish that the mapmakers considered the "actual votes cast by Democrats in

prior elections." *Supra* pp.7-8. There can be no serious dispute that the 2011 map was drawn to disadvantage Democratic voters based on their past voting.[7]

II. The 2011 Map Violates the Pennsylvania Constitution's Equal Protection Guarantees and Free And Equal Clause

Pennsylvania's Constitution guarantees both equal protection of law and free and equal elections. The equal protection guarantees provide that "[a]ll men are born equally free and independent," Pa. Const. Art. I, § 1, and that "[n]either 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," *id.* § 26. The Free and Equal Clause declares: "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.

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[7] The Commonwealth Court admitted Dr. Chen's testimony about these smoking-gun files, which were produced in the federal litigation. But the court precluded Petitioners from obtaining any of their own discovery from Legislative Respondents, and the consequence of the court's November 22 legislative privilege holding is to protect legislators from all discovery in state court no matter what. That holding was erroneous. The Speech and Debate Clause cannot operate to "insulate the legislature from this court's authority to require the legislative branch to act in accord with the Constitution." *Pa. State Ass'n of Cty. Comm'rs v. Commonwealth*, 681 A.3d 699, 703 (1996). Worse, the court held that the privilege extends to the legislature's communications with unrelated third parties, and even communications *between* third parties. 11/22/17 Order at 6, 11-12. For reasons fully explained in Petitioners' November 20 brief to the Commonwealth Court, this Court should vacate the privilege ruling. The Commonwealth Court also erred in refusing to admit certain materials produced in the federal case, such as the draft maps. *E.g.*, Tr.97-98, 1037-1083. If litigants obtain documents without any state-court compulsion, legislative privilege no longer applies.

These provisions mean that the General Assembly is not "free to construct political gerrymanders with impunity." *Erfer*, 794 A.2d at 334. A congressional districting map violates equal protection if the map reflects "intentional discrimination against an identifiable political group" and "there was an actual discriminatory effect on that group." *Id.* at 332; *see also Whitford v. Gill*, 218 F. Supp. 3d 837, 884 (W.D. Wis. 2016) (finding equal protection violation).

The 2011 map fails this test.

A. The Map Intentionally Discriminates Against Democratic Voters

Where, as here, one political party had unified control over a redistricting, "it should not be very difficult to prove that the likely political consequences of the reapportionment were intended." *Erfer*, 794 A.2d at 332 (quotations omitted). As the Commonwealth Court recognized, the evidence "established intentional discrimination." COL ¶51. The evidence of intentional discrimination against Democratic voters is overwhelming.

B. Democratic Voters Are an Identifiable Political Group

Unrebutted evidence established that there is an "identifiable political class of citizens who vote for Democratic congressional candidates." *Erfer*, 794 A.2d at 333. Dr. Warshaw gave his expert opinion that "[m]embers of the mass public are extremely sorted by party" and "Congressional elections are extremely predictable." Tr.998:3-6. Dr. Chen analyzed Pennsylvania elections results over

the last 10 years and found an extremely high correlation—between 0.90 to 0.95—in the level of support for Democratic candidates across elections. Tr.310:10-311:12. It is "very easy" to identify the number of Democratic voters in particular geographic units, all the way down to the precinct level. Tr.315:6-14, 317:1-15.

Dr. Chen's analysis merely provides statistical proof for what is common sense. The reason partisan mapmakers are able to gerrymander districts so effectively is because they are able to use past voting history to identify a class of voters likely to vote for Democratic (or Republican) candidates for Congress. PX1 at 12. Neither of Legislative Respondents' experts even disputed that Democratic voters are an identifiable political class. Beyond that, shapefiles produced in the federal case show that the General Assembly in fact *did* identify likely Democratic voters in creating the 2011 map. *Supra* pp.7-8.

Although the Commonwealth Court recommended a contrary conclusion, COL ¶53, it provided no explanation and failed to address any of Petitioners' evidence on the point.

C. The 2011 Map Has an Actual Discriminatory Effect

An intentional partisan gerrymander has an "actual discriminatory effect" when the gerrymander "works disproportionate results at the polls; this can be accomplished via actual election results or by projected outcomes of future

elections," and there is "evidence indicating a strong indicia of lack of political power and the denial of fair representation." *Erfer*, 794 A.2d at 333.

1. The Map Materially Disadvantages Democratic Voters in Electing Candidates and Denies Them Political Power

The evidence at trial conclusively established that the intentional gerrymandering of the 2011 map has had an "actual discriminatory effect." *Erfer*, 794 A.2d at 332. Republicans have won 13 of 18 seats—the same 13 seats—in each of the three congressional elections under the 2011 map. Republicans won those same 13 seats irrespective of swings in the vote—and even when Democrats won a majority of votes statewide. In the 2012 congressional elections, Democrats would have needed to win more than 57% of the statewide vote just to win 7 of 18 seats. *Supra* pp.21-22.

Petitioners produced extensive further evidence of adverse effects resulting from the dilution of Democratic voters' votes. Dr. Chen found that Republicans have won as many as five more seats than they would under a non-partisan map. *Supra* pp.25-27. Dr. Warshaw's Efficiency Gap analysis directly measures effects by quantifying the extent to which the 2011 map wastes Democratic votes, "impeding [Democratic voters'] ability to translate their votes into legislative seats." *Whitford*, 218 F. Supp. 3d at 910. The Efficiency Gaps under the 2011 map are extreme outliers, unprecedented in Pennsylvania's history and among the highest in the nation, ever. *Supra* pp.32-33. These Efficiency Gaps translate into

as many as four extra seats for the Republicans. And, Dr. Warshaw found, the pro-Republican bias is unlikely to be remedied through the normal electoral process. *Supra* p.34. The 2011 map thus creates disproportionate election results, a lack of political power, and denial of fair representation for Democratic voters. This is not a close case; the "actual discriminatory effect" is clear as day. *Erfer*, 794 A.2d at 333.

2. Petitioners Need Not Show That Democratic Voters Have Been Essentially Shut Out of the Political Process

The Court should hold that a showing of intentional discrimination combined with an actual discriminatory effect—meaning that a congressional seat flips *because* of the intentional discrimination—suffices to show a violation of Pennsylvania's equal protection guarantee. That is what the plain language of Pennsylvania's Constitution says. A Democratic voter whose district goes Republican because of intentional discrimination has been "discriminate[d] against … in the exercise of [a] civil right," namely voting, Pa. Const. Art. I, § 26, and has been deprived of "equal" "[e]lections," Pa. Const. Art. I, § 5. That standard—intentional discrimination plus changing the outcome of an actual congressional election—is easily judicially manageable, and this Court should adopt it.

Moreover, although durability is not a component of an equal protection violation—such a requirement would risk locking in discriminatory maps for multiple cycles—Petitioners have established durability in spades. The 13-5

Republican advantage has persisted through three election cycles regardless of actual vote totals, and Dr. Warshaw testified based on his statistical analyses of the durability of the Efficiency Gap that it would do so in the future. *Supra* p.34.

The Court should clarify or overturn *Erfer*'s requirement of additional proof that the targeted group has "essentially been shut out of the political process." 794 A.2d at 333. This Court is "not constrained to closely and blindly re-affirm constitutional interpretations of prior decisions which have proven unworkable or badly reasoned." *Holt*, 38 A.3d at 759 n.38. Rather, where a prior decision "obscured the manifest intent of a constitutional provision," "engagement and adjustment of precedent as a prudential matter is fairly implicated and salutary." *Robinson Twp., Washington Cty. v. Commonwealth*, 83 A.3d 901, 946 (Pa. 2013).

Erfer's "essentially shut out" standard has proven unworkable. *Erfer* did not identify what evidence might satisfy that vague standard, holding only that the *Erfer* petitioners "ha[d] not alleged ... that a winning Republican congressional candidate" would "entirely ignore the[ir] interests" and that "at least five of the districts" were "safe seats" for Democrats. 794 A.2d at 334. While *Erfer* held that these facts "undermine[ed] Petitioners' claim that Democrats ha[d] been entirely shut out of the political process," *id.*, *Erfer* said nothing about what facts might be sufficient, a lack of guidance that itself renders the standard unworkable.

Erfer's "essentially shut out" standard was also badly reasoned. *Erfer* purported to draw this requirement from *Davis v. Bandemer*, but the *Bandemer* plurality never imposed such a requirement. 478 U.S. 109, 127-43 (1986). Rather, the *Bandemer* plurality held that the effects test would be met when "the electoral system is arranged in a manner that will consistently degrade a voter's or group of voter's influence on the political process as a whole." *Id.* at 132; *see also id.* at 133 ("[S]uch a finding of unconstitutionality must be supported by evidence of continued frustration of the will of a majority of the voters or effective denial to a minority of voters of a fair chance to influence the political process.").

By imposing an "essentially shut out" requirement, *Erfer* opened the door for partisan mapmakers in the General Assembly to devise extreme gerrymanders and defend them on the ground that the minority party would still have *some* "safe … seats" in the U.S. House. COL ¶56(b). But *Erfer* had it exactly backward. The *point* of partisan gerrymandering is to pack the minority party's voters into a few "safe" districts. That is a vice, not a virtue. If the "effects" element of an equal protection claim cannot be met so long as the minority party holds "safe seats," then it may never be met. Where would *Erfer*'s rationale end? Would a partisan gerrymandering claim fail if a map entrenched a 17-1 Republican majority, simply because Democrats held one seat? That cannot be right.

Nor should the Court require representatives to "entirely ignore the interests" of the minority party's voters to establish an equal protection violation. Again, that is not how equal protection works in any other context. A law that required minority students to sit in the back of a classroom would not pass constitutional muster simply because the teachers did not "entirely ignore" the students when they tried to shout over their classmates in the front. Rather, here as in every other equal protection context, it should suffice that the gerrymander deliberately discriminates against the minority party's voters, artificially preventing them from electing candidates of their choice and reducing their chance to translate their preferences into results in Washington. *Erfer*'s contrary holding "cannot bear scrutiny." *William Penn*, 170 A.3d at 456.

3. Democratic Voters Have Been Essentially Shut Out of the Political Process

In any event, Petitioners and other Democratic voters "ha[ve] essentially been shut out of the political process" as a result of the intentional gerrymander. *Erfer*, 794 A.2d at 333. Overwhelming evidence demonstrates that, in today's Congress, a Democratic voter who is artificially deprived of the ability to elect a Democratic representative is effectively shut out of the political process, and their Republican representative will entirely ignore their interests. Dr. Warshaw gave unrebutted testimony on this point. *Supra* pp.37-40. Due to the unprecedented polarization in Congress, Representatives no longer represent the views and

interests of constituents of the opposite party, but rather vote overwhelmingly if not exclusively along national party lines. *Id.*

This is true regardless of the margin of victory. In districts where elections are lopsided and competitive alike, it is winner take all. *Id.* There is no overlap at all in the ideological position of *any* Democratic and Republican representative—the most moderate Republican representative is still far more conservative than the most moderate Democrat, and vice versa. *Id.* This was not true when *Erfer* was decided in 2002. Then, there was still some ideological overlap among Republicans and Democrats in Congress. PX44.

The national trend is no less true in Pennsylvania. Pennsylvania's congressional delegation is sharply divided along party lines, without any overlap. *Supra* pp.38-39. Pennsylvania's Republican representatives vote with the national Republican party 93% of the time. PX35 at 20-21. Nor do Pennsylvania's Democratic and Republican representatives vote together on issues facing the Commonwealth; today, Pennsylvania's delegation votes together less than 10% of the time. *Id.*

In short, the evidence absent in *Erfer* is present here. Petitioners are not "adequately represented by the winning candidate" in districts where Republicans win due to partisan gerrymandering, and they do not have "as much opportunity to influence that candidate as other voters in the district." *Erfer*, 794 A.2d at 333

(quotations omitted). This is not a matter of "Petitioners' feelings," COL ¶56(a); Petitioners presented empirical proof through an expert political scientist.

The Commonwealth Court further suggested that Petitioners can still protest, campaign, donate, and "vote for their candidate of choice in every congressional election." COL ¶56(c), (d). That is incorrect; the gerrymander has resulted in several uncontested elections. *Supra* pp.35-36. More important, this reasoning conflicts with the very animating premise of our system of government. In a representative democracy, citizens affect policy—they have a voice—through their elected representatives. Tr.948:10-13. That Petitioners can donate, campaign, or vote for a doomed candidate is no answer. "[T]he right of suffrage can be denied by a debasement or dilution of the weight of a citizen's vote just as effectively as by wholly prohibiting the free exercise of the franchise." *Reynolds*, 377 U.S. at 555; *see supra* pp.49-50.

The Commonwealth Court finally proposed that the 2011 map comports with equal protection because there will be a new map after 2020. COL ¶56(e). This is wrong. The possibility that the legislature may itself change the law and remedy the discrimination is not a defense under the Pennsylvania Constitution. Otherwise, every discriminatory law would be constitutional.

Finally, the Court should make clear that the 2011 map violates Pennsylvania's equal protection guarantees irrespective of federal law. Although

the Court previously has held that Pennsylvania equal protection law tracks federal law, COL ¶45, the circumstances here warrant a departure from that holding. Pennsylvanians should not have to wait for equal protection under Pennsylvania law "while the U.S. Supreme Court struggles to articulate a standard" for partisan gerrymandering under the Fourteenth Amendment. *Pap's II*, 812 A.2d at 611.

III. The Remedy

Petitioners are entitled to declaratory and injunctive relief invalidating the 2011 map and prohibiting its use in the 2018 primary and general elections. The Court should give Legislative Respondents and Executive Branch Respondents two weeks to enact a map using non-partisan criteria. If they enact a map within the two-week period, the map shall be presented to the Court for review, with the assistance of a special master. Any changes ordered by the Court should be final.

If Legislative Respondents and Executive Branch Respondents do not enact a map within the two-week period, the Court, with the assistance of a special master, should adopt a map using non-partisan criteria. Depending on timing, the Court may wish to direct a special master to begin work on developing a new map simultaneously with Legislative Respondents' and Executive Branch Respondents' consideration of a new map.

CONCLUSION

The Court should declare that the 2011 map violates Pennsylvania's Constitution, irrespective of federal law, and enjoin its use.

Dated: January 5, 2018

Respectfully submitted,

/s/ Mary M. McKenzie

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CERTIFICATION OF WORD COUNT

Per Pa.R.A.P. 2135(a)(1), I hereby certify that this Brief contains 13,964 words, exclusive of the supplementary matter as defined by Pa.R.A.P. 2135(b).

/s/ Mary M. McKenzie
Mary M. McKenzie

Dated: January 5, 2018

ATTACHMENT A

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

League of Women Voters of Pennsylvania, Carmen Febo San Miguel, James Solomon, John Greiner, John Capowski, Gretchen Brandt, Thomas Rentschler, Mary Elizabeth Lawn, Lisa Isaacs, Don Lancaster, Jordi Comas, Robert Smith, William Marx, Richard Mantell, Priscilla McNulty, Thomas Ulrich, Robert McKinstry, Mark Lichty, Lorraine Petrosky, Petitioners	:	
v.	:	No. 261 M.D. 2017
The Commonwealth of Pennsylvania; The Pennsylvania General Assembly; Thomas W. Wolf, In His Capacity As Governor of Pennsylvania; Michael J. Stack III, In His Capacity As Lieutenant Governor of Pennsylvania and President of the Pennsylvania Senate; Michael C. Turzai, In His Capacity As Speaker of the Pennsylvania House of Representatives; Joseph B. Scarnati III, In His Capacity As Pennsylvania Senate President Pro Tempore; Robert Torres, In His Capacity As Acting Secretary of the Commonwealth of Pennsylvania; Jonathan M. Marks, In His Capacity As Commissioner of the Bureau of Commissions, Elections, and Legislation of the Pennsylvania Department of State, Respondents	:	

RECOMMENDED FINDINGS OF FACT AND CONCLUSIONS OF LAW

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I. INTRODUCTION

On June 15, 2017, Petitioners League of Women Voters of Pennsylvania (LWVP),[1] Carmen Febo San Miguel, James Solomon, John Greiner, John Capowski, Gretchen Brandt, Thomas Rentschler, Mary Elizabeth Lawn, Lisa Isaacs, Don Lancaster, Jordi Comas, Robert Smith, William Marx, Richard Mantell, Priscilla McNulty, Thomas Ulrich, Robert McKinstry,[2] Mark Lichty, and Lorraine Petrosky (collectively, Petitioners) commenced this action by filing a Petition for Review (Petition) addressed to this Court's original jurisdiction, challenging the constitutionality of the congressional redistricting plan set forth in Senate Bill 1249 of 2011, enacted into law on December 22, 2011, as Act 131 of 2011, and commonly known as the Congressional Redistricting Act of 2011 (2011 Plan).[3] Petitioners filed their Petition against the Commonwealth of Pennsylvania (Commonwealth);[4] the Pennsylvania General Assembly (General Assembly); Thomas W. Wolf (Governor Wolf), in his capacity as Governor of Pennsylvania; Pedro A. Cortes (Secretary Cortes),[5] in his capacity as Secretary of Pennsylvania; Jonathan M. Marks (Commissioner Marks), in his capacity as Commissioner of the Bureau of Commissions, Elections, and Legislation for the

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[1] By Order dated November 13, 2017, this Court sustained preliminary objections challenging LWVP's standing in this matter and dismissed LWVP as a party petitioner.

[2] Although not identified in the caption as such, throughout the pleadings Robert McKinstry is referred to as "Robert McKinstry, Jr."

[3] Act of December 22, 2011, P.L. 599, 25 P.S. §§ 3596.101-.1510.

[4] This Court dismissed the Commonwealth from this matter by Order dated October 4, 2017.

[5] On November 16, 2017, Acting Secretary of the Commonwealth Robert Torres (Acting Secretary Torres) was substituted as a party for Secretary Cortes pursuant to Pennsylvania Rule of Appellate Procedure 502(c).

Pennsylvania Department of State; Michael J. Stack, III (Lt. Governor Stack), in his capacity as Lieutenant Governor of Pennsylvania and President of the Pennsylvania Senate; Michael C. Turzai (Speaker Turzai), in his capacity as Speaker of the Pennsylvania House of Representatives; and Joseph B. Scarnati, III (President Pro Tempore Scarnati), in his capacity as the Pennsylvania Senate President Pro Tempore (Speaker Turzai and President Pro Tempore Scarnati are hereinafter collectively referred to as "Legislative Respondents").[6]

The 2011 Plan divided Pennsylvania into 18 congressional districts based on the results of the 2010 U.S. Census. In Count I of their Petition, Petitioners allege that the 2011 Plan violates their rights to free expression and association under Article I, Sections 7 and 20 of the Pennsylvania Constitution. More specifically, Petitioners allege that the General Assembly created the 2011 Plan by "expressly and deliberately consider[ing] the political views, voting histories, and party affiliations of Petitioners and other Democratic voters" with the intent to burden and disfavor Petitioners' and other Democratic voters' rights to free expression and association. (Pet. at ¶¶ 105-06.) Petitioners further allege that the 2011 Plan had the effect of burdening and disfavoring Petitioners' and other Democratic voters' rights to free expression and association, because the 2011 Plan "has prevented Democratic voters from electing the representatives of their choice and from influencing the legislative process" and has suppressed "the political views and expression of Democratic voters." (Pet. at ¶ 107.) In Count II of their Petition, Petitioners allege that the 2011 Plan violates the equal

[6] By Order dated November 13, 2017, this Court permitted certain registered Republican voters and active members of the Republican Party to intervene in this matter (Intervenors).

protection provisions of Article I, Sections 1 and 26 of the Pennsylvania Constitution and the Free and Equal Elections Clause of Article I, Section 5 of the Pennsylvania Constitution. More specifically, Petitioners allege that the 2011 Plan intentionally discriminated against Petitioners and other Democratic voters by using "redistricting to maximize Republican seats in Congress and entrench [those] Republican members in power." (Pet. at ¶ 116.) Petitioners further allege that the 2011 Plan has an actual discriminatory effect, because it "disadvantages Petitioners and other Democratic voters at the polls and severely burdens their representational rights." (Pet. at ¶ 117.)

On August 9, 2017, the General Assembly and Legislative Respondents filed with this Court an application to stay all proceedings (Application to Stay), requesting that the entire matter be stayed pending the United States Supreme Court's forthcoming decision in *Gill v. Whitford* (U.S. Supreme Court, No. 16-1161, jurisdictional statement filed March 24, 2017, and argued October 3, 2017) (*Gill*).[7] The Honorable Dan Pellegrini (Senior Judge Pellegrini) heard oral argument on the Application to Stay on October 4, 2017. At the conclusion thereof, Senior Judge Pellegrini advised the parties that the case would be stayed. Thereafter, on October 16, 2017, Senior Judge Pellegrini issued an Order granting the Application to Stay, thereby staying all aspects of the case, except for briefing on the claims of legislative privilege, pending the United States Supreme Court's decision in *Gill*.

[7] *Gill* was originally captioned *Whitford v. Gill* at the district court level, but the caption was changed to *Gill v. Whitford* at the time of its appeal to the United States Supreme Court.

On October 11, 2017, Petitioners filed with the Pennsylvania Supreme Court an application for extraordinary relief under 42 Pa. C.S. § 726 and Pa. R.A.P. 3309 (Application for Extraordinary Relief), requesting that the Pennsylvania Supreme Court exercise its plenary jurisdiction and expedite resolution of this matter before the 2018 midterm elections. By Order dated November 9, 2017, the Pennsylvania Supreme Court granted Petitioners' Application for Extraordinary Relief. In so doing, the Pennsylvania Supreme Court directed, in pertinent part:

> Under the continuing supervision of [the Pennsylvania Supreme Court], the case is hereby remanded to the Commonwealth Court and directed to President Judge Mary Hannah Leavitt for assignment to a commissioned judge of the Commonwealth Court with instructions to conduct all necessary and appropriate discovery, pre-trial and trial proceedings so as to create an evidentiary record on which Petitioners' claims may be decided. The Commonwealth Court shall file with the Prothonotary of [the Pennsylvania Supreme Court] its findings of fact and conclusions of law no later than December 31, 2017.

(Pa. Supreme Ct. Order dated Nov. 9, 2017 at Docket No. 159 MM 2017 (Remand Order).) The President Judge of the Commonwealth Court assigned the matter to the undersigned to conduct all proceedings necessary to comply with the Remand Order.

Thereafter, this Court resolved pending preliminary objections and established a schedule to close the pleadings, conclude discovery, and proceed to trial. Up until the date of trial, the parties filed the following discovery and evidentiary-related motions, applications, and objections that required consideration by this Court:

> 1. On August 9, 2017, Legislative Respondents filed objections to Petitioners' notice of intent to serve subpoenas, asserting, *inter alia*,

that production of the information sought was protected by the Speech and Debate Clause of Article II, Section 15 of the Pennsylvania Constitution (Speech and Debate Clause).[8] By Memorandum and Order dated November 22, 2017, this Court: (1) quashed certain legislative subpoenas directed to current and/or former employees, legislative aides, consultants, experts, and agents of the General Assembly, noting that this Court lacked authority under the Speech and Debate Clause to compel production of the documents sought therein; and (2) struck paragraphs 1(g) and 1(e) of certain third-party subpoenas directed to the Republican National Committee, the National Republican Congressional Committee, the Republican State Leadership Committee (RSLC), the State Government Leadership Foundation, and 2 individuals based upon the Speech and Debate Clause. This Court noted further that it was not clear from the wording of the remaining categories of the third-party subpoenas whether any responsive documents would fall within the scope of the privilege protected by the Speech and Debate Clause, and, therefore, the remaining categories of the third-party subpoenas shall be interpreted as excluding those documents that reflect the intentions, motivations, and activities of state legislators and their staff with respect to the consideration and passage of the 2011 Plan.[9]

2. On August 28, 2017, Legislative Respondents filed objections to Petitioners' notice of intent to serve subpoena on Governor Thomas W. Corbett (Governor Corbett), asserting, *inter alia*, that production of the information sought was protected by the Speech and Debate Clause. By Memorandum and Order dated November 22, 2017, this Court concluded that while it was not clear from the wording of the

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[8] Article II, Section 15 of the Pennsylvania Constitution provides:

> The members of the General Assembly shall in all cases, except treason, felony, violation of their oath of office, and breach or surety of the peace, be privileged from arrest during their attendance at the sessions of their respective Houses and in going to and returning from the same; and for any speech or debate in either House they shall not be questioned in any other place.

[9] In its November 22, 2017 Memorandum and Order, this Court also concluded that it lacked the authority to compel Legislative Respondents to produce documents or information in response to Petitioners' first set of requests for production and first set of interrogatories, because all of the topics set forth therein related to legitimate legislative activity protected by the Speech and Debate Clause.

Governor Corbett subpoena whether any responsive documents would fall within the scope of the privilege protected by the Speech and Debate Clause, the Governor Corbett subpoena shall be interpreted as excluding those documents that reflect the intentions, motivations, and activities of state legislators and their staff with respect to the consideration and passage of the 2011 Plan.[10]

3. On September 12, 2017, Petitioners filed a motion to strike Legislative Respondents' objections to Petitioners' notices of intent to serve subpoenas. While not expressly stated therein, this Court addressed Petitioners' motion to strike in its November 22, 2017 Memorandum and Order, addressing the legislative subpoenas, the third-party subpoenas, and the Governor Corbett subpoena.

4. On September 22, 2017, the General Assembly filed a motion to quash Petitioners' notice of deposition for a designee of the General Assembly and an application for a protective order regarding such notice of deposition. By Order dated November 21, 2017, this Court granted the motion to quash and denied as moot the application for a protective order.

5. On November 16, 2017, Petitioners filed an emergency application to compel responses to pending discovery requests based on the General Assembly's and Legislative Respondents' waiver of all privileges. By Order dated November 17, 2017, this Court denied Petitioners' emergency application.

6. On November 27, 2017, Petitioners filed an application to compel production of non-privileged documents from Legislative Respondents. By Order dated November 28, 2017, this Court granted Petitioners' application to compel with certain qualifications.

7. On December 3, 2017, Legislative Respondents filed an application to preclude introduction of privileged evidence otherwise obtained in the United States District Court for the Eastern District of

[10] On November 27, 2017, non-party Governor Corbett filed a motion to quash a subpoena directed to him by Petitioners. By Memorandum and Order dated November 30, 2017, this Court granted Governor Corbett's motion and quashed the subpoena on the basis that Governor Corbett is clothed in the chief executive privilege set forth in *Appeal of Hartranft*, 85 Pa. 433 (1877).

> Pennsylvania case of *Agre v. Wolf*, No. 2:17-cv-4392 (*Agre* case).[11] By Order dated December 5, 2017, this Court denied Legislative Respondents' application, noting that this Court was not making a determination as to whether specific testimony or documents would be admissible at trial.
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> 8. On December 6, 2017, Petitioners filed an application to exclude portions of the expert report of Dr. James Gimpel and to compel production of the underlying information set forth therein, which Legislative Respondents had previously withheld on the basis of privilege. By Order dated December 7, 2017, this Court denied Petitioners' application without prejudice to raise appropriate objections to Dr. Gimpel's testimony at trial or to cross-examine Dr. Gimpel on the bases for his opinions.
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> This Court conducted a non-jury trial on December 11-15, 2017.

Prior to the start of testimony, this Court heard oral argument on the parties' motions *in limine*, 8 in all. Following oral argument, this Court: (1) granted Petitioners' motion *in limine* to exclude Intervenors' witness testimony, thereby (a) precluding the testimony of an existing congressional candidate, (b) limiting the number of witnesses who will testify as Republican Party chairs to 1, and (c) limiting the number of witnesses who will testify as "Republicans-at-large" to 1; (2) granted Petitioners' motion *in limine* to preclude Legislative Respondents from offering evidence or argument about their intentions, motivations, and activities in enacting the 2011 Plan to the extent that it sought to bar Legislative

[11] In *Agre v. Wolf*, the plaintiffs challenged the 2011 Plan as unconstitutional under the Privileges and Immunities Clause of the Fourteenth Amendment to the United States Constitution and the First Amendment to the United States Constitution. As part of the discovery process in the *Agre* case, the Legislative Respondents filed motions for protective orders, seeking to invoke legislative privilege as a means to exclude any testimony or evidence relative to their deliberative process/subjective intent in the creation and passage of the 2011 Plan. The *Agre* court overruled such motions, concluding that under federal common law, the legislative and deliberative process privileges are qualified (not absolute) and there was no reason to protect any of the information from discovery.

Respondents from offering evidence that Petitioners could not obtain in discovery due to this Court's November 22, 2017 Order addressing the Speech and Debate Clause; (3) denied Petitioners' motion *in limine* to exclude testimony from Dr. Wendy K. Tam Cho regarding Petitioners' expert Dr. Jowei Chen; (4) denied Petitioners' motion *in limine* to exclude testimony from Dr. Gimpel regarding the intended or actual effect of the 2011 Plan on Pennsylvania's communities of interest, but accepted Legislative Respondents' proffer to withdraw pages 17 through 29 of Dr. Gimpel's report; and (5) denied Legislative Respondents' motion *in limine* to exclude documents and/or testimony regarding the Redistricting Majority Project (REDMAP). With respect to Legislative Respondents' motion *in limine* to exclude Petitioners' Exhibits 27-31, 33, and 135-161, Legislative Respondents' motion *in limine* to exclude certain testimony of Dr. Chen, and Petitioners' motion *in limine* to admit evidence produced by Speaker Turzai in the *Agre* case and properly obtained by Petitioners, this Court held that it would only allow the parties to use any documents filed of record in the *Agre* case, any documents admitted into evidence at trial in the *Agre* case, and any documents relied upon by experts in the *Agre* case to the same extent the experts used them in the *Agre* case.

During trial, Petitioners called the following witnesses: (1) Petitioner William Marx; (2) Petitioner Mary Elizabeth Lawn; (3) Jowei Chen, Ph.D.; (4) John J. Kennedy, Ph.D.; (5) Petitioner Thomas Rentschler; (6) Wesley Pegden, Ph.D.; and (7) Christopher Warshaw, Ph.D. Petitioners also designated portions of the depositions or prior trial testimony of the following witnesses and introduced them into the record as exhibits upon stipulation of the parties: (1) Petitioner Carmen Febo San Miguel; (2) Petitioner Don Lancaster; (3) Petitioner Gretchen

Brandt; (4) Petitioner John Capowski; (5) Petitioner Jordi Comas; (6) Petitioner John Greiner; (7) Petitioner James Solomon; (8) Petitioner Lisa Isaacs; (9) Petitioner Lorraine Petrosky; (10) Petitioner Mark Lichty; (11) Petitioner Priscilla McNulty; (12) Petitioner Richard Mantell; (13) Petitioner Robert McKinstry, Jr.; (14) Petitioner Robert Smith; (15) Petitioner Thomas Ulrich; (16) State Senator Andrew E. Dinniman; and (17) State Representative Gregory Vitali. Legislative Respondents called the following witnesses: (1) Wendy K. Tam Cho, Ph.D.; and (2) Nolan McCarty, Ph.D. In addition, Governor Wolf, Acting Secretary Torres, and Commissioner Marks produced an affidavit from Commissioner Marks, which the Court admitted into the record as an exhibit by stipulation of the parties. Lt. Governor Stack also produced an affidavit, which the Court admitted into the record as an exhibit by stipulation of the parties. Finally, Intervenors produced affidavits from the following individuals, which the Court admitted into the record as exhibits by stipulation of the parties: (1) Intervenor Thomas Whitehead; and (2) Intervenor Carol Lynne Ryan.

This Court admitted a number of exhibits into evidence at trial without objection or upon stipulation of the parties, all of which are identified on Exhibit "A" hereto. The parties entered certain joint exhibits into evidence based upon stipulation, all of which are identified on Exhibit "B" hereto.

This Court also admitted certain exhibits into evidence over objection: (1) Petitioners' Exhibit 1, Expert Report of Jowei Chen, Ph.D.; (2) Petitioners' Exhibit 21, Figure - Base 1 (2008-2010): Simulation Set 1: 234 Simulated Plans Following Only Traditional Districting Criteria (No Incumbent Protection) and Containing One District with Black Voting Age Population (VAP) over 50%; (3) Petitioners' Exhibit 23, Figure - Base 2

(2008-2010): Simulation Set 2: 300 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents Containing One District with Black VAP over 50% (Figure 11, Base 1 of Chen Report); (4) Legislative Respondents' Exhibit 39, "Evaluating partisan gains from Congressional gerrymandering: Using computer simulations to estimate the effect of gerrymandering in the U.S. House" (Figure 11, Base 2 of Chen Report); and (5) Lt. Governor Stack's Exhibit 9, Chen Figure 1 Map (detailed) with Residences of Incumbent Congressmen Marked, for illustrative purposes only.

This Court also sustained objections to the admissibility of a number of exhibits but entered them into the record under seal for the limited purpose of allowing the Pennsylvania Supreme Court to review the Court's evidentiary ruling on the admissibility of such exhibits: (1) Petitioners' Exhibit 124, Declaration of Stacie Goede, Republican State Leadership Conference; (2) Petitioners' Exhibit 126, "Redistricting 2010 Preparing for Success;" (3) Petitioners' Exhibit 127, "RSLC Announces Redistricting Majority Project (REDMAP);" (4) Petitioners' Exhibit 128, "REDistricting Majority Project;" (5) Petitioners' Exhibit 129, "REDMAP Political Report: July 2010;" (6) Petitioners' Exhibit 131, 2012 REDMAP Summary Report; (7) Petitioners' Exhibit 132, REDMAP Political Report: Final Report; (8) Petitioners' Exhibit 133, 2012: RSLC Year In Review; (9) Petitioners' Exhibit 134, REDMAP Pennsylvania fundraising letter; and (10) Petitioners' Exhibit 140, Map - "CD18 Maximized." (N.T., 1061, 1070-71.) This Court did not consider these exhibits in preparing its recommended findings of fact and conclusions of law.

Although the Pennsylvania Supreme Court has tasked this Court with preparing recommended findings of fact and conclusions of law based upon the

evidentiary record created by the parties, this Court's paramount responsibility in this matter is to create an evidentiary record upon which the Pennsylvania Supreme Court can render its decision. As such, this Court has exercised discretion in favor of admitting testimony and evidence over objection whenever possible. Moreover, Petitioners and Legislative Respondents, in their post-trial filings, advocated, in some form or another, for a change in existing Pennsylvania precedent. This Court has not considered those requests, adhering instead to what the Court understands is the current state of Pennsylvania law.

II. RECOMMENDED FINDINGS OF FACT[12]

A. Parties

1. *Petitioners*

1. Petitioner Carmen Febo San Miguel (Febo San Miguel) is registered to vote at her residence in Philadelphia, Pennsylvania, in the 1st Congressional District. Febo San Miguel is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13;[13] Petitioners' Ex. 163 (P-163) at 2-3, 5-6.)

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[12] The Court acknowledges that some of the paragraphs in this portion of the recommended findings of fact and conclusions of law can reasonably be characterized not as findings of facts, but as conclusions of law. They are, nonetheless, included in this section as a matter of order and clarity.

[13] The parties filed a Joint Stipulation of Facts with this Court on December 8, 2017. The factual stipulations set forth therein are incorporated into these Recommended Findings of Fact and Conclusions of Law in their entirety. The stipulations have been reordered, reworded, combined, and/or separated when appropriate.

2. Petitioner James Solomon (Solomon) is registered to vote at his residence in Philadelphia, Pennsylvania, in the 2nd Congressional District. Solomon is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 169 (P-169) at 2, 4.)

3. Petitioner John Greiner (Greiner) is registered to vote at his residence in Erie, Pennsylvania, in the 3rd Congressional District. Greiner is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 168 (P-168) at 2-3, 5.)

4. Petitioner John Capowski (Capowski) is registered to vote at his residence in Camp Hill, Pennsylvania, in the 4th Congressional District. Capowski is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 166 (P-166) at 2-3, 6.)

5. Petitioner Gretchen Brandt (Brandt) is registered to vote at her residence in State College, Pennsylvania, in the 5th Congressional District. Brandt is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 165 (P-165) at 2-4, 6.)

6. Petitioner Thomas Rentschler (Rentschler) is registered to vote at his residence in Exeter Township, Pennsylvania, in the 6th Congressional District. Rentschler is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; N.T. 668-73.)

7. Petitioner Mary Elizabeth Lawn (Lawn) is registered to vote at her residence in Chester, Pennsylvania, in the 7th Congressional District. Prior to the 2011 Plan, Lawn resided in the 1st Congressional District. Lawn is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; N.T. at 134, 136-39.)

8. Petitioner Lisa Isaacs (Isaacs) is registered to vote at her residence in Morrisville, Pennsylvania, in the 8th Congressional District. Isaacs is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 170 (P-170) at 2-5, 10.)

9. Petitioner Don Lancaster (Lancaster) is registered to vote at his residence in Indiana, Pennsylvania, in the 9th Congressional District. Lancaster is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 164 (P-164) at 2-3.)

10. Petitioner Jordi Comas (Comas) is registered to vote at his residence in Lewisburg, Pennsylvania, in the 10th Congressional District. Comas is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 167 (P-167) at 2, 6-7.)

11. Petitioner Robert Smith (R. Smith) is registered to vote at his residence in Bear Creek, Pennsylvania, in the 11th Congressional District. R. Smith is a registered Democrat, who has consistently voted for Democratic

candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 176 (P-176) at 2-3.)

12. Petitioner William Marx (Marx) is registered to vote at his residence in Delmont, Pennsylvania, in the 12th Congressional District. Marx is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; N.T. at 102-03, 105, 108, 111.)

13. Petitioner Richard Mantell (Mantell) is registered to vote at his residence in Jenkintown, Pennsylvania, in the 13th Congressional District. Mantell is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 174 (P-174) at 2-3.)

14. Petitioner Priscilla McNulty (McNulty) is registered to vote at her residence in Pittsburgh, Pennsylvania, in the 14th Congressional District. McNulty is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 173 (P-173) at 4, 6, 8, 32.)

15. Petitioner Thomas Ulrich (Ulrich) is registered to vote at his residence in Bethlehem, Pennsylvania, in the 15th Congressional District. Ulrich is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 177 (P-177) at 2-3.)

16. Petitioner Robert McKinstry, Jr. (McKinstry) is registered to vote at his residence in Kennett Square, Pennsylvania, in the 16th Congressional District. McKinstry is a registered Democrat, who has consistently voted for

Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 175 (P-175) at 2-3, 8.)

17. Petitioner Mark Lichty (Lichty) is registered to vote at his residence in East Stroudsburg, Pennsylvania, in the 17th Congressional District. Lichty is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 172 (P-172) at 2, 5.)

18. Petitioner Lorraine Petrosky (Petrosky) is registered to vote at her residence in Latrobe, Pennsylvania, in the 18th Congressional District. Petrosky is a registered Democrat, who has consistently voted for Democratic candidates for the United States House of Representatives. (Joint Stip. of Facts at ¶¶ 12-13; Petitioners' Ex. 171 (P-171) at 4, 6, 8-9, 39.)

19. Three congressional general elections occurred under the 2011 Plan before Petitioners filed their Petition. (Joint Stip. of Facts at ¶ 14.)

20. Petitioners were residents of Pennsylvania when the 2011 Plan became law. (Joint Stip. of Facts at ¶ 15.)

21. Petitioners did not file any type of challenge pertaining to the 2011 Plan prior to the filing of their Petition. (Joint Stip. of Facts at ¶ 16.)

22. No Petitioner has been prevented from registering to vote in Pennsylvania since the 2011 Plan became law. (Joint Stip. of Facts at ¶ 17.)

23. Since the 2011 Plan was enacted, Petitioners have voted in every congressional general election where there was a Democratic candidate on the ballot. (Joint Stip. of Facts at ¶ 18.)

24. Petitioners have each voted for the Democratic congressional candidate in each of the last 3 congressional general elections to the extent that one was running for the seat. (Joint Stip. of Facts at ¶ 19.)

25. No Petitioners have been prohibited from speaking in opposition to the views and/or actions of their Congressperson since the 2011 Plan became law. (Joint Stip. of Facts at ¶ 20.)

26. No Petitioners have been told by any congressional office that constituent services are provided or denied on the basis of partisan affiliations since the 2011 Plan became law. (Joint Stip. of Facts at ¶ 21.)

2. *Respondents*

27. The General Assembly is the state legislature for Pennsylvania and is composed of the Pennsylvania Senate (PA Senate) and the Pennsylvania House of Representatives (PA House). The General Assembly convenes in the Pennsylvania State Capitol Building located in Harrisburg, Pennsylvania. (Joint Stip. of Facts at ¶ 22.)

28. Governor Wolf is the Governor of Pennsylvania and is sued in his official capacity. (Joint Stip. of Facts at ¶ 23.)

29. One of the Governor's official duties is signing or vetoing bills passed by the General Assembly. All Pennsylvania Governors, including Governor Wolf, are charged with, among other things, faithfully executing valid laws enacted by the General Assembly. (Joint Stip. of Facts at ¶ 24.)

30. Governor Wolf was elected Governor of Pennsylvania in November 2014 and assumed office on January 20, 2015. (Joint Stip. of Facts at ¶ 25.)

31. Governor Wolf did not hold public office at the time that Senate Bill 1249 (SB 1249) was drafted and the 2011 Plan was enacted. (Joint Stip. of Facts at ¶ 26.)

32. Acting Secretary Torres is the Acting Secretary of Pennsylvania and is sued in his official capacity. (Joint Stip. of Facts at ¶ 27.)

33. Commissioner Marks is the Commissioner of the Bureau of Commissions, Elections, and Legislation (Bureau) for the Pennsylvania Department of State (DOS) and is sued in his official capacity. Commissioner Marks was appointed to the position of Commissioner in October 2011. Commissioner Marks is responsible for overseeing the day-to-day operations of the Bureau, which includes election administration. (Joint Stip. of Facts at ¶ 28; Governor Wolf, Acting Secretary Torres, and Commissioner Marks' Ex. 2 (EBD-2) at ¶¶ 1-2, 6.)

34. Commissioner Marks has been with the Bureau since the Fall of 2002. From 2004 through 2008, Commissioner Marks served as the Chief of the Division of Elections. From 2008 through 2011, Commissioner Marks served as the Chief of the Division of the Statewide Uniform Registry of Electors. (EBD-2 at ¶¶ 3-5.)

35. Commissioner Marks has supervised the administration of DOS's duties in more than 20 regularly scheduled elections and a number of special elections. (EBD-2 at ¶ 7.)

36. Lt. Governor Stack is the Lieutenant Governor of Pennsylvania and serves as President of the PA Senate. Lt. Governor Stack is sued in his official capacity. (Joint Stip. of Facts at ¶ 30.)

37. Lt. Governor Stack served in the PA Senate as the Senator for the 5th Senatorial district from 2001 until 2015, when he was sworn in as the Lieutenant Governor of Pennsylvania. (Joint Stip. of Facts at ¶ 157.)

38. Speaker Turzai is the Speaker of the PA House and is sued in his official capacity. (Joint Stip. of Facts at ¶ 31.)

39. Speaker Turzai is a Republican. (Joint Stip. of Facts at ¶ 32.)

40. Speaker Turzai has represented Pennsylvania's 28th legislative district since 2001. (Joint Stip. of Facts at ¶ 33.)

41. Speaker Turzai was elected Speaker of the PA House on January 6, 2015, and previously served as Majority Leader for the PA House Republican Caucus from 2011 to 2014. (Joint Stip. of Facts at ¶ 34.)

42. President Pro Tempore Scarnati is the PA Senate President Pro Tempore and is sued in his official capacity. (Joint Stip. of Facts at ¶ 35.)

43. President Pro Tempore Scarnati is a Republican. (Joint Stip. of Facts at ¶ 36.)

44. President Pro Tempore Scarnati was elected President Pro Tempore of the PA Senate in 2006. (Joint Stip. of Facts at ¶ 37.)

3. *Intervenors*

45. Intervenors are registered Republican voters in each of Pennsylvania's 18 congressional districts. Intervenors include announced or potential candidates for United States Congress, county party committee chairpersons, and active Republicans. (Joint Stip. of Facts at ¶¶ 159, 196-98.)

46. Intervenor Brian McCann (McCann) is a registered Republican voter, who resides in Philadelphia County in the 1st Congressional District.

McCann is a Committee member for Philadelphia's 65th Ward and the Ward Leader for Philadelphia's 57th Ward. (Joint Stip. of Facts at ¶ 160.)

47. Intervenor Daphne Goggins (Goggins) is a registered Republican voter, who resides in Philadelphia County in the 2nd Congressional District. Goggins is a Committee member for the Philadelphia City Committee, who currently serves as the Republican Ward Leader for Philadelphia's 16th Ward. (Joint Stip. of Facts at ¶ 161.)

48. Intervenor Carl Edward Pfeifer, Jr. (Pfeifer) is a registered Republican voter, who resides in Montgomery County in the 2nd Congressional District. Pfeifer is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 162.)

49. Intervenor Michael Baker (Baker) is a registered Republican voter, who resides in Armstrong County in the 3rd Congressional District. Baker is the Chairman of the Armstrong County Republican Committee. (Joint Stip. of Facts at ¶ 163.)

50. Intervenor Cynthia Ann Robbins (Robbins) is a registered Republican voter, who resides in Mercer County in the 3rd Congressional District. Robbins is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 164.)

51. Intervenor Ginny Steese Richardson (Richardson) is a registered Republican voter, who resides in Mercer County in the 3rd Congressional District. Richardson is the Chairwoman for the Mercer County Republican Party and a former candidate for public office. (Joint Stip. of Facts at ¶ 165.)

52. Intervenor Carol Lynne Ryan (Ryan) is a registered Republican voter, who resides in Lawrence County in the 3rd Congressional District. Ryan is a

member of the Lawrence County Republican Party Committee. (Joint Stip. of Facts at ¶ 166; Intervenors' Ex. 17 (I-17) at ¶ 1.)

53. Intervenor Joel Sears (Sears) is a registered Republican voter, who resides in York County in the 4th Congressional District. Sears is a member of the York County Republican Party Committee. (Joint Stip. of Facts at ¶ 167.)

54. Intervenor Kurtes D. Smith (K. Smith) is a registered Republican voter, who resides in Clinton County in the 5th Congressional District. K. Smith is the Chairman of the Clinton County Republican Party. (Joint Stip. of Facts at ¶ 168.)

55. Intervenor C. Arnold McClure (McClure) is a registered Republican voter, who resides in Huntingdon County in the 5th Congressional District. McClure is the Chairman of the Huntingdon County Republican Party. (Joint Stip. of Facts at ¶ 169.)

56. Intervenor Karen C. Cahilly (Cahilly) is a registered Republican voter, who resides in Potter County in the 5th Congressional District. Cahilly is the Chairwoman of the Potter County Republican Party. (Joint Stip. of Facts at ¶ 170.)

57. Intervenor Vicki Lightcap (Lightcap) is a registered Republican voter, who resides in Montgomery County in the 6th Congressional District. Lightcap is a member of the Montgomery County Republican Party Committee and has been a candidate for public office. (Joint Stip. of Facts at ¶ 171.)

58. Intervenor Wayne Buckwalter (Buckwalter) is a registered Republican voter, who resides in Chester County in the 6th Congressional District. Buckwalter is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 172.)

59. Intervenor Ann Marshall Pilgreen (Pilgreen) is a registered Republican voter, who resides in Montgomery County in the 7th Congressional District. Pilgreen is a member of the Montgomery County Republican Party Committee. (Joint Stip. of Facts at ¶ 173.)

60. Intervenor Ralph E. Wike (Wike) is a registered Republican voter, who resides in Delaware County in the 7th Congressional District. Wike is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 174.)

61. Intervenor Martin C.D. Morgis (Morgis) is a registered Republican voter, who resides in Bucks County in the 8th Congressional District. Morgis is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 175.)

62. Intervenor Richard J. Tems (Tems) is a registered Republican voter, who resides in Bucks County in the 8th Congressional District. Tems is a member of the Bucks County Republican Party Committee and previously served on the Doylestown Borough Republican Committee. (Joint Stip. of Facts at ¶ 176.)

63. Intervenor James Taylor (Taylor) is a registered Republican voter, who resides in Franklin County in the 9th Congressional District. Taylor is a member of the Franklin County Republican Party and previously served as Chairman for the Franklin County Republican Party. (Joint Stip. of Facts at ¶ 177.)

64. Intervenor Lisa V. Nancollas (Nancollas) is a registered Republican voter, who resides in Mifflin County in the 10th Congressional District. Nancollas has been a candidate for public office. (Joint Stip. of Facts at ¶ 178.)

65. Intervenor Hugh H. Sides (Sides) is a registered Republican voter, who resides in Lycoming County in the 10th Congressional District. Sides is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 179.)

66. Intervenor Mark J. Harris (Harris) is a registered Republican voter, who resides in Snyder County in the 10th Congressional District. Harris is a former Chairman of the Snyder County Republican Party, who continues to remain active in Republican campaign activities. (Joint Stip. of Facts at ¶ 180.)

67. Intervenor William P. Eggleston (Eggleston) is a registered Republican voter, who resides in Wyoming County in the 11th Congressional District. Eggleston is the Vice Chair of the Wyoming County Republican Party and a former candidate for public office, who continues to remain active in Republican campaign activities. (Joint Stip. of Facts at ¶ 181.)

68. Intervenor Jacqueline D. Kulback (Kulback) is a registered Republican voter, who resides in Cambria County in the 12th Congressional District. Kulback currently serves as the County Chairwoman of the Cambria County Republican Party. (Joint Stip. of Facts at ¶ 182.)

69. Intervenor Timothy D. Cifelli (Cifelli) is a registered Republican voter, who resides in Philadelphia County in the 13th Congressional District. Cifelli is an appointed member of the Philadelphia County Republican Party Committee. (Joint Stip. of Facts at ¶ 183.)

70. Intervenor Ann M. Dugan (Dugan) is a registered Republican voter, who resides in Allegheny County in the 14th Congressional District. Dugan is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 184.)

71. Intervenor Patricia J. Felix (Felix) is a registered Republican voter, who resides in Northampton County in the 15th Congressional District. Felix has been a registered Republican since 1980 after initially registering as a Democrat. Felix is a member of the Northampton County Republican Party Committee. (Joint Stip. of Facts at ¶ 185.)

72. Intervenor Scott C. Uehlinger (Uehlinger) is a registered Republican voter, who resides in Berks County in the 15th Congressional District. Uehlinger is a candidate for the 15th Congressional District. (Joint Stip. of Facts at ¶ 186.)

73. Intervenor Brandon Robert Smith (B. Smith) is a registered Republican voter, who resides in Lancaster County in the 16th Congressional District. B. Smith is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 187.)

74. Intervenor Glen Beiler (Beiler) is a registered Republican voter, who resides in Lancaster County in the 16th Congressional District. Beiler is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 188.)

75. Intervenor Tegwyn Hughes (Hughes) is a registered Republican voter, who resides in Northampton County in the 17th Congressional District. Hughes is a Committee member from Washington Township for the Northampton County Republican Party. (Joint Stip. of Facts at ¶ 189.)

76. Intervenor Thomas Whitehead (Whitehead) is a registered Republican voter, who resides in Monroe County in the 17th Congressional District. Whitehead is the Chairman for the Monroe County Republican Committee and an active member of the Republican Party. (Joint Stip. of Facts at ¶ 190; Intervenors' Ex. 16 (I-16) at ¶¶ 1-2.)

77. Intervenor David Moylan (Moylan) is a registered Republican voter, who resides in Schuylkill County in the 17th Congressional District. Moylan was a former congressional candidate for the 17th Congressional District and a potential congressional candidate in future elections. (Joint Stip. of Facts at ¶ 191.)

78. Intervenor James R. Means, Jr. (Means) is a registered Republican voter, who resides in Allegheny County in the 18th Congressional District. Means is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 192.)

79. Intervenor Barry O. Christenson (Christenson) is a registered Republican voter, who resides in Allegheny County in the 18th Congressional District. Christenson has been a candidate for public office. (Joint Stip. of Facts at ¶ 193.)

80. Intervenor Kathleen Bowman (Bowman) is a registered Republican voter, who resides in the 4th Congressional District. Bowman is an active member of the Republican Party. (Joint Stip. of Facts at ¶ 194.)

81. Intervenor Bryan Leib (Leib) is a registered Republican voter, who resides in the 1st Congressional District. Leib is an active member of the Republican Party and a potential candidate for the 1st Congressional District. (Joint Stip. of Facts at ¶ 195.)

B. Background

82. Article I, Section 2 of the United States Constitution leaves the states' legislatures primarily responsible for the apportionment of their federal congressional districts. *See Growe v. Emison*, 507 U.S. 25, 34 (1993).

83. Following the national census that is mandated every 10 years, each state is responsible for drawing its congressional districts based upon how many districts the United States Department of Commerce assigns the state relative to such state's population. (Joint Stip. of Facts at ¶ 1.)

84. The decision to award a particular state a certain number of seats is known as apportionment. (Joint Stip. of Facts at ¶ 2.)

85. Congressional seats were reapportioned after the 2010 U.S. Census. (Joint Stip. of Facts at ¶ 3.)

86. As a result of reapportionment in 2010, Pennsylvania lost 1 congressional seat, dropping from 19 to 18 seats. (Joint Stip. of Facts at ¶ 4.)

87. In creating the 2011 Plan, it was mathematically impossible to avoid pairing 2 incumbents unless 1 or more incumbent Congressmen/women declined to seek re-election. (Joint Stip. of Facts at ¶ 5.)

88. In Pennsylvania, the boundaries for congressional districts are redrawn by legislative action in the form of a bill that proceeds through both chambers of the General Assembly and is signed into law by the Governor. (Joint Stip. of Facts at ¶ 6.)

89. In the year prior to the November 2010 elections, a majority of the Representatives of the PA House were Democrats. (Joint Stip. of Facts at ¶ 153.)

90. In 2011, the year after the November 2010 elections, a majority of the Representatives of the PA House were Republicans. (Joint Stip. of Facts at ¶¶ 8, 154.)

91. In 2011, a majority of the Senators in the PA Senate were Republicans. (Joint Stip. of Facts at ¶ 7.)

92. Governor Corbett, a Republican, was Pennsylvania's Governor in 2011. (Joint Stip. of Facts at ¶ 9.)

93. The Pennsylvania Manual[14] contains a description of each of Pennsylvania's congressional districts for the congressional district maps adopted between 1960 and 2011. Pennsylvania's congressional district maps for 1943, 1951, 1962, 1972, 1982, 1992, 2002, and 2011, which are from the Pennsylvania Manual, are set out in Joint Exhibit 26. (Joint Stip. of Facts at ¶¶ 88-89.)

94. True and accurate lists of the members of the United States House of Representatives for each congressional district from 2005 to the present are set forth in Joint Exhibit 25. (Joint Stip. of Facts at ¶ 67.)

95. The following table accurately depicts the partisan distribution of seats in Pennsylvania's congressional delegation from 1966 to 2010, though some members may have been elected on some party label other than Democrat or Republican:

Year	Districts	Democratic Seats	Republican Seats
1966	27	14	13
1968	27	14	13
1970	27	14	13
1972	25	13	12
1974	25	14	11
1976	25	17	8
1978	25	15	10
1980	25	12[15]	12
1982	23	13	10

[14] The Pennsylvania Manual is a regularly published book issued by the Pennsylvania Department of General Services, a public authority. (Joint Stip. of Facts at ¶ 88.)

[15] One elected representative, Thomas M. Foglietta, was not elected as either a Democrat or Republican in 1980. (Joint Stip. of Facts at ¶ 70 n.1.)

1984	23	13	10
1986	23	12	11
1988	23	12	11
1990	23	11	12
1992	21	11	10
1994	21	11	10
1996	21	11	10
1998	21	11	10
2000	21	10	11
2002	19	7	12
2004	19	7	12
2006	19	11	8
2008	19	12	7
2010	19	7	12

(Joint Stip. of Facts at ¶ 70.)

96. The following chart contains the home addresses for each of the 17 current Pennsylvania members of the United States House of Representatives:

1	Bob Brady	7028 Brentwood Rd Philadelphia, PA 19151
2	Dwight Evans	1600 Cardeza St Philadelphia, PA 19150
3	Mike Kelly	239 W Pearl St Butler, PA 16001
4	Scott Perry	155 Warrington Rd Dillsburg, PA 17019
5	Glenn Thompson	8351 Pondview Dr McKean, PA 16426
6	Ryan Costello	107 Yorktown Rd Collegeville, PA 19426
7	Pat Meehan	102 Harvey Ln Chadds Ford, PA 19317
8	Brian Fitzpatrick	19 Spinythorn Rd Levittown, PA 19056

9	Bill Shuster	455 Overlook Dr Hollidaysburg, PA 16648
10	Tom Marino	358 Kinley Dr Cogan Station, PA 17728
11	Lou Barletta	1529 Terrace Blvd Hazleton, PA 18201
12	Keith Rothfus	227 Walnut St Sewickley, PA 15143
13	Brandon Boyle	13109 Bustleton Ave Philadelphia, PA 19116
14	Mike Doyle	205 Hawthorne Ct Pittsburgh, PA 15221
15	Charlie Dent	3626 Evening Star Terrace Allentown, PA 18104
16	Lloyd Smucker	230 Deerfield Dr Lancaster, PA 17602
17	Matthew Cartwright	8 Steinbeck Dr Moosic, PA 18507
18	Vacant Due to Resignation	

(Joint Stip. of Facts at ¶ 155.)

C. Enactment of the 2011 Plan

97. The PA House and PA Senate State Government Committees held hearings on May 11, June 9, and June 14, 2011, to receive testimony and public comment on redistricting. No congressional district map or draft of a congressional district map was presented at the hearings. (Joint Stip. of Facts at ¶ 38.)

98. On September 14, 2011, SB 1249 was introduced in the PA Senate in the form of Joint Exhibit 1. (Joint Stip. of Facts at ¶ 39.)

99. SB 1249's primary sponsors were Majority Floor Leader Dominic F. Pileggi (Majority Floor Leader Pileggi), President Pro Tempore Scarnati, and Senator Charles T. McIlhenney Jr. (Senator McIlhenney). Majority

Floor Leader Pileggi and Senator McIlhenney are Republicans. (Joint Stip. of Facts at ¶ 40.)

100. The PA Senate's first consideration of SB 1249 took place on December 7, 2011. (Joint Stip. of Facts at ¶ 41.)

101. The original version of SB 1249, Printer's Number (PN) 1520, did not provide any information about the boundaries of the congressional districts. Rather, for each of the 18 congressional districts, SB 1249, PN 1520 stated: "The [Number] District is composed of a portion of this Commonwealth." (Joint Stip. of Facts at ¶ 42.)

102. The PA Senate's second consideration of SB 1249 took place on December 12, 2011. (Joint Stip. of Facts at ¶ 43.)

103. During the second consideration, SB 1249 contained no map showing the proposed congressional districts. Rather, each of the 18 congressional districts were described as follows: "The [Number] District is composed of a portion of this Commonwealth." (Joint Stip. of Facts at ¶ 44.)

104. On December 14, 2011, SB 1249 was amended in the PA Senate State Government Committee and reported out as PN 1862 in the form of Joint Exhibit 2. (Joint Stip. of Facts at ¶ 45.)

105. On December 14, 2011, SB 1249 was referred to the PA Senate Appropriations Committee, where it was rewritten and reported out as PN 1869 in the form of Joint Exhibit 3. (Joint Stip. of Facts at ¶ 46.)

106. PN 1862 and PN 1869 were the only versions of SB 1249 that contained details of the boundaries of each congressional district. (Joint Stip. of Facts at ¶ 47.)

107. Upon stipulation and agreement of the parties, this Court takes judicial notice of the legislative history of SB 1249/Act 2011-131, including the Legislative Journals available at http://www.legis.state.pa.us/cfdocs/billinfo/bill_history.cfm?syear=2011&sind=0&body=S&type=B&bn=1249. (Joint Stip. of Facts at ¶ 48.)

108. Democratic Senator Jay Costa introduced an amendment to SB 1249 that he stated would create 8 congressional districts favorable to Republicans, 4 congressional districts favorable to Democrats, and 6 swing congressional districts. The amendment did not pass. (Joint Stip. of Facts at ¶ 49.)

109. On December 14, 2011, SB 1249 passed in the PA Senate by a vote of 26-24. (Joint Stip. of Facts at ¶ 50.)

110. No Democratic Senator voted for SB 1249. (Joint Stip. of Facts at ¶ 51.)

111. As a Democratic Senator, Lt. Governor Stack voted against SB 1249. Based upon his experience as Lieutenant Governor of Pennsylvania and as chair of the Local Government Advisory Committee, Lt. Governor Stack believes that it is beneficial, when possible, to keep individual counties and municipalities in a single congressional district. (Joint Stip. of Facts at ¶ 158; Lt. Governor Stack Ex. 11.)

112. On December 14, 2011, SB 1249 was referred to the PA House State Government Committee. (Joint Stip. of Facts at ¶ 52.)

113. The PA House's first consideration of SB 1249 took place on December 15, 2011. (Joint Stip. of Facts at ¶ 53.)

114. The PA House's second consideration of SB 1249 took place on December 19, 2011. (Joint Stip. of Facts at ¶ 54.)

115. On December 19, 2011, the PA House referred SB 1249 to the PA House Appropriations Committee. (Joint Stip. of Facts at ¶ 55.)

116. On December 20, 2011, the PA House Appropriations Committee reported out SB 1249 in the form of Joint Exhibit 4. (Joint Stip. of Facts at ¶ 56.)

117. On December 20, 2011, SB 1249 passed in the PA House by a vote of 136-61. (Joint Stip. of Facts at ¶ 57.)

118. Thirty-six PA House Democrats voted for SB 1249. (Joint Stip. of Facts at ¶ 58.)

119. At least 33 of the 36 (approximately 92%) PA House Democrats who voted for SB 1249 represented state legislative districts that were part of at least 1 of the following congressional districts under the 2011 Plan: the 1st, 2nd, 13th, 14th, or 17th. (Joint Stip. of Facts at ¶ 59.)

120. Eighteen PA House Democrats from the Philadelphia area voted in favor of SB 1249. (Joint Stip. of Facts at ¶ 129.)

121. On December 22, 2011, the PA Senate signed SB 1249, after it was passed in the PA House, and then-Governor Corbett signed SB 1249 into law. (Joint Stip. of Facts at ¶ 60.)

122. When SB 1249 was enacted into law, it became Act 2011-131, also known as the 2011 Plan. (Joint Stip. of Facts at ¶ 61.)

123. The 2011 Plan remains in effect today. (Joint Stip. of Facts at ¶ 62.)

124. Neither Acting Secretary Torres nor Commissioner Marks had any role in the drafting or enactment of SB 1249. (Joint Stip. of Facts at ¶ 29.)

125. State Senator Andrew Dinniman (Senator Dinniman) is a Democratic member of the PA Senate. Senator Dinniman represents Chester County and is a member of the PA Senate State Government Committee. (Petitioners' Ex. 178 (P-178) at 17-19.)

126. Senator Dinniman testified[16] consistently with the facts set forth above in this Section II.C., regarding the PA Senate's involvement in the enactment of the 2011 Plan. Senator Dinniman also testified as follows:

a. Senator Dinniman does not ever recall a situation where a "shell bill" was presented to a committee for a vote, prior to the introduction of SB 1249. (P-178 at 19-20, 56-57.)

b. The minority members of the PA Senate State Government Committee, including Senator Dinniman, did not see SB 1249 as amended to include the descriptions of the congressional districts until the morning of December 14, 2011. (P-178 at 20-21, 48.)

c. On December 14, 2011, the PA Senate rule that requires a minimum of 6 hours between the time that a bill comes out of appropriations and is considered on the floor of the PA Senate was suspended for SB 1249. (P-178 at 23.)

d. On December 14, 2011, the PA Senate rule that requires sessions to end at 11:00 p.m. was suspended for SB 1249. (P-178 at 25, 76.)

e. It is unusual for a bill involving suffrage to proceed through the PA Senate in such a rapid manner—*i.e.*, introduced with a

[16] Excerpts of Senator Dinniman's testimony from the *Agre* case were admitted into evidence as Petitioners' Exhibit 178.

description of the congressional districts in the morning and adopted by the PA Senate after 11:00 p.m. that same day. Senator Dinniman believes that any bill dealing with suffrage should be considered in a deliberative manner, and that it was unfair for him to have to vote on a bill involving suffrage within such a short period of time. (P-178 at 27-28, 44-45.)

f. Because SB 1249 did not contain descriptions of the congressional districts until the morning of December 14, 2011, there was no opportunity for advocacy groups to respond to SB 1249. (P-178 at 30.)

g. Because SB 1249 did not contain descriptions of the congressional districts until the morning of December 14, 2011, Senator Dinniman was denied the opportunity to determine how his constituents felt about SB 1249. (P-178 at 30.)

h. In late November or early December 2011, Senator Dinniman expressed concern about the status of SB 1249 to the Chairman of the PA Senate State Government Committee. (P-178 at 31-32, 34-35.)

i. The PA Senate State Government Committee has the capacity to use voting data in a very different and more sophisticated manner than the past. (P-178 at 40, 75-76.)

j. Senator Dinniman believes that incumbency protection factored into SB 1249. (P-178 at 73-74.)

127. State Representative Gregory Vitale (Representative Vitale) is a Democratic member of the PA House, who represents the 166th legislative district. From 1993 through 2003, Representative Vitale served on the PA House State Government Committee. (Petitioners' Ex. 179 (P-179) at 2-3.)

128. Representative Vitale testified[17] consistently with the facts set forth above in Section II.C., regarding the PA House's involvement in the enactment of the 2011 Plan. Representative Vitale also testified as follows:

a. The discussions regarding SB 1249 and the creation of the congressional districts were held "behind closed doors." (P-179 at 9-10, 16, 25.)

b. Representative Vitale believed that the 2011 Plan was the result of an agreement between the PA House Republicans, the PA Senate Republicans, and the then-Governor. (P-179 at 9-10.)

c. There were no public opportunities to participate in the drafting of SB 1249. (P-179 at 11.)

d. Representative Vitale believes that it is clear that the 2011 Plan was drawn to maximize the number of Republican congressional seats. (P-179 at 16-17.)

e. It was unique that SB 1249 was introduced as a "shell," with no content. Representative Vitale explained that, even with controversial bills, the initial version of the bill has some content and then the "behind-the-scenes" deal is inserted into the bill at the last second. Representative Vitale explained that with SB 1249, it was the same bill without any content, rather than a different bill where something was added at the last second. (P-179 at 18, 31-32.)

[17] The Court admitted into evidence as Petitioners' Exhibit 179 excerpts of Representative Vitale's deposition taken on December 4, 2017.

f. As a citizen and voter of the 7th Congressional District, Representative Vitale believes that the 7th Congressional District is an embarrassment. (P-179 at 21-22.)

g. Representative Vitale believes that the 7th Congressional District was created by computer-generated lines with the intent to find all Republican precincts to make the congressional seat competitive. (P-179 at 35.)

D. The 2011 Plan Congressional Districts

129. The 2011 Plan, which is depicted in Joint Exhibit 5, officially establishes the boundaries of Pennsylvania's congressional districts. (Joint Stip. of Facts at ¶¶ 63-64.)

130. The 1st Congressional District, which is depicted in Joint Exhibit 6, is composed of parts of Delaware and Philadelphia Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(1) of the 2011 Plan.

131. The 2nd Congressional District, which is depicted in Joint Exhibit 7, is composed of parts of Montgomery and Philadelphia Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(2) of the 2011 Plan.

132. The 3rd Congressional District, which is depicted in Joint Exhibit 8, is composed of all of Armstrong, Butler, and Mercer Counties and parts of Clarion, Crawford, Erie, and Lawrence Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(3) of the 2011 Plan.

133. The 4th Congressional District, which is depicted in Joint Exhibit 9, is composed of all of Adams and York Counties and parts of Cumberland and Dauphin Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(4) of the 2011 Plan.

134. The 5th Congressional District, which is depicted in Joint Exhibit 10, is composed of all of Cameron, Centre, Clearfield, Clinton, Elk, Forest, Jefferson, McKean, Potter, Venango, and Warren Counties and parts of Clarion, Crawford, Erie, Huntingdon, and Tioga Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(5) of the 2011 Plan.

135. The 6th Congressional District, which is depicted in Joint Exhibit 11, is composed of parts of Berks, Chester, Lebanon, and Montgomery Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(6) of the 2011 Plan.

136. The 7th Congressional District, which is depicted in Joint Exhibit 12, is composed of parts of Berks, Chester, Delaware, Lancaster, and Montgomery Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(7) of the 2011 Plan.

137. The evolution of the shapes of the 7th Congressional District from 1953 to 2013 is depicted in Joint Exhibit 24. (Joint Stip. of Facts at ¶ 66; N.T. at 614-15.)

138. The 8th Congressional District, which is depicted in Joint Exhibit 13, is composed of all of Bucks County and part of Montgomery County. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(8) of the 2011 Plan.

139. The 9th Congressional District, which is depicted in Joint Exhibit 14, is composed of all of Bedford, Blair, Fayette, Franklin, Fulton, and Indiana Counties and parts of Cambria, Greene, Huntingdon, Somerset, Washington, and Westmoreland Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(9) of the 2011 Plan.

140. The 10th Congressional District, which is depicted in Joint Exhibit 15, is composed of all of Bradford, Juniata, Lycoming, Mifflin, Pike,

Snyder, Sullivan, Susquehanna, Union, and Wayne Counties and parts of Lackawanna, Monroe, Northumberland, Perry, and Tioga Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(10) of the 2011 Plan.

141. The 11th Congressional District, which is depicted in Joint Exhibit 16, is composed of all of Columbia, Montour, and Wyoming Counties and parts of Carbon, Cumberland, Dauphin, Luzerne, Northumberland, and Perry Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(11) of the 2011 Plan.

142. The 12th Congressional District, which is depicted in Joint Exhibit 17, is composed of all of Beaver County and parts of Allegheny, Cambria, Lawrence, Somerset, and Westmoreland Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(12) of the 2011 Plan.

143. The 13th Congressional District, which is depicted in Joint Exhibit 18, is composed of parts of Montgomery and Philadelphia Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(13) of the 2011 Plan.

144. The 14th Congressional District, which is depicted in Joint Exhibit 19, is composed of parts of Allegheny and Westmoreland Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(14) of the 2011 Plan.

145. The 15th Congressional District, which is depicted in Joint Exhibit 20, is composed of all of Lehigh County and parts of Berks, Dauphin, Lebanon, and Northampton Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(15) of the 2011 Plan.

146. The 16th Congressional District, which is depicted in Joint Exhibit 21, is composed of parts of Berks, Chester, and Lancaster Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(16) of the 2011 Plan.

147. The 17th Congressional District, which is depicted in Joint Exhibit 22, is composed of all of Schuylkill County and parts of Carbon, Lackawanna, Luzerne, Monroe, and Northampton Counties, including Scranton, Wilkes-Barre, and Easton. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(17) of the 2011 Plan.

148. The 18th Congressional District, which is depicted in Joint Exhibit 23, is composed of parts of Allegheny, Greene, Washington, and Westmoreland Counties. (Joint Stip. of Facts at ¶ 65.) *See* Section 301(18) of the 2011 Plan.

149. The 2011 Plan splits 28 counties between at least 2 different congressional districts. The following table accurately depicts those 28 split counties:

Count	Split Counties	Number of Districts Falling Within
1	Allegheny	3
2	Berks	4
3	Cambria	2
4	Carbon	2
5	Chester	3
6	Clarion	2
7	Crawford	2
8	Cumberland	2
9	Dauphin	3
10	Delaware	2
11	Erie	2
12	Greene	2
13	Huntingdon	2
14	Lackawanna	2
15	Lancaster	2
16	Lawrence	2
17	Lebanon	2
18	Luzerne	2

19	Monroe	2
20	Montgomery	5
21	Northampton	2
22	Northumberland	2
23	Perry	2
24	Philadelphia	3
25	Somerset	2
26	Tioga	2
27	Washington	2
28	Westmoreland	4

(Joint Stip. of Facts at ¶ 90.)

150. Until 1992, there were no municipalities split into separate congressional districts at the census block level. In the 1992 Pennsylvania congressional district map, there were 3 municipalities split into separate congressional districts at the census block level. (Joint Stip. of Facts at ¶ 103.)

151. The 2011 Plan splits 68 out of Pennsylvania's 2,561 municipalities (2.66%) between at least 2 different congressional districts. The following table accurately depicts the 68 split municipalities:

Count	Split Municipalities
1	Archbald
2	Barr
3	Bethlehem
4	Caln
5	Carbondale
6	Chester
7	Cumru
8	Darby
9	East Bradford
10	East Carroll
11	East Norriton
12	Fallowfield
13	Glenolden
14	Harrisburg
15	Harrison

16	Hatfield
17	Hereford
18	Horsham
19	Kennett
20	Laureldale
21	Lebanon
22	Lower Alsace
23	Lower Gwynedd
24	Lower Merion
25	Mechanicsburg
26	Millcreek
27	Monroeville
28	Morgan
29	Muhlenberg
30	North Lebanon
31	Northern Cambria
32	Olyphant
33	Penn
34	Pennsbury
35	Perkiomen
36	Philadelphia
37	Piney
38	Plainfield
39	Plymouth Township
40	Ridley
41	Riverside
42	Robinson
43	Sadsbury
44	Seven Springs
45	Shippen
46	Shippensburg
47	Shirley
48	Spring
49	Springfield
50	Stroud
51	Susquehanna
52	Throop
53	Tinicum
54	Trafford

55	Upper Allen
56	Upper Darby
57	Upper Dublin
58	Upper Gwynedd
59	Upper Hanover
60	Upper Merion
61	Upper Nazareth
62	West Bradford
63	West Hanover
64	West Norriton
65	Whitehall
66	Whitemarsh
67	Whitpain
68	Wyomissing

The municipalities of Seven Springs, Shippensburg, and Trafford are naturally split across counties. (Joint Stip. of Facts at ¶¶ 91, 121.)

152. Under the 2011 Plan, 11 of Pennsylvania's 18 congressional districts contain more than 3 counties that are divided into separate districts. (Joint Stip. of Facts at ¶ 92.)

153. The 2011 Plan splits Montgomery County (population 799,814) into 5 congressional districts. (Joint Stip. of Facts at ¶ 93.)

154. The 2011 Plan splits Westmoreland County (population 365,169) into 4 congressional districts. (Joint Stip. of Facts at ¶ 95.)

155. The 2011 Plan splits the city of Monroeville into 3 different congressional districts: the 12th, 14th, and 18th. (Joint Stip. of Facts at ¶ 96.)

156. The 2011 Plan splits the municipality of Caln Township into 3 different congressional districts: the 6th, 7th, and 16th. (Joint Stip. of Facts at ¶ 97.)

157. The 2011 Plan splits the municipality of Cumru Township into 3 different congressional districts: the 6th, 7th, and 16th. Cumru Township is a naturally non-contiguous municipality. (Joint Stip. of Facts at ¶ 98.)

158. The 2011 Plan splits the municipality of Spring Township into 3 different congressional districts: the 6th, 7th, and 16th. (Joint Stip. of Facts at ¶ 99.)

159. From at least 1962 until the 2002 congressional district map, all of Berks County lied within a single district. (Joint Stip. of Facts at ¶ 104.)

160. Under the 2011 Plan, Berks County (population 411,442) is split into 4 congressional districts: the 6th, 7th, 15th, and 16th. (Joint Stip. of Facts at ¶¶ 94, 105.)

161. Under the 2011 Plan, the City of Reading is located in the 16th Congressional District, separate from other parts of Berks County. (Joint Stip. of Facts at ¶ 106.)

162. Under the 2011 Plan, Dauphin County is split into 3 congressional districts: the 4th, 11th, and 15th. (Joint Stip. of Facts at ¶ 107.)

163. Under the 2011 Plan, the City of Harrisburg is divided between the 4th and 11th Congressional Districts. (Joint Stip. of Facts at ¶ 108.)

164. Two divisions of Harrisburg's 1st Ward are located in the 11th Congressional District, while the rest of Harrisburg is located in the 4th Congressional District. (Joint Stip. of Facts at ¶ 118.)

165. The 2011 Plan splits Northampton County. (Joint Stip. of Facts at ¶ 109.)

166. Under the 2011 Plan, Easton is located in the 17th Congressional District and split from the rest of Northampton County, which is located in the 15th Congressional District. (Joint Stip. of Facts at ¶ 115.)

167. Under the 2011 Plan, parts of the City of Chester, all of Swarthmore, and parts of Philadelphia are all located in the 1st Congressional District. (Joint Stip. of Facts at ¶ 110.)

168. In the 2011 Plan, the City of Chester is divided between the 1st Congressional District and the 7th Congressional District. (Joint Stip. of Facts at ¶ 116.)

169. Under the 2011 Plan, Coatesville is located in the 16th Congressional District and split from other parts of Chester County. (Joint Stip. of Facts at ¶ 111.)

170. Under the 2011 Plan, Wilkes-Barre is located in the 17th Congressional District and split from other parts of Luzerne County. (Joint Stip. of Facts at ¶ 112.)

171. From at least 1966 until the 2002 congressional district map, the 11th Congressional District incorporated both Scranton and Wilkes-Barre. (Joint Stip. of Facts at ¶ 119.)

172. From at least 1931 until the 2011 Plan, Erie County was not split between congressional districts. (Joint Stip. of Facts at ¶ 113.)

173. Under the 2011 Plan, Erie County is split between 2 congressional districts. (Joint Stip. of Facts at ¶ 113.)

174. Under the 2011 Plan, the City of Bethlehem is divided between the 15th Congressional District and the 17th Congressional District. (Joint Stip. of Facts at ¶ 114.)

175. Four census blocks in a single ward of the City of Bethlehem are contained in a different congressional district in the 2011 Plan. (Joint Stip. of Facts at ¶ 120.)

176. The 2011 Plan keeps Armstrong, Butler, Mercer, Venango, and Warren Counties whole. Such counties were split in Pennsylvania's 2002 congressional district map. (Joint Stip. of Facts at ¶ 117.)

177. The 2011 Plan paired 2 incumbents in a single district, Democratic Congressman Mark Critz (Critz) and Jason Altmire (Altmire). No other incumbents were paired. (Joint Stip. of Facts at ¶ 122.)

178. Under the prior congressional districting plan, Critz had been in the 12th Congressional District and Altmire had been in the 4th Congressional District. (Joint Stip. of Facts at ¶ 123.)

179. In the 2012 election cycle, Critz defeated Altmire in the Democratic primary. (Joint Stip. of Facts at ¶ 124.)

180. In the 2012 election cycle, Critz lost to Republican Keith Rothfus (Rothfus) in the general election. (Joint Stip. of Facts at ¶ 125.)

181. Rothfus has won re-election in the 12th Congressional District in every election since 2012. (Joint Stip. of Facts at ¶ 126.)

E. Pennsylvania Election Results[18]

182. The following chart represents the 17 largest counties in Pennsylvania by population and which of those counties voted Democratic in the 2008, 2012, and 2016 Presidential elections:

[18] The election returns that Acting Secretary Torres and Commissioner Marks produced in response to Petitioners' first set of requests for production are true and correct. (Joint Stip. of Facts at ¶ 69.)

County by Population	County	2008	2012	2016
1.	Philadelphia	X	X	X
2.	Allegheny	X	X	X
3.	Montgomery	X	X	X
4.	Bucks	X	X	X
5.	Delaware	X	X	X
6.	Lancaster			
7.	Chester	X		X
8.	York			
9.	Berks	X		
10.	Westmoreland			
11.	Lehigh	X	X	X
12.	Luzerne	X	X	
13.	Northampton	X	X	
14.	Erie	X	X	
15.	Dauphin	X	X	X
16.	Cumberland			
17.	Lackawanna	X	X	X

(Joint Stip. of Facts at ¶ 68.)

183. In the 2012 congressional elections, Democrats won 50.8% of the two-party statewide congressional vote. (Joint Stip. of Facts at ¶ 71.)

184. In the 2012 congressional elections, Republicans won 13 of the 18 congressional seats. Democrats won 5 congressional seats. (Joint Stip. of Facts at ¶ 72.)

185. In the 2012 congressional elections, each party's share of the two-party vote in the congressional districts the party won were as follows:

District	Democratic Vote	Republican Vote
1	84.9%	
2	90.5%	
13	69.1%	
14	76.9%	
17	60.3%	
3		57.2%
4		63.4%
5		62.9%
6		57.1%
7		59.4%
8		56.6%
9		61.7%
10		65.6%
11		58.5%
12		51.7%
15		56.8%
16		58.4%
18		64.0%
Average of Districts Won by Party	**76.4%**	**59.5%**
Statewide Vote Share	**50.8%**	**49.2%**

(Joint Stip. of Facts at ¶ 73.)

186. The following table shows the Democratic two-party vote share for each of Pennsylvania's congressional districts in 2012:

District	Democratic Vote Share
10	34.4%
18	36.0%
4	36.6%
5	37.1%
9	38.3%
7	40.6%
11	41.5%
16	41.6%
3	42.8%
6	42.9%
15	43.2%
8	43.4%
12	48.3%
17	60.3%
13	69.1%
14	76.9%
1	84.9%
2	90.5%
Mean	**50.5%**
Median	**42.8%**

(Joint Stip. of Facts at ¶ 86.)

187. In the 2012 congressional election, the mean Democratic two-party vote share across all districts was 50.46%. The median Democratic two-party vote share was 42.81% (the average of the 6th and 3rd Congressional Districts, which were Democrats' 9th and 10th best districts). (Joint Stip. of Facts at ¶ 87.)

188. In the 2014 congressional elections, Republicans won 55.5% of the two-party statewide congressional vote. (Joint Stip. of Facts at ¶ 74.)

189. In the 2014 congressional elections, Republicans won 13 of the 18 congressional seats. Democrats won 5 congressional seats. (Joint Stip. of Facts at ¶ 75.)

190. In the 2014 congressional elections, the elections in the 14th, 15th, and 18th Congressional Districts were uncontested. (Joint Stip. of Facts at ¶ 76.)

191. In the 2014 congressional elections, there was no Democratic challenger in the 15th and 18th Congressional Districts. (Joint Stip. of Facts at ¶ 77.)

192. In the 2014 contested congressional elections, each party's share of the two-party vote in the districts the party won were as follows:

District	Democratic Vote	Republican Vote
1	82.8%	
2	87.7%	
13	67.1%	
14	100%	
17	56.8%	
3		60.6%
4		74.5%
5		63.6%
6		56.3%
7		62.0%
8		61.9%
9		63.5%
10		71.6%
11		66.3%
12		59.3%
15		100%
16		57.7%
18		100%
Average of Contested Districts Won by Party	**73.6%**	**63.4%**
Statewide Vote Share	**44.5%**	**55.5%**

(Joint Stip. of Facts at ¶ 78.)

193. In 2014, the average two-party vote share for successful Democratic congressional candidates was 73.6%, as compared to 63.4% for successful Republican congressional candidates (excluding uncontested elections). (Joint Stip. of Facts at ¶ 79.)

194. In the 2016 congressional elections, Republicans won 54.1% of the two-party statewide congressional vote. (Joint Stip. of Facts at ¶ 80.)

195. In the 2016 congressional elections, Republicans won 13 of the 18 congressional seats. Democrats won 5 congressional seats. (Joint Stip. of Facts at ¶ 81.)

196. In the 2016 congressional elections, the elections in the 3rd, 13th, and 18th Congressional Districts were uncontested. (Joint Stip. of Facts at ¶ 83.)

197. In the 2016 congressional elections, there was no Democratic challenger in the 3rd and 18th Congressional Districts. (Joint Stip. of Facts at ¶ 84.)

198. In the 2016 congressional elections, each party's share of the two-party vote in the districts the party won were as follows:

District	Democratic Vote	Republican Vote
1	82.2%	
2	90.2%	
13	100.0%	
14	74.4%	
17	53.8%	
3		100.0%
4		66.1%
5		67.2%
6		57.2%
7		59.5%
8		54.4%
9		63.3%

District	Democratic Vote	Republican Vote
10		70.2%
11		63.7%
12		61.8%
15		60.6%
16		55.6%
18		100.0%
Average of Contested Districts Won by Party	**75.2%**	**61.8%**
Statewide Vote Share	**45.9%**	**54.1%**

(Joint Stip. of Facts at ¶ 82.)

199. In 2016, the average two-party vote share for successful Democratic congressional candidates was 75.2%, as compared to 61.8% for successful Republican congressional candidates (excluding uncontested elections). (Joint Stip. of Facts at ¶ 85.)

200. In the 3 election cycles that have taken place since the last redistricting in Pennsylvania, Democrats have won 5 of the 18 congressional seats. (Joint Stip. of Facts at ¶ 100.)

201. In each of the 3 congressional elections that have taken place under the 2011 Plan, Republican candidates have won the same 13 districts. (Joint Stip. of Facts at ¶ 101.)

202. The following table depicts the partisan distribution of congressional seats in Pennsylvania's congressional delegation from 2012-2016:

Year	Districts	Democratic Seats	Republican Seats	Democratic Vote Percentage	Republican Vote Percentage
2012	18	5	13	50.8%	49.2%
2014	18	5	13	44.5%	55.5%
2016	18	5	13	45.9%	54.1%

The vote percentages are based on the two-party share of the votes cast. (Joint Stip. of Facts at ¶ 102.)

203. In the 2016 elections, the 6th and 7th Congressional Districts re-elected Republican Congressmen while voting for Democratic nominee Hillary Clinton, former Secretary of State (Secretary Clinton) for President. (Joint Stip. of Facts at ¶¶127, 206.)

204. In the 2016 elections, the 17th Congressional District re-elected a Democratic Congressman while voting for Donald Trump for President. (Joint Stip. of Facts at ¶ 128.)

F. Pennsylvania Voting Patterns

205. By the November 2016 election, 24 Pennsylvania counties had more registered Democrats than registered Republicans, while 43 Pennsylvania counties had more registered Republicans than registered Democrats. (Joint Stip. of Facts at ¶ 203.)

206. Overall, from November 2012 to November 2016, percentages of registered Republicans increased in 59 Pennsylvania counties, while percentages of registered Republicans decreased in 8 Pennsylvania counties. (Joint Stip. of Facts at ¶ 204.)

207. From November 2012 to November 2016, percentages of registered Democrats increased in 5 Pennsylvania counties, while percentages of

registered Democrats decreased in 62 Pennsylvania counties. (Joint Stip. of Facts at ¶ 205.)

208. Twenty-four Pennsylvania counties had more registered Democrats than registered Republicans at the time of the 2016 Presidential Election. Secretary Clinton won 11 Pennsylvania counties in the 2016 Presidential Election. (Joint Stip. of Facts at ¶ 206.)

209. Three Pennsylvania counties that President Obama won in 2012 voted for President Trump in 2016: Erie County, Northampton County, and Luzerne County. (Joint Stip. of Facts at ¶ 207.)

210. President Trump won Erie County by 48.57% to Secretary Clinton's 46.99%. Registered Democrats outnumbered registered Republicans by 51.31% to 35.48% in Erie County in November 2016. (Joint Stip. of Facts at ¶ 208.)

211. President Trump won Northampton County by 49.98% to Secretary Clinton's 46.18%. Registered Democrats outnumbered registered Republicans by 46.87% to 34.76% in Northampton County in November 2016. (Joint Stip. of Facts at ¶ 209.)

212. President Trump won Luzerne County by 58.29% to Secretary Clinton's 38.86%. Registered Democrats outnumbered registered Republicans by 52.62% to 36.10% in Luzerne County in November 2016. (Joint Stip. of Facts at ¶ 210.)

213. President Trump's performance in Luzerne County improved by 11.42 percentage points over the 2012 Republican nominee, Mitt Romney, who won 46.87% of the vote in Luzerne County. (Joint Stip. of Facts at ¶ 211.)

214. In November 2016, Fayette County had 57.96% registered Democrats. President Trump won 64.33% of the vote in Fayette County. (Joint Stip. of Facts at ¶ 212.)

215. In November 2016, Greene County had 55.22% registered Democrats. President Trump won 68.82% of the vote in Greene County. (Joint Stip. of Facts at ¶ 213.)

216. In November 2016, Cambria County had 52.25% registered Democrats. President Trump won 67% of the vote in Cambria County. (Joint Stip. of Facts at ¶ 214.)

217. In November 2016, Beaver County had 52.15% registered Democrats. President Trump won 57.64% of the vote in Beaver County. (Joint Stip. of Facts at ¶ 215.)

218. In 2016, President Trump won Pennsylvania, Republican Pat Toomey was re-elected to the United States Senate, and Democratic candidates won statewide races for Attorney General, Treasurer, and Auditor General. (Joint Stip. of Facts at ¶ 216.)

219. In 2016, not all registered Democrats in Pennsylvania voted straight Democratic. (Joint Stip. of Facts at ¶ 217.)

220. In 2016, at least some voters voted Republican for President and United States Senate while voting Democratic for other statewide officers. (Joint Stip. of Facts at ¶ 218.)

G. Petitioners' Beliefs Regarding How the 2011 Plan Has Affected Their Ability to Influence the Political Process

221. Some Petitioners believe that the 2011 Plan has taken away their ability to vote for a candidate that has a chance of winning the election for their congressional districts. (N.T. at 113, 140, 674; P-166 at 8; P-177 at 12.)

222. Some Petitioners believe that the 2011 Plan lessens the power, strength, impact, and/or weight of their vote. (P-163 at 2, 4, 7-10, 13, 15; P-170 at 7, 15-16, 18; P-174 at 7-8.)

223. At least one of Petitioners believes that his vote does not count under the 2011 Plan. (P-164 at 11.)

224. At least one of Petitioners believes that the 2011 Plan prevents him from having a meaningful effect on who is elected in his congressional district. (P-167 at 19.)

225. Some Petitioners believe that the 2011 Plan has taken away their ability to express themselves and/or to have their voices effectively heard about issues that are important to them. (N.T. at 113-14, 125, 680-81; P-164 at 5-6; P-167 at 20; P-169 at 4-6, 8-9; P-173 at 66; P-175 at 16-17; P-177 at 6.)

226. Some Petitioners believe that under the 2011 Plan, they do not have a Congressman that fairly/adequately represents them and their points of view/interests. (N.T. at 117-18, 141-43, 675-77; P-165 at 8-9; P-166 at 6-7, 12; P-168 at 10-11; P-170 at 14-15; P-177 at 10-11.)

227. Some Petitioners believe that under the 2011 Plan, they do not have access to their Congressman and/or are unable to communicate with their Congressman because their Congressman makes himself unavailable—*e.g.*, they are unable to reach their Congressman at his offices, their Congressman does not hold town halls, and their Congressman is nonresponsive to inquiries. (N.T. at 116-17, 130, 143-46, 148; P-164 at 7; P-165 at 9-10; P-167 at 7, 10-12; P-176 at 4-5, 8.)

228. Some Petitioners believe that under the 2011 Plan, their current Congressman has no reason to listen to their concerns about issues that are

important to them because their Congressman does not need their votes to be re-elected. (N.T. at 118, 126, 146; P-164 at 5, 8; P-165 at 9; P-176 at 7, 10-11; P-177 at 15.)

229. Some Petitioners believe that the congressional districts created by the 2011 Plan are unfair. (N.T. at 125, 681; P-163 at 10-11; P-164 at 8-9; P-165 at 6-7, 12, 13; P-166 at 7-8; P-168 at 6-7, 11-12; P-170 at 12; P-171 at 43-44, 68-69; P-173 at 37-38; P-177 at 8-9, 12-13.)

230. Some Petitioners believe that under the 2011 Plan their communities of interest are not located within their congressional districts and that Petitioners' communities do not have anything in common with the other communities that are located within their congressional districts. (N.T. at 677-79, 681-82; P-164 at 4-5, 9-10; P-167 at 12, 14-15.)

231. At least one of Petitioners believes that the 2011 Plan harms his community of interest by splitting it between congressional districts, and, as a result, his community of interest does not have a single Congressman representing its interests. (P-168 at 9-10.)

232. At least one of Petitioners believes that the 2011 Plan makes his Congressman more beholden to the party politics and donors than to the voters. (P-167 at 9-10, 13.)

233. Some Petitioners believe that the 2011 Plan has deterred potential Democratic candidates from running against the Republican incumbents in their congressional districts, and, therefore, they do not have a candidate to vote for or a choice regarding who their Congressperson will be. (P-171 at 41-43, 50, 84; P-177 at 15-16.)

234. At least one of Petitioners believes that the 2011 Plan has created a lack of trust in democracy. (P-172 at 12-13, 17.)

H. Expert Testimony

1. Jowei Chen, Ph.D.

235. The Court accepted Jowei Chen, Ph.D., as an expert in the areas of redistricting and political geography without objection from counsel. (N.T. at 164.)

236. Dr. Chen is an associate professor in the Department of Political Science at the University of Michigan, Ann Arbor; a faculty associate at the Center for Political Studies of the Institute for Social Research at the University of Michigan; and a research associate at the Spatial Social Science Laboratory at Stanford University. (Petitioners' Ex. 1 (P-1) at 1; N.T. at 153-54.) Dr. Chen received an M.S. in statistics from Stanford University in 2007 and a Ph.D. in political science from Stanford University in 2009. (P-1 at 1; N.T. at 153.) Dr. Chen has published academic papers on political geography and districting in political science journals and has expertise in the use of computer algorithms and geographic information systems to study questions related to political and economic geography and redistricting. (P-1 at 1; N.T. at 154-64.)

237. Dr. Chen analyzed the 2011 Plan for the purposes of determining: (1) whether partisan intent was the predominant factor in the drawing of the 2011 Plan; (2) the effect of the 2011 Plan on the number of congressional Democrats and Republicans elected from Pennsylvania; and (3) the effect of the 2011 Plan on the ability of the individual Petitioners to elect a Democrat or Republican congressional candidate from their respective districts. (P-1 at 1-2; N.T. at 165.)

238. Dr. Chen developed various computer simulation programming techniques that allow him to produce a large number of nonpartisan districting plans that adhere to traditional districting criteria using U.S. Census geographies as building blocks. (P-1 at 2; N.T. at 166-69, 205-06.)

239. Dr. Chen's computer simulation process ignored all partisan and racial considerations when drawing districts. (P-1 at 2; N.T. at 370-71.)

240. Dr. Chen's computer simulation process generally utilized traditional districting criteria, which Dr. Chen identified as equalizing population, contiguity, maximizing geographic compactness, and preserving county and municipal boundaries. (P-1 at 2; N.T. at 167.)

241. Dr. Chen analyzed the 2011 Plan against simulated districting plans developed following traditional districting criteria (and some that also provided for incumbency protection) in order to determine whether the distribution of partisan outcomes created by the 2011 Plan plausibly could have emerged from a nonpartisan districting process and, thus, be explained by nonpartisan factors. (P-1 at 5; N.T. at 165-66.)

242. Dr. Chen opined that by holding constant the application of those nonpartisan traditional districting criteria through the simulations, he was able to determine whether the 2011 Plan could have been the product of something other than the intentional pursuit of partisan advantage. (P-1 at 2; N.T. at 166.)

243. Dr. Chen, using a computer algorithm designed to follow closely and optimize the nonpartisan traditional districting criteria he identified, generated 500 simulated districting plans that each would create 18 Pennsylvania congressional voting districts (Set 1). (P-1 at 2; N.T. at 167-68.)

244. Dr. Chen, using the computer algorithm used for Set 1 with the additional criterion of preserving the seats of 17 of the 19 incumbent Pennsylvania Congresspersons who held seats at the time of the creation of the 2011 Plan (the 2012 Incumbents), generated another 500 simulated districting plans that each would create 18 Pennsylvania congressional voting districts (Set 2). (P-1 at 2, 4; N.T. at 172-73, 205-06.)

245. The algorithms prioritized the traditional voting criteria identified by Dr. Chen in the following order: (1) equal population; (2) contiguity of districts; (3) minimization of counties split between districts; (4) minimization of municipality splits; and (5) compactness. (N.T. at 383.)

246. The algorithm for the Set 2 simulated districting plans intentionally guaranteed that 17 of 19 2012 Incumbents resided in separate districts, thus avoiding any pairing of any of the 2012 Incumbents in those 17 districts. Beyond this intentional incumbent protection, the Set 2 algorithm otherwise prioritized the same 5 nonpartisan traditional districting criteria followed in the algorithm for Set 1. Importantly, the computer algorithms ignored the partisanship and the identities of the 2012 Incumbents. (P-1 at 24; N.T. at 206-08.)

247. Dr. Chen's districting simulation process used precisely the same U.S. Census geographies and population data that the General Assembly used in creating congressional voting districts, and, therefore, the simulated districting plans created by Dr. Chen account for the same population patterns and political boundaries across Pennsylvania that the General Assembly encountered when drawing the congressional voting districts under the 2011 Plan. (P-1 at 6; N.T. at 189-90.)

248. Pennsylvania's 2010 U.S. Census population was 12,702,379, so congressional voting districts in the 18-district plan have an ideal population of 705,687.7. Dr. Chen's algorithm was designed to populate 5 simulated districts with 705,687 and 13 simulated districts with 705,688. (P-1 at 8; N.T. at 167.)

249. Dr. Chen's algorithm required districts to be geographically contiguous, with point contiguity prohibited, meaning the districts had to be connected by more than a mere point. (P-1 at 8; N.T. at 167, 456-57, 464.)

250. Dr. Chen's algorithm attempted to avoid splitting any of Pennsylvania's 67 counties, except when doing so was necessary to avoid creating an unequally populated district. (P-1 at 8; N.T. at 167.)

251. Dr. Chen's algorithm also attempted to avoid splitting Pennsylvania's 2,562 municipalities, except where doing so was necessary to avoid creating unequally populated districts or to avoid additional county splits. (P-1 at 8; N.T. at 368-69.)

252. With regard to compactness, Dr. Chen's algorithm prioritized the drawing of geographically compact districts whenever doing so did not violate the aforementioned criteria. (P-1 at 9; N.T at 174-77.)

253. Dr. Chen calculated the geographic compactness of the simulated districting plans by using common measures of compactness—*i.e.*, by using the "Reock" and "Popper Polsby" measures of compactness. (P-1 at 9; N.T. at 166.)

254. After completing the simulations, Dr. Chen measured aspects of the simulated districting plans (Set 1 and Set 2) and the same aspects of the 2011 Plan to determine the extent to which the 2011 Plan deviated from

the 1,000 simulated districting plans (Set 1 and Set 2), beginning with Set 1. (P-1 at 2; N.T. at 166.)

255. Dr. Chen observed that the simulated districting plans in Set 1 all divided less counties than the 2011 Plan, and the 2011 Plan divided far more counties than was reasonably necessary. (P-1 at 2; N.T. at 179-80.) The Set 1 simulated plans split 11 to 16 counties, whereas the 2011 Plan split 28 counties. (P-1 at 8; N.T. 416-17.)

256. Dr. Chen opined that the Set 1 simulation results demonstrated that the 2011 Plan divided more municipalities than the simulated districting plans. The simulated districting plans split 40-58 municipalities, whereas the 2011 Plan split 68 municipalities. (P-1 at 8-9; N.T. at 180-81.)

257. Dr. Chen opined that, based on the Set 1 simulation results, the 2011 Plan's splitting of 28 counties and 68 municipalities was an outcome that could not plausibly have emerged from a districting process that prioritizes traditional districting criteria. (P-1 at 17; N.T. at 181.)

258. Dr. Chen, using the common measures of compactness identified above, observed that the 2011 Plan is significantly less compact than every single one of the Set 1 simulated districting plans and that the 2011 Plan is significantly more geographically non-compact than necessary. (P-1 at 3, 9; N.T. at 180-83.)

259. Dr. Chen also considered the partisan performance of each precinct and opined that the most reliable method of comparing the partisan performance of different legislative districts within a state is to consider whether the districts—and more specifically the precincts that comprise each district—have tended to favor Republican or Democratic candidates in recent competitive

statewide elections. (P-1 at 12; N.T. at 190, 291-92.) He also opined that voter registration data is less reliable for predicting partisanship than recent statewide elections. (P-1 at 12; N.T. at 184, 193-94.)

260. Dr. Chen based his partisan performance calculations for the precincts on the actual votes cast for Republican and Democratic candidates in the following Pennsylvania statewide elections: 2008 Presidential, 2008 Attorney General, 2010 U.S. Senatorial, and 2010 Gubernatorial. He did not base his calculations on voter registration records. (P-1 at 13; N.T. at 186-89.)

261. Dr. Chen chose those election results because they were the most recent results prior to the enactment of the 2011 Plan, they were reasonably closely-contested elections, and the precinct-level vote counts from those elections were available to the General Assembly during its enactment of the 2011 Plan. (P-1 at 13-14; N.T. at 189-90.)

262. Dr. Chen took the election results at the precinct level for the statewide elections identified above and overlaid those precinct level results onto the simulated districting plans and 2011 Plan. Dr. Chen then calculated the number of districts that would have been won by Democrats and Republicans under each districting plan in order to measure the partisan performance of the districting plan. (P-1 at 6-7; N.T. at 185-86, 195-97.)

263. Dr. Chen determined that the 2011 Plan resulted in 13 of the 18 congressional voting districts having partisan performance calculations favoring Republican candidates. Those 13 congressional voting districts correspond with the same 13 districts that have consistently elected Republican congressional representatives during the 2012, 2014, and 2016 general elections. (P-1 at 3, 14; N.T. at 166, 198, 201-04.)

264. Dr. Chen determined that the Set 1 simulated districting plans resulted in the creation of 7 to 10 congressional voting districts having partisan performance calculations favoring Republican candidates and did not result in any simulated districting plan having 13 congressional voting districts with partisan performance calculations favoring Republicans. (P-1 at 3; N.T. at 233.)

265. Dr. Chen opined that the 2011 Plan represents an extreme statistical outlier, creating a level of partisan bias not observed in a single one of the simulated districting plans designed using traditional districting criteria. (P-1 at 3; N.T. at 233.)

266. Dr. Chen assessed the predictive strength of his measure of partisan performance—using precinct-level results from the 2008 and 2010 statewide elections—to predict the congressional elections under the 2011 Plan. Using his measure of partisan performance, Dr. Chen was able to accurately predict the results for 54 out of 54 congressional elections in 2012, 2014, and 2016. (N.T. at 201-04, 410-12.)

267. Based on his analysis of partisan performance calculations, Dr. Chen concluded that the 2011 Plan creates several more congressional voting districts with partisan performance calculations favoring Republicans, which resulted in several more Republican seats than what is generally achievable under a map drawing process respecting nonpartisan, traditional districting criteria. (P-1 at 3; N.T. at 205.)

268. Dr. Chen further concluded, based on the Set 1 simulations, that partisan consideration predominated over other nonpartisan criteria, particularly minimizing county splits and maximizing compactness, in the drawing of the

congressional voting districts in the 2011 Plan. (P-1 at 3, 20; N.T. at 166, 204, 220.)

269. Dr. Chen also compared the Set 1 simulated districting plans to the 2011 Plan by calculating the mean-median gap of the plans. (P-1 at 20; N.T. at 261-63.)

270. Dr. Chen explained that the mean-median gap is another accepted method that redistricting scholars commonly use to compare the relative partisan bias of different districting plans. (P-1 at 20; N.T. at 257.)

271. Dr. Chen explained that the mean of a districting plan is calculated as the average of the Republican vote share across all 18 congressional voting districts, and the median is the Republican vote share in the congressional voting district where Republicans performed the middle-best. (P-1 at 20; N.T. at 257-58.)

272. Dr. Chen, using the aggregated results of the 2008-2010 statewide elections, calculated that the congressional voting districts created by the 2011 Plan have a mean Republican vote share of 47.5%, while the median district has a Republican vote share of 53.4%. Thus, the 2011 Plan has a mean-median gap of 5.9%, indicating that the median district is skewed significantly more Republican than the 2011 Plan's average district. In other words, the 2011 Plan distributes voters across congressional voting districts in such a way that most districts are significantly more Republican-leaning than the average Pennsylvania district, while Democratic voters are more heavily concentrated in a minority of the congressional voting districts. (P-1 at 20; N.T. at 260-64.)

273. Dr. Chen opined that the skew of the mean-median gap in the 2011 Plan created a significant advantage for Republicans by giving them stronger control over the median district. (P-1 at 20; N.T. at 262.)

274. Dr. Chen considered whether the significant mean-median gap arose naturally from applying traditional districting criteria to Pennsylvania, given the state's unique voter geography, or whether the skew in the 2011 Plan's mean-median gap is explainable only as the product of an intentional partisan effort to favor one party over another in the drawing of the congressional voting districts by deviating from traditional districting criteria. (P-1 at 20; N.T. at 260, 264.)

275. To determine the cause of the significant mean-median gap, Dr. Chen examined the range of mean-median gaps that would have arisen under the Set 1 simulated districting plans. The Set 1 simulated districting plans produced mean-median gaps ranging from 0.1% to 4.5%, with the vast majority of the plans producing a mean-median ranging from 0.1% to 3%. (P-1 at 21-22, Fig. 5; N.T. at 262-64.)

276. Dr. Chen concluded with extremely strong statistical certainty that the 2011 Plan's mean-median gap of 5.9% is not the result of Pennsylvania's natural political geography combined with the application of traditional districting criteria. (P-1 at 21; N.T. at 264.)

277. The fact that the Set 1 simulated districting plans all produced a mean-median gap, albeit smaller than the 2011 Plan's mean-median gap, indicates that voter geography is modestly skewed in a manner that slightly benefits Republicans in districting. Dr. Chen opined that this modest skew in the

Set 1 simulated districting plans resulted naturally because Democratic voters tend to cluster in large, urban areas of Pennsylvania. (P-1 at 21; N.T. at 263.)

278. Dr. Chen opined that the range of this natural skew in the Set 1 simulated voting plans, however, is always much smaller than the 5.9% mean-median gap observed in the 2011 Plan. (P-1 at 21; N.T. at 263.)

279. Dr. Chen concluded, based on his analysis of the mean-median gap of the Set 1 simulated districting plans and the 2011 Plan, that the 2011 Plan created an extreme partisan outcome that cannot be explained by Pennsylvania's voter geography or by any of the traditional districting criteria. Instead, the extremity of the 2011 Plan's mean-median gap can be explained only by a districting process that pursued a partisan goal by subordinating traditional districting criteria in the drawing of congressional voting districts. (P-1 at 21; N.T. at 264.)

280. Dr. Chen considered whether an attempt to protect the maximum number of 2012 Incumbents might explain the 2011 Plan's partisan bias. (P-1 at 3, 23; N.T. at 265.)

281. By examining the home residential addresses of the 2012 Incumbents, who were 12 Republicans and 7 Democrats, Dr. Chen observed that the 2011 Plan protected 17 of the 19 2012 Incumbents by avoiding the pairing of 2 or more of the 2012 Incumbents into the same congressional voting district. (P-1 at 3-4, 23; N.T. at 266.)

282. The 2011 Plan paired only Altmire and Critz, the incumbents from the then 4th and 12th Congressional Districts, in a single congressional voting district. (P-1 at 23; N.T. at 225.)

283. Dr. Chen concluded that it was statistically implausible that the 2011 Plan's outcome of 17 protected 2012 Incumbents could have arisen by chance as a result of traditional districting criteria without an intentional effort to protect the 2012 Incumbents. (P-1 at 23; N.T. at 236-37.)

284. Dr. Chen opined that the protection of incumbents is not a traditional districting principle used in the drawing of congressional voting districts. (P-1 at 24; N.T. at 206.) *But see Vieth v. Jubelirer*, 541 U.S. 267, 298 (2004) (plurality opinion) (recognizing incumbency protection as traditional districting principle); *Bush v. Vera*, 517 U.S. 952, 1047-48 (1996) (*Vera*) (Souter, J., dissenting) (acknowledging incumbency protection to be traditional and constitutionally acceptable districting principle).

285. Dr. Chen then analyzed the Set 2 simulated districting plans, which Dr. Chen created by applying nonpartisan traditional districting criteria plus the criterion of protecting 17 of the 19 2012 Incumbents. (P-1 at 23-24; N.T. at 205-07.)

286. The Set 2 simulated districting plans accomplished the goal of protecting 17 of the 19 2012 Incumbents, as did the 2011 Plan, but the Set 2 simulated districting plans achieved this protection at the cost of only a small increase in split counties and a modest decrease in district compactness. (P-1 at 23-24; N.T. at 230-32.) The Set 2 simulated districting plans split between 12 to 19 counties, with the vast majority splitting 15, 16, or 17 counties, whereas the 2011 Plan split 28 counties. (P-1 at 23-24; N.T. at 216-17.)

287. Dr. Chen opined that the 2011 Plan's splitting of 28 counties is still very significantly outside of the entire range of Set 2 simulated districting plans. (P-1 at 24; N.T. at 216-17.)

288. Dr. Chen opined that the 2011 Plan had significantly lower compactness scores than the Set 2 simulated districting plans, and the 2011 Plan's compactness scores were outside the entire range of the compactness scores for the Set 2 simulated districting plans. (P-1 at 24; N.T. at 214.)

289. Dr. Chen concluded, based on his analysis of the Set 2 simulated districting plans, that the 2011 Plan's deviations from the traditional districting criteria of compactness and avoiding county splits are not explained by the goal of protecting 17 of the 2012 Incumbents. (P-1 at 24; N.T. at 217.)

290. Dr. Chen also compared the partisan performance of the Set 2 simulated districting plans to the partisan performance of the 2011 Plan and observed that the vast majority (98%) of the Set 2 simulated districting plans produced 8 to 11 congressional voting districts with partisan performance favoring Republicans. Not one of the Set 2 simulated districting plans contained 13 voting districts with partisan performance favoring Republicans. (P-1 at 27; N.T. at 222.)

291. Dr. Chen concluded with an overwhelmingly high degree of statistical certainty that even an extensive effort by the General Assembly to protect as many of the 2012 Incumbents as possible, while otherwise adhering to nonpartisan traditional districting criteria, would not explain or somehow necessitate the creation of a congressional map with a 13-5 Republican advantage. Instead, it is clear that the 2011 Plan was drawn through a process in which a particular partisan goal—the creation of 13 Republican districts—predominated over adherence to traditional districting criteria of drawing compact districts and avoiding county splits. (P-1 at 27; N.T. at 223.)

292. Dr. Chen opined that the Set 2 simulated districting plans reject any notion that an effort to avoid pairing the 2012 Incumbents in the same

congressional voting district can explain the Republican bias in the 2011 Plan. (P-1 at 4, 27; N.T. at 220.)

293. To determine the cause of the significant mean-median gap favoring Republicans, Dr. Chen examined the range of mean-median gaps that would have arisen under the Set 2 simulated districting plans. (P-1 at 29; N.T. at 262.)

294. Dr. Chen concluded with extremely strong statistical certainty that the 2011 Plan's mean-median gap of 5.9% was not the result of Pennsylvania's natural political geography combined with the application of traditional districting criteria. (P-1 at 29; N.T. at 265-66.)

295. Dr. Chen concluded with extreme statistical certainty that the Republican skew in the 2011 Plan's mean-median gap reflects the intentional pursuit of a partisan outcome that subordinated the traditional districting criteria of avoiding county splits and drawing compact congressional voting districts. (P-1 at 29; N.T. at 266.)

296. With regard to the pairing of Democrats Altmire and Critz in the 2011 Plan, Dr. Chen opined that not one of the Set 2 simulated districting plans paired those 2 2012 Incumbents together in the same congressional voting district. (P-1 at 31; N.T. at 226.)

297. Dr. Chen concluded with strong statistical certainty that the 2011 Plan's pairing of Democrats Altmire and Critz was not the product of a nonpartisan attempt to protect the 2012 Incumbents. (P-1 at 31-32; N.T. at 226-27.)

298. Dr. Chen also considered whether racial goals may explain the statistically extreme partisan composition of the 2011 Plan. (P-1 at 33; N.T. at 238.)

299. Dr. Chen observed that the 2nd Congressional District of the 2011 Plan (which includes areas of Philadelphia) has an African-American VAP of 56.8%, and it is the only district that contains an African-American majority. (P-1 at 4, 33; N.T. at 239.)

300. Dr. Chen analyzed the 259 simulated districting plans generated by Set 1 and Set 2 that included a congressional voting district with an African American VAP of at least 56.8% to determine whether a hypothetical goal of creating a congressional voting district with at least a 56.8% African-American VAP might have caused the extreme 13-5 Republican advantage in the 2011 Plan. (P-1 at 4, 33; N.T. at 245.)

301. Dr. Chen observed that among the 259 simulated districting plans that created at least a 56.8% African-American VAP congressional voting district, not a single simulated districting plan remotely came close to creating 13 congressional voting districts with partisan performance calculations favoring Republicans. Instead, the majority of the relevant Set 1 simulated districting plans contained either 8 or 9 congressional voting districts with partisan performance calculations favoring Republicans, and the vast majority of the relevant Set 2 simulated districting plans contained 8 to 11 congressional voting districts with partisan performance calculations favoring Republicans. (P-1 at 4, 33-35; N.T. at 244-45.)

302. Dr. Chen opined that even if a congressional districting process required a 56.8% African-American VAP congressional voting district, in addition

to allowing for the protection of 17 of the 2012 Incumbents while following traditional districting criteria, such a districting process would generally produce plans with 9, 10, or 11 Republican-leaning seats. (P-1 at 35; N.T. at 249-50.)

303. Based on his analysis of the Set 1 and 2 simulated districting plans that include a congressional voting district with an African-American VAP of at least 56.8%, Dr. Chen rejected any notion that an intentional effort to create such a district might explain the extreme partisan bias observed in the 2011 Plan. (P-1 at 4, 33, 35; N.T. at 245.)

304. Dr. Chen also evaluated the sort of congressional voting district each Petitioner would have been placed into under the Set 1 and Set 2 simulated districting plans and the district into which each Petitioner was placed under the 2011 Plan. He testified with a strong statistical certainty that the 2011 Plan had the effect of treating 4 of the Petitioners differently—meaning they were placed into a different partisan district compared to the sort of districting plans that would have emerged under a districting process respecting traditional districting criteria and possibly even protecting 17 of the 2012 Incumbents in a nonpartisan manner. (P-1 at 35; N.T. at 271-81.)

305. Ultimately, Dr. Chen opined that the 2011 Plan could not have been the product of something other than the intentional pursuit of partisan advantage. (P-1 at 2; N.T. at 166.)

306. Ultimately, Dr. Chen also concluded that partisan considerations predominated over other nonpartisan criteria, particularly minimizing county splits and maximizing compactness, in the drawing of the 2011 Plan. (P-1 at 3; N.T. at 166, 181, 204, 220.)

307. Dr. Chen testified regarding data files purportedly produced by Speaker Turzai in the *Agre* case, but the Court makes no findings regarding that aspect of Dr. Chen's expert report or testimony. (P-1 at 38-41; N.T. at 294-310.)

308. The Court finds Dr. Chen's testimony to be credible.

309. The Court notes that Dr. Chen's testimony established that the General Assembly included factors other than nonpartisan traditional districting criteria in creating the 2011 Plan in order to increase the number of Republican-leaning congressional voting districts.

310. Dr. Chen's testimony, while credible, failed to take into account the communities of interest when creating districting plans. (*See* Dr. Kennedy's testimony, N.T. at 390-91.)

311. Dr. Chen's testimony, while credible, failed to account for the fact that courts have held that a legislature may engage in some level of partisan intent when creating redistricting plans.

312. Dr. Chen's testimony, while credible, failed to provide this Court with any guidance as to the test for when a legislature's use of partisan considerations results in unconstitutional gerrymandering.

2. John J. Kennedy, Ph.D.

313. The Court accepted John J. Kennedy, Ph.D., as an expert in the area of political science, including political geography and political history of Pennsylvania, without objection from counsel. (N.T. at 578-79.)

314. Dr. Kennedy is a professor in the Department of Political Science at West Chester University. Dr. Kennedy received a B.S. in public administration from Kutztown University in 1984, a Master's degree in public administration from Kutztown University in 1988, and a Ph.D. in political science

from Temple University in 1996. Dr. Kennedy has published three books on Pennsylvania politics and has expertise in Pennsylvania government and politics. (Petitioners' Ex. 54; Petitioners' Ex. 53 (P-53) at 1; N.T. at 570-72.)

315. Overall, Dr. Kennedy concluded that the 2011 Plan: (1) negatively affects Pennsylvania's communities of interest at an unprecedented level; (2) contains more anomalies than ever before; (3) places partisan considerations above those of communities of interest; and (4) favors Republican voters over Democratic voters. (N.T. at 579-80, 583, 585, 644.)

316. When asked to describe what he meant by "communities of interest," Dr. Kennedy explained that communities are important to the identity of Pennsylvanians. (N.T. at 583-85.)

317. Even though not defined succinctly, it appears from the sum of Dr. Kennedy's testimony that he considers a community of interest to consist of a group of individual communities that share similar interests and are located in the same geographic region. (N.T. at 590-91, 619, 624-26, 628, 631-32.)

318. Dr. Kennedy described gerrymandering as the political manipulation of district lines to achieve some sort of political result. A gerrymander takes place through the methods of "cracking," "packing," and what he refers to as "hijacking." Cracking occurs when you separate or divide the voters of a particular party across several districts. Packing occurs when you take voters of a particular party who reside in different communities and pack them together in one district based upon their partisan performance. Together, cracking and packing create anomalies—*i.e.*, strangely designed districts, tentacles (a narrow tract of land that connects communities), isthmuses (connecting 2 communities that would not ordinarily have anything in common), and appendages (an arm going

from one area to another). Hijacking occurs when 2 congressional districts (containing 2 separate and distinct communities of interest) controlled by the political party opposite to that in control of the redistricting process are combined, forcing the incumbents to run against one another in the primary election, thereby automatically eliminating one of them. Further, this may result in a district that leaves the incumbent surviving the primary election in a more difficult position in the general election. (P-53 at 2-3; N.T. at 580, 585-87, 634.)

319. Dr. Kennedy stated that the 3rd Congressional District provides an example of cracking. (P-53 at 23; N.T. at 589-90.)

320. Dr. Kennedy opined that there is no apparent nonpartisan explanation for why the 2011 Plan split Erie County, a community of interest, between the 3rd Congressional District and the 5th Congressional District. Dr. Kennedy explained that, historically, Erie County has been Democratic. The 2011 Plan was the first time in the modern era of redistricting that Erie County was cracked. Dr. Kennedy explained further that the 2011 Plan diluted the vote of Democratic voters located in Erie County by pushing the eastern parts of Erie County into the 5th Congressional District, a district that contains a very rural and overwhelmingly Republican county. (P-53 at 23-24; Petitioners' Ex. 73; N.T. at 589-91, 597-98.)

321. Dr. Kennedy stated that the 1st Congressional District provides an example of packing. (P-53 at 20; N.T. at 605-06.)

322. Dr. Kennedy explained that the 1st Congressional District takes in some appendages from Delaware County, where parts of the City of Chester, the town of Swarthmore (which is connected by an isthmus), and some other

Democratic communities are packed into the 1st Congressional District. (P-53 at 20-21; Petitioners' Ex. 70; N.T. at 605-08.)

323. Dr. Kennedy explained that the 7th Congressional District, which is commonly referred to as the "Goofy Kicking Donald Duck" district, has become famous as one of the most gerrymandered districts in the country. Dr. Kennedy described the 7th Congressional District as essentially 2 districts (an eastern district and a western district) that are held together at 2 locations: (1) a tract of land that is roughly the length of 2 football fields and contains a medical facility; and (2) a Creed's Seafood & Steaks in King of Prussia. Dr. Kennedy also indicated that the 7th Congressional District contains 26 split municipalities. (P-53 at 30-33; Petitioners' Exs. 81-83; N.T. at 598-602, 613-14.)

324. Dr. Kennedy explained that the 6th Congressional District, which is likened by some as resembling the State of Florida with a more jagged and elongated panhandle, includes communities in southern Chester County, western Montgomery County, Berks County, and Lebanon County. When asked whether there is anything that unites these communities other than all being located within the 6th Congressional District, Dr. Kennedy opined that they are all separate and distinct communities of interest that have been combined into the 6th Congressional District and not maintained as a whole. Dr. Kennedy also explained that the City of Reading, which is the county seat of Berks County, has been carved out of the 6th Congressional District. Dr. Kennedy opined that this changes the partisan makeup and performance of the 6th Congressional District considerably because the City of Reading is a very Democratic city. (P-53 at 28-29; Petitioners' Ex. 78; N.T. at 615-17, 621-22.)

325. Dr. Kennedy explained that the 16th Congressional District, which is based in Amish country and has always been one of the more Republican districts in Pennsylvania, has taken on some appendages. Dr. Kennedy explained further that Democratic municipalities, such as Coatesville, were removed from Chester County and the 6th Congressional District and appended onto the 16th Congressional District. Similarly, the City of Reading was taken out of the 6th Congressional District via a very narrow isthmus and appended onto the 16th Congressional District. Dr. Kennedy opined that appending these communities onto the 16th Congressional District has the net political effect of diluting Democratic precincts and Democratic performance in Reading and Coatesville. In terms of communities of interest, Dr. Kennedy explained that Coatesville has commonalities with the 6th Congressional District, not Amish country. (P-53 at 50-53; Petitioners' Exs. 97, 99; N.T. at 618-20.)

326. Dr. Kennedy explained that the 15th Congressional District contains 2 diverse communities of interest: the Lehigh Valley and parts of Berks, Dauphin, and Lebanon Counties. Dr. Kennedy explained further that, historically, the 15th Congressional District has been primarily a Lehigh Valley district, but under the 2011 Plan, the Lehigh Valley district no longer exists because a segment of Northampton County, including Easton, and a quarter of the City of Bethlehem are cracked out of the district and the district is extended down to Hershey, Pennsylvania. (P-53 at 47-49; Petitioners' Ex. 95; N.T. at 623-26.)

327. Dr. Kennedy stated that the 17th Congressional District is a textbook example of packing. (N.T. at 627-28.)

328. Dr. Kennedy explained that the 17th Congressional District is composed of 2 separate and distinct communities of interest:

Scranton/Wilkes-Barre and Easton/Bethlehem. Dr. Kennedy opined that Easton and Bethlehem belong with Allentown, not Wilkes-Barre and Scranton. (P-53 at 54-55; Petitioners' Ex. 102; N.T. at 626-29.)

329. Dr. Kennedy explained that the 11th Congressional District is almost a straight vertical district from the northern end of Wyoming County down to Cumberland County, approximately 200 miles long. Dr. Kennedy explained further that Scranton and Wilkes-Barre have been removed from the 11th Congressional District and packed into the 17th Congressional District and that the City of Harrisburg has been carved out of the 11th Congressional District. (P-53 at 40-41; N.T. at 629-31.)

330. Dr. Kennedy explained that the 4th Congressional District is historically a very Republican district. Dr. Kennedy explained further that the City of Harrisburg, which had previously been located with communities of interest in Central Pennsylvania and the Harrisburg metro area, is now the northernmost tip of the 4th Congressional District. Dr. Kennedy opined that the overall impact of moving the City of Harrisburg, a predominantly Democratic city, into the 4th Congressional District is to dilute the Democratic vote in Harrisburg. (P-53 at 25-26; Petitioners' Ex. 75; N.T. at 631-32.)

331. Dr. Kennedy explained that the 2011 Plan is the first time that Dauphin County has been splintered among congressional districts. (N.T. at 632.)

332. Dr. Kennedy stated that the 12th Congressional District is an example of hijacking. (N.T. at 634-65.)

333. Dr. Kennedy explained that the 12th Congressional District is approximately 120 miles long and runs along 4 other congressional districts to connect what was the old 4th Congressional District and the old 12th Congressional

District. Dr. Kennedy explained further that the net effect of combining these districts was to force 2 Democrat incumbents, Altmire and Critz, to run off against one another in the 2012 Democratic primary election, automatically eliminating one of them, which Dr. Kennedy described as an example of "hijacking." Nevertheless, Dr. Kennedy conceded that under the 2011 Plan, 2 incumbents had to be paired together into 1 congressional district, unless one of them decided not to run for reelection. Republican-performing areas, particularly in Westmoreland County, were also added to the 12th Congressional District, which Dr. Kennedy opined was to make the district overall more Republican. (P-53 at 42; N.T. at 634-35, 662-63.)

334. Dr. Kennedy opined that the 14th Congressional District contains a tentacle that rises up through the Allegheny River to pack certain Democratic precincts into the 14th Congressional District, which is already very Democratic, thereby diluting the Democratic vote in the 12th Congressional District. (P-53 at 45-46; Petitioners' Ex. 93; N.T. at 635-36.)

335. Dr. Kennedy opined that while the number of split counties and municipalities is indicative of a gerrymander, they do not tell the whole story. Dr. Kennedy explained that county and municipality splits are not necessarily indicative of splitting a community of interest. For example, Dr. Kennedy explained that he does not view the removal of 1 district in Upper Macungie Township as splitting the community of interest known as the Leigh Valley, because it is not the same as removing Easton, the county seat, one-fourth of the City of Bethlehem, and a number of other Democratic municipalities from the 15th Congressional District. (Petitioners' Ex. 56; N.T. at 637-41.)

336. Dr. Kennedy explained that the 2011 Plan contains 19 census block splits (splitting neighborhoods between congressional districts), which is considerably more than prior Pennsylvania congressional district maps. (P-53 at 5; Petitioners' Ex. 57; N.T. at 641-43.)

337. Dr. Kennedy explained that the 2011 Plan splits certain counties considerably more than others: (1) Montgomery County, which is the third largest county in Pennsylvania, is split into 5 congressional districts; and (2) Westmoreland and Berks Counties, which have relatively lower populations, are split into 4 congressional districts. (N.T. at 643-44.)

338. Ultimately, Dr. Kennedy opined that the 2011 Plan is a gerrymandered congressional map. (N.T. at 644.)

339. The Court finds Dr. Kennedy's testimony to be credible.

340. Dr. Kennedy's testimony, while credible, did not address the intent behind the 2011 Plan. (N.T. at 645-46.)

341. Moreover, to the extent that Dr. Kennedy offered an opinion on an ultimate question of law—*i.e.*, whether the 2011 Plan is an unconstitutional political gerrymander, the opinion is disregarded.

3. Wesley Pegden, Ph.D.

342. The Court accepted the testimony of Wesley Pegden, Ph.D., as an expert in the area of mathematical probability without objection from counsel. (N.T. at 715-16.)

343. Dr. Pegden is an associate professor in the Department of Mathematical Sciences at Carnegie Mellon University. Dr. Pegden received a Ph.D. in Mathematics from Rutgers University. Dr. Pegden has published academic papers, including an academic paper co-authored with 2 others that was

published in the Proceedings of the National Academy of Sciences in early 2017 (Pegden Article), which set forth a new statistical test to demonstrate that a configuration is an outlier in a rigorous statistical sense. (Petitioners' Ex. 117 (P-117) at 1; N.T. at 707, 710-13.)

344. Petitioners asked Dr. Pegden to analyze whether the Republican advantage in the 2011 Plan could be a consequence of nonpartisan factors such as the political geography of the state. In so doing, Dr. Pegden analyzed whether the 2011 Plan is a typical member of the set of possible districting plans of Pennsylvania with respect to its partisan bias or whether it is an outlier with respect to partisan bias. (P-117 at 1-2; N.T. at 716-17.)

345. In order to answer those questions, Dr. Pegden analyzed whether the partisan bias in the 2011 Plan is fragile, such that it evaporates when many random small changes are made to the districting plan, by developing a computer algorithm that starts with the 2011 Plan and makes many random small changes to the 2011 Plan in succession. (P-117 at 1; N.T. at 722-23.)

346. Dr. Pegden explained that the number of possible districting plans can be astronomical, so one cannot look at all of them to perform a one-by-one comparison. (P-117 at 4 n.5; N.T. at 720.)

347. Dr. Pegden developed a computer algorithm that began with the 2011 Plan and randomly selected a precinct on the boundary of 2 congressional voting districts (Step 1). If the precinct could be swapped with a precinct in the other district without violating the constraints placed on the districts, then the computer algorithm made the swap (Step 2). Using voter preference data, the computer algorithm used the mean-median test to evaluate the partisan bias of the new districting plan and recorded whether it was more or less biased than the

2011 Plan (Step 3). The computer algorithm then repeated Step 2 and Step 3 as many times as instructed. (P-117 at 4, 4 n.6, 8; N.T. at 721-31.)

348. To assess the partisan bias of a given districting plan, Dr. Pegden estimated voter preference in each precinct that comprised the districts by using election results for the 2010 PA Senate race between Pat Toomey and Joe Sestak, because it was a statewide race, there was no incumbent in the race, and it was among the most recent data available to mapmakers when drawing the 2011 Plan. (P-117 at 9; N.T. at 737-38, 783.)

349. Dr. Pegden's computer algorithm employed a variation of a Markov Chain developed by Dr. Pegden. In this context, a Markov Chain is a way of generating a random sample through a series of small changes. (P-117 at 4 n.4; N.T. at 790-94.)

350. Dr. Pegden ran his computer algorithm such that it made approximately 1,000,000,000,000 (1 trillion) random small changes to the 2011 Plan in succession. (P-117 at 1; N.T. at 731.) The computer algorithm could only make changes that would result in simulated congressional districting plans per the parameters or constraints set by Dr. Pegden, which included districting plans consisting of 18 contiguous districts, equipopulous districts (with an allowable 2% difference between districts), and reasonably shaped—*i.e.*, compact—districts. (P-117 at 2-3; N.T. at 726-28.) By specifying such parameters and constraints, the computer algorithm created what Dr. Pegden referred to as a "bag of districting [plans]," which are "candidate" or simulated possible alternative districting plans for Pennsylvania. (P-117 at 3; N.T. at 720-21.)

351. Dr. Pegden also altered the parameters or constraints used in the computer algorithm, such as changing the allowable difference in population

between simulated districts from 2% to 1%, not dividing any counties not divided by the 2011 Plan, and keeping intact the current 2nd Congressional District (which is a majority-minority district) in order to create additional bags of districting plans. (P-117 at 3; N.T. at 739-42, 744-45.)

352. Dr. Pegden chose his parameters or constraints so that the 2011 Plan met all of the corresponding requirements under consideration, because his goal was not to compare the 2011 Plan to other "better" simulated possible alternative districting plans which satisfy stricter requirements. Instead, Dr. Pegden assumed that the geometric properties of the 2011 Plan are reasonable, and he compared the 2011 Plan to the other possible alternative districting plans of Pennsylvania with the same properties. (P-117 at 3; N.T. at 733-34.)

353. Dr. Pegden acknowledged that his use of a parameter or constraint of an allowable 2% population difference between districts is not as an exacting standard as using an allowable difference of 1% or 0%, but he opined that the small population variations between districts cannot account for the extreme outlier status of the 2011 Plan. (P-117 at 4; N.T. at 779-80.) He was confident in that representation because he generated a smaller bag of districting plans using the 1% allowable difference in population parameter or constraint, and it did not affect the outcome. (P-117 at 4; N.T. at 780.)

354. Dr. Pegden's analysis was based on what he characterized in his expert report as a conservative definition of what is a "gerrymandered" districting plan, which would require that the districting plan be considered "gerrymandered" only if it passed the following 3-prong test (Test):

a. The districting plan has partisan bias for one party;

b. Small random changes to the districting plan rapidly decrease the partisan bias of the districting plan, demonstrating that the districting plan was carefully crafted; and

c. The overwhelming majority of the alternative districts of the state exhibit less partisan bias than the districting plan in question.

(P-117 at 2.)

355. Based on the results generated from the computer algorithm, Dr. Pegden concluded that the 2011 Plan is a gross outlier with regard to partisan bias among the set of all possible congressional districting plans for Pennsylvania. (P-117 at 1; N.T. at 717.)

356. Based on the results generated from the computer algorithm, Dr. Pegden concluded that the 2011 Plan exhibits more partisan bias than roughly 99.999999% of the simulated possible alternative districting plans created by his computer algorithm, which he contended establishes that the General Assembly carefully crafted the 2011 Plan to ensure a Republican advantage. (P-117 at 1; N.T. at 749-52.)

357. Dr. Pegden concluded that the Republican advantage created by the 2011 Plan was not caused by Pennsylvania's political geography. This is because, while political geography might conceivably join forces with traditional districting criteria to create a situation where typical districting plans of a state are biased in favor of one party, the political geography of a state does not interact with the traditional districting criteria to create a situation where typical districting plans of a state quickly exhibit decreased partisan bias when undergoing random swaps. (P-117 at 1; N.T. at 748-51, 755-56.)

358. Dr. Pegden concluded that not only does the 2011 Plan exhibit a strong partisan bias as required by the first prong of the Test, but it also satisfies the second prong of the Test to an extreme degree, which requires that small random changes to the 2011 Plan rapidly decrease the partisan bias of the 2011 Plan, thereby demonstrating that the General Assembly carefully crafted the 2011 Plan. (P-117 at 2, 4; N.T. at 751-53.) Dr. Pegden opined that when a districting plan strongly satisfies the second prong of the Test, then it must also satisfy the third prong of the Test, regardless of political geography. (N.T. at 733-34, 748-49.)

359. Ultimately, Dr. Pegden concluded that Pennsylvania's congressional voting districts are dramatically gerrymandered, and the 2011 Plan is an extreme outlier among the set of possible alternative districting plans in a way that is insensitive to how precisely the set of alternatives are defined. (P-117 at 8; N.T. at 753.)

360. The Court finds Dr. Pegden's testimony to be credible.

361. Dr. Pegden's testimony, like Dr. Chen's, however, failed to take into account other districting considerations, such as not splitting municipalities, communities of interest, and some permissible level of incumbent protection and partisan intent.

362. Dr. Pegden's computer algorithm did not account for the permissible districting considerations discussed above.

363. Moreover, to the extent that Dr. Pegden offered an opinion on an ultimate question of law—*i.e.*, whether the 2011 Plan is an unconstitutional political gerrymander, the opinion is disregarded.

4. Christopher Warshaw, Ph.D.

364. The Court accepted Christopher Warshaw, Ph.D., as an expert in American politics in the areas of political representation, public opinion, elections, and polarization. (N.T. at 834-35.)

365. Dr. Warshaw is an assistant professor of political science at George Washington University. He received a J.D. from Stanford Law School and a Ph.D. in political science from Stanford University. Dr. Warshaw has published various academic articles. (Petitioners' Ex. 35 (P-35) at 1-3; N.T. at 825-34.)

366. Dr. Warshaw analyzed relevant data for the purposes of: (1) evaluating the degree of partisan bias in the 2011 Plan, including providing a historical perspective of partisan bias in Pennsylvania; (2) evaluating polarization with regard to members of Congress and whether the polarization magnifies the effects of gerrymandering; (3) examining the consequences of the 2011 Plan on the representation that Pennsylvania residents receive in Congress in the context of growing polarization in Congress; and (4) examining the consequences of the 2011 Plan in Pennsylvania on citizens' trust in government. (P-35 at 1; N.T. at 836-38.)

367. Dr. Warshaw explained that the goal of partisan gerrymandering is to create legislative districts that are as efficient as possible in translating a party's vote share into seat share. This entails drawing districts in which the supporters of the advantaged party constitute either a slim majority or a small minority. This involves practices referred to as "cracking" and "packing." (P-35 at 4; N.T. at 839.)

368. Dr. Warshaw explained that, in a "cracked" district, the disadvantaged party narrowly loses, wasting a large number of votes without

winning a seat. In a "packed" district, the disadvantaged party wins overwhelmingly, wasting a large number of votes. (P-35 at 4; N.T. at 839.)

369. The "efficiency gap" is a metric used to capture the ratio of wasted votes by each party. (P-35 at 3; N.T. at 840-41.) The efficiency gap is defined as the difference between the parties' respective "wasted votes," divided by the total number of votes cast in the election. In calculating the efficiency gap, all of the losing party's votes are wasted if it loses the election. As to the winning party, the wasted votes are those above the 50% plus 1 vote required to win. (P-35 at 5; N.T. at 844-48.)

370. Dr. Warshaw opined that the efficiency gap mathematically captures the cracking and packing practices that occur with partisan gerrymandering. (P-35 at 6; N.T. at 840-41.)

371. Dr. Warshaw opined that historically the vast majority of efficiency gaps in states with more than 6 congressional seats lie close to 0, roughly 75% of the efficiency gaps lie between -10% and 10%, and only about 4% have more than a 20% advantage to either party. (P-35 at 7-8; N.T. at 865.)

372. Dr. Warshaw opined that after the most-recent nationwide redistricting in 2012, Republican advantage grew significantly, with Republicans abruptly developing a very substantial net advantage in the translation of congressional votes to seats. (P-35 at 9; N.T. at 987.)

373. Dr. Warshaw opined that studies strongly suggest that political control of redistricting continues to have large and durable effects, and that partisan gerrymandering is unlikely to be remedied through the normal electoral process. (P-35 at 10; N.T. at 890-91.)

374. Dr. Warshaw calculated that the average efficiency gap nationwide went from approximately 0 in 2010 to an average Republican advantage of 8% in 2012 when new congressional districts came into existence. (P-35 at 9; N.T. at 988.) Dr. Warshaw opined that the sharpness of the change in the efficiency gap nationwide between 2010 and 2012 makes it unlikely to have been caused by geographic changes or nonpolitical factors. (P-35 at 9; N.T. at 879, 982-84.)

375. Dr. Warshaw explained that the efficiency gap can be non-zero and differ across state lines for reasons unrelated to the drawing of district lines, such as how different demographic groups are distributed across geographic space. (P-35 at 9; N.T. at 983, 990-91.) The efficiency gap can also be affected by the intentional drawing of district lines to accomplish goals other than maximizing partisan seat share, such as ensuring the representation of racial minorities. (P-35 at 9; N.T. at 991.)

376. Dr. Warshaw opined that in recent elections, Pennsylvania has had a pro-Republican efficiency gap that is extreme relative to both its own historical efficiency gaps and the efficiency gaps in other states. (P-35 at 3-4, 11-12; N.T. at 871-72, 874, 899.)

377. As to Pennsylvania, Dr. Warshaw opined that Pennsylvania had a modestly pro-Democratic efficiency gap in the 1970s, which evaporated by the 1980s. From about 1980 through 2010, neither party had a persistent advantage in the efficiency gap. The 2011 Plan, however, led to a large Republican advantage in Pennsylvania congressional elections unlike what the state experienced after previous redistricting periods. (P-35 at 12; N.T. at 870-72.)

378. Dr. Warshaw opined that, in 2012, the Democrats wasted 1.3 million more votes than Republicans. (P-35 at 12; N.T. at 952.) Republican candidates won only 49% of the statewide vote, but they won 13 of 18 (72%) of Pennsylvania's congressional seats, which translated into a pro-Republican efficiency gap of approximately -24%. (P-35 at 12-13; N.T. at 871, 896-97.)

379. Dr. Warshaw opined that Democratic candidates received 51% of the congressional votes in 2012 but only won 5 of Pennsylvania's congressional seats, generally by overwhelming margins. (P-35 at 13; N.T. at 896-97.)

380. The efficiency gaps in Pennsylvania during the past 3 elections were among the most Republican-leaning efficiency gaps the nation has ever seen. (P-35 at 4, 12; N.T. at 874, 899.) The 2012 efficiency gap in Pennsylvania was the most Republican-leaning efficiency gap in the 2010 cycle among states with more than 6 seats and the second largest one in history. Averaging the past 3 elections (2012, 2014, 2016), Pennsylvania had the second most Republican-leaning efficiency gap in the country (19%). (P-35 at 15; N.T. at 899-1000.)

381. Dr. Warshaw opined that the efficiency gap in Pennsylvania was 24% in 2012; 15% in 2014; and 19% in 2016. (P-35 at 11-13; N.T. at 871, 1000-01.)

382. Dr. Warshaw cited recent studies for the proposition that these efficiency gaps imply that Republicans in Pennsylvania have won 3 or 4 more seats in these elections than they would have won if Pennsylvania had no partisan bias in its efficiency gap. (P-35 at 13-14; N.T. at 873.)

383. Dr. Warshaw opined that the more extreme pro-Republican efficiency gap that developed following the 2011 Plan suggests that geographic factors are unlikely to be the cause of the large efficiency gap in Pennsylvania in recent elections. (P-35 at 14; N.T. at 879, 982-83.)

384. Dr. Warshaw concluded that the 2011 Plan disadvantages the Democratic Party when compared to the Republican Party in ways that are historically extreme. (P-35 at 3; N.T. at 872, 874, 885-86, 899, 984.) There were substantially more wasted Democratic votes in Pennsylvania congressional elections than Republican votes, which Dr. Warshaw opined has led to a substantial and durable pro-Republican bias in the translation of votes to seats in congressional elections in Pennsylvania. (P-35 at 3; N.T. at 836, 999-1000.)

385. Dr. Warshaw opined that the recent efficiency gaps in Pennsylvania are quite durable, which suggests that partisan gerrymandering is unlikely to be remedied through the normal electoral process. (P-35 at 4; N.T. at 887, 999-1000.)

386. Dr. Warshaw opined that the Republican-leaning efficiency gap created conditions where many Democratic voters in Pennsylvania are unable to elect representatives of their choice, and they are artificially deprived of the opportunity to elect someone who shares their values. (P-35 at 15; N.T. at 932-33.)

387. Dr. Warshaw concluded that the pro-Republican advantage in congressional elections in Pennsylvania has important representational consequences for voters. He based this conclusion on his opinion that, due to the growing polarization in Congress, there is a massive difference between the roll call voting behavior of Democrats and Republicans, such that Democratic voters

whose votes are wasted in Pennsylvania are unlikely to see their preferences represented by their Congressperson. (P-35 at 4, 15; N.T. at 902-03.)

388. Dr. Warshaw concluded that the pro-Republican bias in Pennsylvania elections contributes to a lack of trust in Congress. (P-35 at 4, 25-26; N.T. at 952-53.)

389. The Court finds Dr. Warshaw's testimony to be credible, particularly regarding the existence of an "efficiency gap" in Pennsylvania, as that measure has been employed in recent gerrymandering analyses. The full meaning and effect of the existing efficiency gap, however, requires some speculation and does not take into account some relevant considerations, such as quality of candidates, incumbency advantage, and voter turnout.

390. The Court's other lingering concern is how, in a gerrymandering analysis, the efficiency gap devalues competitive elections. Specifically, if a "fair" district is one in which the Republican and Democratic candidates have a roughly equal chance of prevailing in the election, a close contest will yield a substantial efficiency gap in favor of the prevailing party. In this regard, the efficiency gap treats a "fair" and competitive district as unfair and possibly unconstitutionally gerrymandered.

391. The Court also finds that Dr. Warshaw's comparison of Pennsylvania's efficiency gap with other states has limited value, as Dr. Warshaw failed to take account for differences between states in terms of how congressional districts are drawn (*e.g.*, by an elected partisan legislature or by a nonpartisan commission) and the extent to which each state has enacted laws or constitutional provisions that impose limitations on the drawing of congressional districts. In

other words, his state-by-state comparison is not reflective of an apples-to-apples analysis.

5. Wendy K. Tam Cho, Ph.D.

392. The Court accepted Wendy K. Tam Cho, Ph.D., as an expert in the area of political science, with a focus on political geography, redistricting, American elections, operations research, statistics, probability, and high-performance computing. (N.T. at 1132.)

393. Dr. Cho is a full professor at the University of Illinois, Urbana-Champaign, with appointments in the departments of Political Science, Statistics, and Asian American Studies, as well as the College of Law. (Legislative Respondents' Ex. 11 (LR-11) at 1; N.T. at 1114-15.) Dr. Cho received her Bachelor's degrees in Political Science and Math, her Master's degrees in Political Science and Statistics, and her Ph.D. in Political Science, all from the University of California at Berkeley. (Legislative Respondents' Ex. 10 at 1; N.T. at 1114.) Dr. Cho has published academic papers on redistricting as it pertains to operations research, high-performance computing, engineering, law, and political science and has expertise in the use of computer algorithms in redistricting. (LR-11 at 1-2; N.T. at 1120-21.)

394. Dr. Cho did not use or develop an algorithm of her own to analyze the 2011 Plan. Instead, Legislative Respondents retained Dr. Cho to provide comment on the expert reports of Dr. Pegden and Dr. Chen. (LR-11 at 2; N.T. at 1132.)

395. Dr. Cho opined that Dr. Chen's algorithm and code that produced Set 1 and Set 2 of simulated districting plans did not yield samples of random maps, because the code is deterministic, not random. (LR-11 at 19-21;

N.T. at 1137-38.) Dr. Cho testified, however, that she did not review Dr. Chen's algorithm or code written to execute the algorithm. (LR-11 at 10; N.T. at 1141.)

396. Dr. Chen testified on rebuttal that Dr. Cho's testimony on this point was inaccurate. Dr. Chen also testified regarding the specific source code written to result in random (not deterministic) swaps. (N.T. at 1650-75.)

397. Dr. Cho criticized Dr. Pegden's algorithm and opined that Dr. Pegden's "bag of alternative" maps cannot be compared to the 2011 Plan because he failed to incorporate traditional districting criteria like avoiding municipal splits and incumbency protection, which she believed were considerations that the General Assembly incorporated during the mapmaking process. (LR-11 at 10; N.T. at 1219.) Dr. Cho testified, however, that she did not review Dr. Pegden's algorithm or code written to execute the algorithm. (N.T. at 1293-95.) Dr. Pegden testified on rebuttal and addressed Dr. Cho's criticisms of his algorithm to the satisfaction of the Court. (N.T. at 1362-94.)

398. The Court finds Dr. Cho's testimony not credible with regard to her criticisms of the algorithms used by Dr. Chen and Dr. Pegden, but credible with regard to her observation that Dr. Pegden's algorithm failed to avoid municipal splits and did not account for permissible incumbency protection.

399. Dr. Cho's testimony does not lessen the weight given to Dr. Chen's testimony that adherence to (what he considers to be) traditional redistricting criteria does not explain the partisan bias of the 2011 Plan.

400. Dr. Cho's testimony does not lessen the weight given to Dr. Pegden's conclusion that the 2011 Plan is an outlier when compared to maps with nearly identical population equality, contiguity, compactness, and number of county splits.

401. Dr. Cho's testimony failed to provide this Court with any guidance as to the test for when a legislature's use of partisan considerations results in unconstitutional gerrymandering.

6. Nolan McCarty, Ph.D.

402. The Court accepted Nolan McCarty, Ph.D., as an expert in the areas of redistricting, quantitative election and political analysis, representation and legislative behavior, and voting behavior. (N.T. at 1417-18.)

403. Dr. McCarty has a Bachelor's degree in economics from the University of Chicago, and a M.S. and Ph.D. in economics from Carnegie Mellon University. Dr. McCarty is a professor of politics and public affairs at Princeton University, and he is Chair of Princeton's Department of Politics. He has written academic articles regarding redistricting. (Legislative Respondents' Ex. 16 at 1-3; N.T. at 1409-14.)

404. Legislative Respondents retained Dr. McCarty to provide comment on the expert reports of Dr. Chen and Dr. Warshaw. (Legislative Respondents' Ex. 17 (LR-17) at 1.)

405. Dr. McCarty explained that he analyzed whether congressional districts created under the 2011 Plan were Republican-leaning or Democratic-leaning by calculating the partisan voting index (PVI) of each congressional district. He explained that the PVI was based on presidential vote returns. A PVI is calculated by taking the presidential voting returns of the previous 2 elections in a congressional voting district, then subtracting the national performance of each of the parties from that measure, and then taking the average over those 2 elections. (N.T. at 1418-21.)

406. Based on his analysis using the PVI of each congressional voting district, Dr. McCarty opined that Democrats should have won 8 seats under the 2011 Plan and that their failure to do so was based upon other outcomes, such as candidate quality, incumbency, spending, national tides, and trends within the electorate. (N.T. at 1447-48.) After examining the PVI of congressional districts and the efficiency gaps in those districts, Dr. McCarty saw no evidence to demonstrate that the 2011 Plan gives the Republicans a partisan advantage from redistricting. (N.T. at 1489-90.)

407. Dr. McCarty criticized the method Dr. Chen used to calculate the partisan performance of a district and opined that it is an imperfect predictor of how a district will vote in congressional elections. (LR-17 at 3, 20; N.T. at 1458-76.) Dr. Chen testified on rebuttal and addressed Dr. McCarty's criticisms to the satisfaction of the Court. (N.T. at 1675-1701.)

408. Dr. McCarty criticized Dr. Warshaw's claim that gerrymandering exacerbates the problems associated with the level of disagreement between members of opposing political parties—*i.e.*, polarization. Dr. McCarty essentially opined that gerrymandering does not exacerbate problems associated with polarization because: (1) Democratic voters who are "packed" into congressional voting districts benefit by being packed because they have a better chance to elect a candidate of their choice; and (2) Democratic voters who are "cracked" are placed in districts with small Republican majorities that elect Democrats with some regularity. (LR-17 at 14-15; N.T. at 1477-82.) Dr. McCarty also criticized Dr. Warshaw's reliance on the efficiency gap as an indicator of gerrymandering, contending that: (1) the efficiency gap does not account for partisan bias resulting naturally from geographic sorting; (2) proponents of the

efficiency gap have not developed principled ways of determining when an efficiency gap is too large to be justified by geographic sorting; and (3) close elections can have an effect on the calculation of efficiency gaps. He opined that there are many components to wasted votes that are not related to partisan districting. (LR-17 at 18-20; N.T. at 1482-89.)

409. The Court finds Dr. McCarty's testimony not credible with regard to criticism of Dr. Chen's report, as the methodology employed by Dr. Chen to calculate partisan performance appears to have been a reliable predictor of election outcomes in Pennsylvania since the enactment of the 2011 Plan. The Court notes that Dr. Chen's methodology resulted in accurate predictions for 54 out of 54 congressional elections under the 2011 Plan.

410. With regard to Dr. McCarty's testimony in response to Dr. Warshaw's expert report, the Court finds it not credible to the extent Dr. McCarty disagrees that gerrymandering does not exacerbate problems associated with polarization and with his contention that cracked and packed districts benefit the voters who are placed in cracked and packed districts. The Court further finds his testimony not credible relating to Dr. Warshaw's reliance on the efficiency gap, because Dr. Warshaw accounted for some geographic sorting in his analysis of the efficiency gap and did not dispute that close elections can impact the calculation of an efficiency gap. The Court finds credible Dr. McCarty's testimony that proponents of the efficiency gap have not developed principled ways of determining when an efficiency gap is so large that it evidences partisan gerrymandering and that there are many components to wasted votes that are not related to partisan districting.

411. Dr. McCarty's testimony does not lessen the weight given to Dr. Chen's testimony that the 2011 Plan is an outlier with respect to its partisan advantage.

412. Dr. McCarty's testimony does not lessen the weight given to Dr. Warshaw's testimony that an efficiency gap exists in Pennsylvania and that gerrymandering exacerbates problems associated with polarization.

413. Dr. McCarty's testimony failed to provide this Court with any guidance as to the test for when a legislature's use of partisan considerations results in unconstitutional gerrymandering.

7. Summary of Expert Findings

414. The Court found the testimony of Drs. Chen, Kennedy, Pegden, and Warshaw credible. Their collective testimony, however, has limited utility. Accepting their opinions, the 2011 Plan has a partisan skew in favor of Republican candidates. Indeed, by their respective measures, the skew is substantial in relation to their method of comparison.

415. The Court found the testimony of Drs. Cho and McCarty largely not credible in their criticisms of Petitioners' expert witnesses, and the testimony of Drs. Cho and McCarty did not provide the Court with any guidance as to the test for when a legislature's use of partisan considerations results in unconstitutional gerrymandering.

416. Dr. Chen compared the partisanship of the 2011 Plan to 2 sets of simulated districting plans. Dr. Chen created Set 1 using certain traditional districting criteria and created Set 2 with an additional constraint of pairing as few 2012 Incumbents together in a district as possible (how Dr. Chen defines "incumbency protection"). By comparing the partisanship of both sets of

simulated districting plans to the 2011 Plan and assigning a partisanship score to those plans, Dr. Chen concluded, in essence, that the 2011 Plan is much more partisan than the plans he simulated.

417. Dr. Pegden took a different approach. Using his proprietary algorithm, which employed a Markov Chain analysis, Dr. Pegden offered a probability calculation on the likelihood that the 2011 Plan is "similar" to a computer-generated series of plans—what Dr. Pegden referred to as his "bag of districting plans." Like Dr. Chen, Dr. Pegden assigned a partisanship score to the 2011 Plan and the computer-generated plans in his "bag of districting plans." Applying his analytics, Dr. Pegden concluded that the 2011 Plan is indeed an outlier from the plans in his "bag of districting plans" in that it is so carefully drawn that its partisan score is skewed in favor of Republican candidates to a further degree than any plan generated by his algorithm.

418. Finally, Dr. Warshaw employed the "efficiency gap" metric. In using this metric, Dr. Warshaw was able to assign a number value (+/-), relative to 0, reflecting the political leaning of each state's congressional districts. He then compared the value assigned to the 2011 Plan to (a) Pennsylvania's historical congressional maps and (b) the congressional maps of other states. In offering this comparison, Dr. Warshaw opined that the 2011 Plan is (a) the most partisan plan in Pennsylvania history and (b) one of the most partisan plans in the country (second only to North Carolina) among states with more than 6 congressional seats. This Court notes that while Dr. Warshaw's testimony was credible, it did little to alleviate concerns regarding the use of the efficiency gap in gerrymandering cases. The efficiency gap determinations were central to the plaintiffs' case in *Whitford v. Gill*, 218 F. Supp. 3d 837 (W.D. Wis. 2016) (*Whitford*), and undoubtedly will be

addressed in the United States Supreme Court's ultimate decision in *Gill*. The efficiency gap's utility is uncertain, and this Court has noted a few reasons why our Supreme Court should hesitate to endorse it as clear evidence of unconstitutional gerrymandering. (*See* Findings of Fact ¶¶ 388-90.) The very notion of a "wasted" vote is anathema to our democracy, and our courts should not embrace such a concept. The notion of wasted votes is particularly noxious in the context of a close election, where traditionally the American (and Pennsylvanian) mantra is "every vote counts."

419. In short, each of Petitioners' experts has established, through different measures and statistical devices, that the 2011 Plan is more partisan than (a) computer-generated "neutral" plans and (b) plans in other states. Though informative, these comparisons do not address the central question in this case.

420. Because the law does not require legislatures to draw congressional lines with equal (actual or rough) distribution of likely Republican voters and likely Democratic voters, nor does it require any proportionality of seats relative to party performance in statewide elections, *see Davis v. Bandemer*, 478 U.S. 109, 130 (1986) (*Bandemer*), partisanship is part of the process. In the elections of members of the General Assembly and the Governor leading up the drawing of the 2011 Plan, Pennsylvania voters elected Republicans to control the congressional redistricting process. There should be no surprise then that when choices had to be made in how to draw congressional districts,[19] elected

[19] By way of example, as a result of the 2010 U.S. Census, Pennsylvania's apportioned seats in the United States House of Representatives was reduced by 1—from 19 to 18 seats. In essence, this meant that 1 incumbent was doomed to lose his or her seat through *any* redistricting plan. In accounting for this, the General Assembly had 3 options: (1) draw a district that pitted two incumbent Republicans against each other; (2) draw a district that pitted incumbent **(Footnote continued on next page...)**

Republicans made choices that favored their party (and thereby their voters). This type of partisanship has never been ruled unconstitutional (unless you are in a state, like Florida, that expressly makes it unlawful under its state constitution). Rather, it is a reasonably anticipated, if not expected, consequence of the political process.

421. The comparison, then, that is most meaningful for a constitutional analysis, is the partisan bias (by whatever metric) of the 2011 Plan when compared to the most partisan congressional plan that could be drawn, but not violate the Pennsylvania or United States Constitutions. Bringing this back to Drs. Chen, Pegden, and Warshaw, none of these experts opined as to where on their relative scales of partisanship, the line is between a constitutionally partisan map and an unconstitutionally partisan districting plan. This is the point that has bedeviled courts throughout history.

I. 2018 Pennsylvania Elections Schedule

422. Under the current election schedule, Pennsylvania's 2018 general primary election, which will include the next congressional primary, is scheduled for May 15, 2018. (Joint Stip. of Facts at ¶ 130; EBD-2 at ¶ 8.) *See* Section 603(a) of the Pennsylvania Election Code (Election Code), Act of June 3, 1937, P.L. 1333, *as amended*, 25 P.S. § 2753(a).

(continued...)

Democrats against each other; or (3) draw a district that pitted 1 incumbent Republican against 1 incumbent Democrat. The 2011 Plan reflects option 2, although the actual reasons the General Assembly made this choice are not of record. Regardless of the reasons, however, there is no constitutional imperative that mandated a different choice.

423. Under the current election schedule, the first day to circulate and file nomination petitions is February 13, 2018. (Joint Stip. of Facts at ¶ 131.) *See* Section 908 of the Election Code, Act of June 3, 1937, P.L. 1333, *as amended*, 25 P.S. § 2868.

424. Under the current election schedule, the last day to circulate and file nomination petitions is March 6, 2018. (Joint Stip. of Facts at ¶ 132.) *See* Section 908 of the Election Code.

425. Under the current election schedule, the first day to circulate and file nomination papers is March 7, 2018. (Joint Stip. of Facts at ¶ 133.) *See* Section 953(b) of the Election Code, Act of June 3, 1937, P.L. 1333, *as amended*, 25 P.S. § 2913(b).

426. Under the current election schedule, the last day for withdrawal by candidates who filed nomination petitions is March 21, 2018. (Joint Stip. of Facts at ¶ 134.) *See* Section 914 of the Election Code, Act of June 3, 1937, P.L. 1333, *as amended*, 25 P.S. § 2874.

427. Under the current election schedule, remote military-overseas absentee ballots for the primary election must be sent by March 26, 2018. (Joint Stip. of Facts at ¶ 135.) *See* 25 Pa. C.S. § 3508(b)(1).

428. Under the current election schedule, all remaining military-overseas absentee ballots for the primary election must be sent by March 30, 2018. (Joint Stip. of Facts at ¶ 136.) *See* 25 Pa. C.S. § 3508(a)(1).

429. Under the current election schedule, the last day for voters to register before the primary election is April 16, 2018. (Joint Stip. of Facts at ¶ 137.) *See* 25 Pa. C.S. § 1326(b).

430. Under the current election schedule, the last day to apply for a civilian absentee ballot for the primary election is May 8, 2018. (Joint Stip. of Facts at ¶ 138.) *See* Section 1302.1(a) of the Election Code, Act of June 3, 1937, P.L. 1333, added by the Act of August 13, 1963, P.L. 707, *as amended*, 25 P.S. § 3146.2a(a).

431. Under the current election schedule, the last day for County Boards of Elections to receive voted civilian absentee ballots for the primary election is May 11, 2018. (Joint Stip. of Facts at ¶ 139.) *See* Section 1306(a) of the Election Code, Act of June 3, 1937, P.L. 1333, added by the Act of March 6, 1951, P.L. 707, *as amended*, 25 P.S. § 3146.6(a).

432. Under the current election schedule, the first day for voters to register after the primary election is May 16, 2018. (Joint Stip. of Facts at ¶ 140.) *See* 25 Pa. C.S. § 1326(c)(2)(iii).

433. Under the current election schedule, the last day for County Boards of Elections to receive voted military-overseas ballots for the primary election is May 22, 2018. (Joint Stip. of Facts at ¶ 141.) *See* 25 Pa. C.S. § 3511(a).

434. Under the current election schedule, the last day to circulate and file nomination papers is August 1, 2018. (Joint Stip. of Facts at ¶ 142.) *See* Consent Decree, *Hall v. Davis* (No. 84-1057, E.D. Pa., June 14, 1984).

435. Under the current election schedule, the last day for withdrawal by minor political party and political body candidates who filed nomination papers is August 8, 2018. (Joint Stip. of Facts at ¶ 143.) *See* Section 978(b) of the Election Code, Act of June 3, 1937, P.L. 1333, *as amended*, 25 P.S. § 2938(b).

436. Under the current election schedule, the last day for withdrawal by candidates nominated by a political party is August 13, 2018. (Joint Stip. of Facts at ¶ 144.) *See* Section 978(a) of the Election Code, Act of June 3, 1937, P.L. 1333, *as amended*, 25 P.S. § 2938(a).

437. Under the current election schedule, remote military-absentee ballots for the November general election must be sent by August 28, 2018. (Joint Stip. of Facts at ¶ 145.) *See* 25 Pa. C.S. § 3508(b)(1).

438. Under the current election schedule, all remaining military-overseas absentee ballots for the November general election must be sent by September 21, 2018. (Joint Stip. of Facts at ¶ 146.) *See* 52 U.S.C. § 20302(a)(8)(A); 25 Pa. C.S. § 3508(a)(1).

439. Under the current election schedule, the last day for voters to register before the November general election is October 9, 2018. (Joint Stip. of Facts at ¶ 147.) *See* 25 Pa. C.S. § 1326(b).

440. Under the current election schedule, the last day to apply for a civilian absentee ballot for the November general election is October 30, 2018. (Joint Stip. of Facts at ¶ 148.) *See* Section 1302.1(a) of the Election Code.

441. Under the current election schedule, the last day for County Boards of Elections to receive voted civilian absentee ballots for the November general election is November 2, 2018. (Joint Stip. of Facts at ¶ 149.) *See* Section 1306(a) of the Election Code.

442. Under the current election schedule, Pennsylvania's 2018 general election is scheduled for November 6, 2018. (Joint Stip. of Facts at ¶ 150.) *See* Article VII, Section 2 of the Pennsylvania Constitution; Section 601

of the Election Code, Act of June 3, 1937, P.L. 1333, as affected by the Act of April 28, 1978, P.L. 202, 25 P.S. § 2751.

443. Under the current election schedule, the first day for voters to register after the November general election is November 7, 2018. (Joint Stip. of Facts at ¶ 151.) *See* 25 Pa. C.S. § 1326(c)(2)(iii).

444. Under the current election schedule, the last day for County Boards of Elections to receive voted military-overseas ballots for the general election is November 13, 2018. *See* 25 Pa. C.S. § 3511(a).

445. The election deadlines set forth above are required by federal or state law. (EBD-2 at ¶ 10.)

446. In order to prepare for the earliest deadline in the 2018 election schedule, which is February 13, 2018, the first day for circulating and filing nomination petitions, it would be highly preferable to DOS to have all congressional district boundaries finalized and in place by January 23, 2018. This would give DOS 3 weeks to prepare. (EBD-2 at ¶¶ 11-12.)

447. Should there be a court order directing that a new congressional districting plan be put into place, and that congressional districting plan is not ready until after January 23, 2018, it may still be possible for the 2018 primary election to proceed as scheduled using the new plan. (EBD-2 at ¶ 13.)

448. Through a combination of internal administrative adjustments and court-ordered date changes, it would be possible to hold the primary election on the scheduled May 15, 2018 date even if a new congressional districting plan is not put into place until on or before February 20, 2018. (EBD-2 at ¶ 14.)

449. The current election schedule gives the counties 10 weeks between the last date for circulating and filing nomination petitions (currently

March 6, 2018) and the primary election date to prepare for the primary election. (EBD-2 at ¶ 15.)

450. Based on Commissioner Marks' experience, counties could fully prepare for the primary election in 6 to 8 weeks. (EBD-2 at ¶ 16.)

451. Commissioner Marks believes that the close of the nomination petitions period could be moved back 2 weeks to March 20, 2018, without compromising the elections process in any way. (EBD-2 at ¶ 17.)

452. If the Court were to order a time period for circulating and filing nomination petitions that lasted 2 weeks, instead of 3, the nomination period could start on March 6, 2018. (EBD-2 at ¶ 18.)

453. DOS would normally need 3 weeks of preparation time before the first date for the filing and circulating of nomination petitions, however, with the addition of staff and increased staff hours, it would be possible for DOS to complete its preparations in 2 weeks instead of 3. (EBD-2 at ¶¶ 19-20.)

454. Accordingly, if the first date for circulating and filing nomination petitions is moved to March 6, 2018, DOS would need to have a final congressional districting plan in place by approximately February 20, 2018. (EBD-2 at ¶ 21.)

455. Should there be a court order directing that a new congressional districting plan be put in place, and that congressional districting plan is not ready until after February 20, 2018, it would also be possible to postpone the 2018 primary election from May 15, 2018, to a date in the summer of 2018. Under this scenario, there would be 2 options: (1) the Pennsylvania Supreme Court could postpone all of the primary elections currently scheduled for May 15, 2018; or

(2) the Pennsylvania Supreme Court could postpone the congressional primary election alone. (EBD-2 at ¶¶ 22-23.)

456. Depending on the date of the postponed primary election, the date by which the new congressional districting plan would be put into place could be as late as the beginning of April 2018. (EBD-2 at ¶ 24.)

457. Postponement of the primary election in any manner would not be preferable because it would result in significant logistical challenges for county election administrators. If postponement takes place, for administrative and cost savings reasons, DOS's preferred option would be postponement of the entire primary. (EBD-2 at ¶ 25.)

458. Postponing the congressional primary alone would require the administration of 2 separate primary elections (1 for congressional seats and 1 for other positions), which would result in an additional expenditure of a significant amount of public funds. (EBD-2 at ¶ 26.)

459. The cost of holding a single primary in 2018 would be approximately $20 million. If 2 primary elections were held, each would cost approximately $20 million. (EBD-2 at ¶ 27.)

460. For each primary, Pennsylvania's 67 counties will be reimbursed a portion of the costs associated with mailing absentee ballots to certain military and overseas civilian voters and bedridden or hospitalized veterans. The other costs of the primary are paid by the counties. This is similar to the way that costs are allocated in special congressional elections. (EBD-2 at ¶ 28.)

461. DOS will make every effort to comply with any election schedule that the Pennsylvania Supreme Court puts in place. (EBD-2 at ¶ 30.)

J. Ongoing Activities for the 2018 Elections

462. Five Democratic candidates have registered with the Federal Election Commission to run in the 7th Congressional District race in 2018. (Joint Stip. of Facts at ¶ 219.)

463. Four Democratic candidates have registered with the Federal Election Commission to run in the 12th Congressional District race in 2018. (Joint Stip. of Facts at ¶ 220.)

464. Democratic candidate Chrissy Houlahan has raised $810,649.55 in her campaign for the 6th Congressional District in 2018. (Joint Stip. of Facts at ¶ 221.)

465. According to the Federal Election Commission, 1 Democratic candidate has raised over $100,000 to challenge an incumbent in the 16th Congressional District in 2018. (Joint Stip. of Facts at ¶ 222.)

466. Governor Wolf issued a Writ of Election to hold a special election for the vacancy in the 18th Congressional District on March 13, 2018. The special election in the 18th Congressional District is to fill the seat vacated by Congressman Murphy only for the duration of his term, which ends in January 2019. (Joint Stip. of Facts at ¶ 223.)

467. The special election for the existing 18th Congressional District will be held 28 days after nomination petitions begin to circulate for the election for the 18th Congressional District in November 2018. (Joint Stip. of Facts at ¶ 224.)

468. The following chart contains the names and addresses of the Republican and Democratic nominated candidates for the March 13, 2018 special election in the 18th Congressional District:

D	Conor Lamb	928 Washington Road Pittsburgh, PA 15228
R	Rick Saccone	404 Boston Hollow Road Elizabeth, PA 15037

(Joint Stip. of Facts at ¶ 156.)

469. Campaigns for members of the United States Congress start far in advance of the year of election. The existing congressional districts under the 2011 Plan have now been in effect for 3 election cycles. Intervenors work to elect their preferred candidates to the United States Congress in reliance on the existing congressional districts. Before the filing of the Petition, Intervenors did not expect that the existing congressional districts would change between the 2016 and 2018 elections. (Joint Stip. of Facts at ¶¶ 199-202; I-16 at ¶¶ 5, 17, 23; I-17 at ¶¶ 9, 26.)

470. One of the Intervenors has been performing his duties and responsibilities in connection with the 2018 congressional election as Chairman for the Monroe County Republican Committee since November 2016. Those duties and responsibilities have included, but have not been limited to, actively recruiting candidates to run against the incumbent Democratic candidate in the 17th Congressional District. (I-16 at ¶¶ 5-9.)

471. Such Intervenor has also been actively involved in election activities intended to benefit Republican congressional candidates in the 2018 elections. Those activities have included, but have not been limited to: (1) communicating with candidates and their committee representatives; (2) generating support for the candidates; and (3) reviewing and identifying issues that could affect the campaign. (I-16 at ¶ 20.)

472. Such Intervenor believes that he will be harmed if the congressional district boundaries are changed before the 2018 election because it

could negate all of the activities that he has undertaken in connection with the 2018 congressional elections. (I-16 at ¶¶ 18, 20.)

473. Another of the Intervenors has been actively involved in election activities intended to benefit her Republican candidate for the 2018 congressional elections. Those activities have included, but have not been limited to: (1) attending a statewide planning conference in December 2016; (2) attending events in support of her candidate; and (3) recruiting donors and volunteers for her candidate's campaign. Such Intervenor believes that at least some of her efforts will be lost if the congressional district boundaries are changed before the 2018 elections. (I-17 at ¶¶ 5, 8-9, 23.)

III. RECOMMENDED CONCLUSIONS OF LAW

A. Congressional Reapportionment Generally

1. Every decade, the 435 seats in the United States House of Representatives must be reapportioned among the 50 states according to the results of the U.S. Census. U.S. Const. art. I, § 2.

2. State legislatures, vested with the power, *inter alia*, to determine the "Times, Places and Manner of holding Elections for . . . Representatives," control the process of reapportionment and resulting redistricting (drawing of congressional district lines), subject to any rules that Congress may establish. U.S. Const. art. I, § 4.

3. The Pennsylvania Constitution includes express provisions that guide and limit reapportionment of the General Assembly[20] and local

[20] Reapportionment of the General Assembly is governed by Article II, Section 16 of the Pennsylvania Constitution, which provides:

(Footnote continued on next page...)

municipalities.[21] There is, however, no similar provision in the Pennsylvania Constitution with respect to congressional reapportionment.

4. Like all states, Pennsylvania must draw its congressional districts "with populations as close to perfect equality as possible." *Evenwel v. Abbott*, ___ U.S. ___, 136 S. Ct. 1120, 1124 (2016).

5. Like all states, Pennsylvania must draw its congressional districts in compliance with Section 2 of the Voting Rights Act of 1965, 52 U.S.C. § 10301.

6. While the General Assembly derives its authority over congressional redistricting from the United States Constitution and there are no explicit provisions in the Pennsylvania Constitution or any Pennsylvania statute that govern congressional reapportionment, redistricting plans nonetheless may be scrutinized under other provisions of the Pennsylvania Constitution, as any law

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(continued...)

> 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.

[21] Reapportionment of local municipalities is governed by Article IX, Section 11 of the Pennsylvania Constitution, which provides:

> Within the year following that in which the Federal decennial census is officially reported as required by Federal law, and at such other times as the governing body of any municipality shall deem necessary, each municipality having a governing body not entirely elected at large shall be reapportioned, by its governing body or as shall otherwise be provided by uniform law, into districts which shall be composed of compact and contiguous territory as nearly equal in population as practicable, for the purpose of describing the districts for those not elected at large.

passed by the General Assembly would be. *See Erfer v. Commonwealth*, 794 A.2d 325, 331 (Pa. 2002).

7. While many states have adopted constitutional provisions regulating reapportionment, at least one of which mandates that districts be "contiguous and compact," *see, e.g.*, Va. Const. art. II, § 6, there is no Pennsylvania constitutional provision specifically dealing with congressional reapportionment.[22]

8. In light of the Speech and Debate Clause, the General Assembly and its members cannot be compelled by the Court to explain individual lines and boundaries in the 2011 Plan. (*See* this Court's Memorandum and Order, dated November 22, 2017.)

9. The 2011 Plan is legislation passed by a majority of duly-elected members of the PA House and PA Senate from state legislative districts approved by the Pennsylvania Supreme Court, *Albert v. 2001 Legislative Reapportionment Commission*, 790 A.2d 989 (Pa. 2002), and signed into law by the duly-elected Governor of the Commonwealth.

B. Partisan Gerrymandering Generally

10. Partisan gerrymandering cases are justiciable under the United States and Pennsylvania Constitutions. *See Bandemer*, 478 U.S. at 124-27;

[22] At numerous times throughout the trial, various witnesses and parties characterized Pennsylvania's 2011 Plan as one of the most politically gerrymandered in the country. If true, the reputation can be explained by the following: (1) Pennsylvania does not have any limiting standards for the drawing of congressional districts; (2) Pennsylvania has not opted to adopt an independent, nonpartisan commission to craft a politically neutral plan; and (3) when the 2011 Plan was drawn, the voters of Pennsylvania chose single party (Republican) rule in the General Assembly and the Office of the Governor.

Erfer, 794 A.2d at 331 (citing *In re 1991 Pa. Legislative Reapportionment Comm'n*, 609 A.2d 132 (Pa. 1992) (*1991 Reapportionment*), *abrogated on other grounds by Holt v. 2011 Legislative Reapportionment Comm'n*, 38 A.3d 711 (Pa. 2012)).

11. Partisanship and political classifications are permissible considerations in the creation of congressional districts. *See Vieth*, 541 U.S. at 285 (plurality opinion) ("The Constitution clearly contemplates districting by political entities, and unsurprisingly that turns out to be root-and-branch a matter of politics." (internal citation omitted)); *id.* at 307 (Kennedy, J., concurring) (noting that "[a] determination that a gerrymander violates the law must rest on something more than the conclusion that political classifications were applied" because such classifications are "generally permissible"); *id.* at 336 (Stevens, J., dissenting) ("[P]artisanship [can] be a permissible consideration in drawing district lines, so long as it does not predominate."); *id.* at 344 (Souter, J., dissenting) ("[S]ome intent to gain political advantage is inescapable whenever political bodies devise a district plan . . . ."); *id.* at 360 (Breyer, J., dissenting) ("[T]raditional or historically based boundaries are not, and should not be, 'politics free.'"); *Hunt v. Cromartie*, 526 U.S. 541, 551 (1999) ("Our prior decisions have made clear that a jurisdiction may engage in constitutional political gerrymandering, even if it so happens that the most loyal Democrats happen to be black Democrats and even if the State were *conscious* of that fact." (emphasis in original)); *Vera*, 517 U.S. at 1047-48 (Souter, J., dissenting) (noting that incumbency protection is traditional districting principle that is "entirely consistent" with Fourteenth Amendment); *Gaffney v. Cummings*, 412 U.S. 735, 753 (1973) ("The reality is that districting inevitably has and is intended to have substantial political consequences.").

12. There is no Pennsylvania constitutional provision that expressly prohibits partisanship in the drawing of congressional districts. *But see, e.g.*, Cal. Const. art. XXI, § 2(e) ("The place of residence of any incumbent or political candidate shall not be considered in the creation of a map. Districts shall not be drawn for the purpose of favoring or discriminating against an incumbent, political candidate, or political party."); Fla. Const. art. III, § 20 ("No [congressional] apportionment plan or individual [congressional] district shall be drawn with the intent to favor or disfavor a political party or an incumbent.").

13. There is no Pennsylvania statute that expressly prohibits partisanship in the drawing of congressional districts.

14. Congressional reapportionment is "the most political of legislative functions," and judicial intervention should be reserved for only the most egregious abuses of the power conferred to the General Assembly. *Erfer*, 794 A.2d at 334 (quoting *Bandemer*, 478 U.S. at 143 (plurality opinion)).

15. The question presented in a political gerrymandering case is not whether the General Assembly, in drawing congressional districts, may make decisions that favor one political party or even a particular incumbent; rather, the question is how much partisan bias is too much. *See Holt*, 38 A.3d at 745 ("It is true, of course, that redistricting has an inevitably legislative, and therefore an inevitably political, element; but, the constitutional commands and restrictions on the process exist precisely as a brake on the most overt of potential excesses and abuse."); *see also Vieth*, 541 U.S. at 344 (Souter, J., dissenting) (noting that in partisan gerrymandering context, "the issue is one of how much is too much").

C. Burden of Proof – Constitutionality of Enacted Legislation

16. Petitioners bear the heavy burden of proving that the 2011 Plan is unconstitutional. *Singer v. Sheppard*, 346 A.2d 897, 900 (Pa. 1975). There is a presumption in favor of constitutionality for all lawfully enacted legislation and "'all doubt is to be resolved in favor of sustaining the legislation.'" *Id.* (quoting *Milk Control Comm'n v. Battista*, 198 A.2d 840, 843 (Pa.), *appeal dismissed*, 379 U.S. 3 (1964)). "'An Act of Assembly will not be declared unconstitutional unless it [c]learly, palpably and [p]lainly violates the [Pennsylvania] Constitution.'" *Id.* (quoting *Daly v. Hemphill*, 191 A.2d 835, 840 (Pa. 1963)).

17. In challenging the constitutionality of the 2011 Plan, it is Petitioners' burden of establishing not that a better or fairer plan can be drawn, but rather that the 2011 Plan fails to meet constitutional requirements. *See Albert*, 790 A.2d at 995.

D. Free Expression and Association (Count I)

18. Article I, Section 7 of the Pennsylvania Constitution provides, in relevant part: "The free communication of thoughts and opinions is one of the invaluable rights of man, and every citizen may freely speak, write and print on any subject, being responsible for the abuse of that liberty."

19. Article I, Section 20 of the Pennsylvania Constitution provides: "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."

20. "The protections afforded by Article I, [Section] 7 . . . are distinct and firmly rooted in Pennsylvania history and experience. The provision is

an ancestor, not a stepchild, of the First Amendment." *Pap's A.M. v. City of Erie*, 812 A.2d 591, 605 (Pa. 2002) (*Pap's II*). Thus, Article I, Section 7 of the Pennsylvania Constitution "'provides protection for freedom of expression that is broader than the federal constitutional guarantee.'" *Id.* (quoting *Bureau of Prof'l and Occupational Affairs v. State Bd. of Physical Therapy*, 728 A.2d 340, 343-44 (Pa. 1999)); *see also Working Families Party v. Commonwealth*, 169 A.3d 1247, 1260 (Pa. Cmwlth. 2017) ("The Pennsylvania Constitution affords greater protection of speech and associational rights than does our Federal Constitution."). "Nevertheless, [the Pennsylvania] Supreme Court has explained that reference to 'First Amendment authority remains instructive in construing Article I, Section 7' of the Pennsylvania Constitution." *Working Families Party*, 169 A.3d at 1260 (quoting *DePaul v. Commonwealth*, 969 A.2d 536, 547 (Pa. 2009)).

21. "[W]here a party to litigation 'mounts an individual rights challenge under the Pennsylvania Constitution, the party should undertake an independent analysis' to explain why 'state constitutional doctrine should depart from the applicable federal standard.'" *Working Families Party*, 169 A.3d at 1262 (quoting *DePaul*, 696 A.2d at 541). The party advocating for the departure from the analogous federal standard should brief: "(1) the text of the Pennsylvania Constitution[;] (2) its history and Pennsylvania case law thereon[;] (3) case law from other jurisdictions[;] and (4) policy considerations, including unique issues of state and local concern." *Id.* at 1262 n.25 (citing *Commonwealth v. Edmunds*, 586 A.2d 887 (Pa. 1991)). While Petitioners cite *Edmunds* in their post-trial filing, it does not appear that they have performed a thorough *Edmunds* analysis. Nonetheless, the Pennsylvania Supreme Court is free to conduct its constitutional analysis of Petitioners' claim that the 2011 Plan violates their rights to free

expression under Article I, Section 7 of the Pennsylvania Constitution consistently with the model set forth by *Edmunds*. *See Pap's II*, 812 A.2d at 603.

22. In *Pap's A.M. v. City of Erie*, 719 A.2d 273 (Pa. 1988) (*Pap's I*), *reversed and remanded*, 529 U.S. 277 (2000), the Pennsylvania Supreme Court concluded that a public indecency ordinance that made it a summary offense to appear in public in a "state of nudity" placed an unconstitutional burden on the right to freedom of expression guaranteed by the First Amendment to the United States Constitution. *Pap's I*, 719 A.2d at 275-76, 280. The United States Supreme Court granted certiorari to consider whether the Pennsylvania Supreme Court properly evaluated the subject ordinance's constitutionality under the First Amendment. *City of Erie v. Pap's A.M.*, 529 U.S. 277, 283 (2000). In a plurality opinion, the United States Supreme Court held that the subject ordinance was a content-neutral regulation that satisfied the four-part test set forth in *United States v. O'Brien*, 391 U.S. 367 (1968), and, therefore, did not violate the First Amendment. *Id.* at 289-302 (plurality opinion). As a result, the United States Supreme Court reversed the decision of the Pennsylvania Supreme Court and remanded the matter for the consideration of any remaining issues. *Id.* at 302.

23. On remand in *Pap's II*, the Pennsylvania Supreme Court considered whether the same public indecency ordinance violated the right to freedom of expression guaranteed by Article I, Section 7 of the Pennsylvania Constitution. *Pap's II*, 812 A.2d at 593. Ultimately, the Pennsylvania Supreme Court concluded that the subject ordinance was unconstitutional because "the legitimate governmental goals in [the] case [could] be achieved by less restrictive means, without burdening the right to expression guaranteed" by Article I, Section 7 of the Pennsylvania Constitution. *Id.* at 613. Essentially, the

Pennsylvania Supreme Court issued the same holding in *Pap's II* that it had issued in *Pap's I*, but rested its decision on Article I, Section 7 of the Pennsylvania Constitution, not the First Amendment. *Id.* In reaching its decision under the Pennsylvania Constitution, the Pennsylvania Supreme Court noted:

> We are left, then, with a circumstance where we must decide a Pennsylvania constitutional question, but the governing federal law, to which we ordinarily would look for insight and comparison, has been fluid and changing and still is not entirely clear. As a matter of policy, Pennsylvania citizens should not have the contours of their fundamental rights under our charter rendered uncertain, unknowable, or changeable, while the [United States] Supreme Court struggles to articulate a standard to govern a similar federal question. There is an entirely different jurisprudential and constitutional imperative at work when this Court, which is the final word on the meaning of our own charter in a properly joined case or controversy, is charged with the duty to render a judgment. In addition, it is a settled principle of Pennsylvania jurisprudence that a provision of the Pennsylvania Constitution may, in appropriate circumstances, provide broader protections than are afforded by its federal counterpart.

Id. at 611.

24. The rights of free expression and free association are fundamental rights. *See Schneider v. New Jersey*, 308 U.S. 147, 161 (1939); *Working Families Party*, 169 A.3d at 1260.

25. In *Working Families Party*, the Commonwealth Court analyzed, *inter alia*, whether the anti-fusion provisions of the Election Code violated the petitioners' speech and associational rights under Article I, Sections 7 and 20 of the Pennsylvania Constitution. *Working Families Party*, 169 A.3d at 1260-64. In

so doing, the Commonwealth Court relied upon the model set forth in *Timmons v. Twin Cities Area New Party*, 520 U.S. 351 (1997).[23] *Id.* at 1260-62. The Commonwealth Court concluded that in deciding whether speech and associational rights have been violated, "we weigh the character and magnitude of the burden imposed by the provisions against the interests proffered to justify that burden." *Id.* at 1260. Quoting the United States Supreme Court in *Timmons*, the Commonwealth Court observed that "regulations imposing severe burdens on plaintiffs' rights must be narrowly tailored and advance a compelling state interest. Lesser burdens, however, trigger less exacting review, and a [s]tate's 'important regulatory interests' will usually be enough to justify 'reasonable, nondiscriminatory restrictions.'" *Id.* at 1262 (quoting *Timmons*, 520 U.S. at 358).

26. The Pennsylvania Supreme Court has acknowledged that the United States Supreme Court has "'consistently recognized that retaliation by public officials against the exercise of First Amendment rights is itself a violation of the First Amendment.'" *Uniontown Newspapers, Inc. v. Roberts*, 839 A.2d 185, 198 (Pa. 2003) (quoting *McBride v. Village of Michiana*, 100 F.3d 457, 460-61 (6th Cir. 1996), *abrogated on other grounds as recognized by Fritz v. Charter Twp. of Comstock*, 592 F.3d 718, 724-25 (6th Cir. 2010)). In *Uniontown Newspapers*, the Pennsylvania Supreme Court held:

> To prove a claim of retaliation, a plaintiff must establish: (1) the plaintiff was engaged in a constitutionally protected activity; (2) the defendant's action caused the plaintiff to suffer an injury that would likely chill a person of ordinary firmness from continuing to engage in

[23] In *Working Families Party*, the Commonwealth Court determined that the petitioners had failed to perform the *Edmunds* analysis. *Working Families Party*, 169 A.3d at 1262 n.25.

> that activity; and (3) the adverse action was motivated at least in part as a response to the exercise of the plaintiff's constitutional rights.

Id.

27. No Pennsylvania courts have analyzed a partisan gerrymandering challenge to congressional districts under Article I, Sections 7 and 20 of the Pennsylvania Constitution.

28. A majority of the United States Supreme Court Justices have not analyzed a partisan gerrymandering challenge to congressional districts under the First Amendment to the United States Constitution.

29. The 2011 Plan does not preclude Petitioners from freely associating with a political party or a candidate, nor does it preclude Petitioners from exercising their right to vote for the candidate of their choice.

30. What Petitioners seek in Count I is in essence a declaration, in the name of free speech and association, that under Article I, Sections 7 and 20 of the Pennsylvania Constitution, Petitioners are entitled to a nonpartisan, neutral redistricting process free of any and all partisan considerations. Such a right is not apparent in the Pennsylvania Constitution or in the history of gerrymandering decisions in Pennsylvania and throughout the country.

31. Moreover, as courts have uniformly recognized that partisanship can and does play a role in congressional reapportionment cases, particularly in a state, like Pennsylvania, that leaves the process in the control of a partisan state legislature, Petitioners, in order to prevail, must articulate a judicially manageable standard by which a court can determine that partisanship crossed the line into an unconstitutional infringement on Petitioners' free speech and associational rights. *See Holt*, 38 A.3d at 745; *see also Vieth*, 541 U.S. at 315

(Kennedy, J., concurring) ("Of course, all this depends first on courts' [sic] having available a manageable standard by which to measure the effect of the apportionment and so to conclude that the State did impose a burden or restriction on the rights of a party's voters."). Petitioners have not presented a judicially manageable standard.

32. Assuming a free speech and association retaliation claim is cognizable under the Pennsylvania Constitution with respect to political gerrymandering claims, to maintain the action Petitioners bear the burden of proving: (1) that Petitioners were "engaged in a constitutionally protected activity"; (2) that the General Assembly caused Petitioners "to suffer an injury that would likely chill a person of ordinary firmness from continuing to engage in that activity"; and (3) that "the adverse action was motivated at least in part as a response to the exercise of" Petitioners' constitutional rights. *Uniontown Newspapers*, 839 A.2d at 198.

33. Of these elements, Petitioners satisfy the first.

34. With respect to the second element, Petitioners all continue to participate in the political process. Indeed, they have voted in congressional races since the implementation of the 2011 Plan. The Court assumes that each Petitioner is a "person of [at least] ordinary firmness." Accordingly, Petitioners have failed to prove the second element of their claim.

35. With respect to the third element, Petitioners have similarly failed to adduce evidence that the General Assembly passed the 2011 Plan with any motive to retaliate against Petitioners (or others who voted for Democratic candidates in any particular election) for exercising their right to vote.

36. Intent to favor one party's candidates over another should not be conflated with motive to retaliate against voters for casting their votes for a particular candidate in a prior election. There is no record evidence to suggest that in voting for the 2011 Plan, the General Assembly, or any particular member thereof, was motivated by a desire to punish or retaliate against Pennsylvanians who voted for Democratic candidates. Indeed, it is difficult to assign a singular and dastardly motive to a branch of government made up of 253 individual members elected from distinct districts with distinct constituencies and divided party affiliations.

37. On final passage of the 2011 Plan in the PA House, of the 197 members voting, 136 voted in the affirmative, with some Republican members voting in the negative and 36 Democratic members voting in the affirmative. Given the negative Republican votes, the 2011 Plan would not have passed the PA House without Democratic support. The fact that some Democrats voted in favor of the 2011 Plan further militates against a finding or conclusion that the General Assembly passed the 2011 Plan, in whole or in part, as a response to actual votes cast by Democrats in prior elections.

38. Based on the evidence presented and the current state of the law, Petitioners have failed to meet their burden of proving that the 2011 Plan clearly, plainly, and palpably violates Petitioners' rights under Article I, Sections 7 and 20 of the Pennsylvania Constitution.

E. Equal Protection Guarantee and Free and Equal Elections Clause (Count II)

39. Article I, Section 5 of the Pennsylvania Constitution, which is commonly referred to as 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."

40. The Pennsylvania Supreme Court has defined the Free and Equal Elections Clause as follows:

> "[E]lections are free and equal within the meaning of the Constitution when they are public and open to all qualified electors alike; when every voter has the same right as any other voter; when each voter under the law has the right to cast his ballot and have it honestly counted; when the regulation of the right to exercise the franchise does not deny the franchise itself, . . . and when no constitutional right of the qualified elector is subverted or denied him."

1991 Reapportionment, 609 A.2d at 142 (alteration and omission in original) (quoting *City Council of City of Bethlehem v. Marcincin*, 515 A.2d 1320, 1323 (Pa. 1986)).

41. In the context of partisan gerrymandering, the Free and Equal Elections Clause provides no greater protection than the United States Constitution's Equal Protection Clause, and the Pennsylvania Supreme Court has considered claims brought under the Free and Equal Elections Clause and the equal protection provisions of Article I, Sections 1 and 26 of the Pennsylvania Constitution using the same standard. *See Erfer*, 794 A.2d at 332 ("[W]e reject Petitioners' claim that the Pennsylvania Constitution's free and equal elections clause provides further protection to the right to vote than does the Equal Protection Clause.").

42. Article I, Section 1 of the Pennsylvania Constitution provides: "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."

43. Article I, Section 26 of the Pennsylvania Constitution provides: "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."

44. Article I, Sections 1 and 26 of the Pennsylvania Constitution together constitute what is commonly referred to as the equal protection guarantee (Equal Protection Guarantee).

45. In the context of partisan gerrymandering, the Pennsylvania Supreme Court has stated that the Equal Protection Guarantee is coterminous with the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution. *Erfer*, 794 A.2d at 332 (citing *Love v. Borough of Stroudsburg*, 597 A.2d 1137, 1139 (Pa. 1991)). This holding is consistent with decades of Pennsylvania Supreme Court precedent holding that the "equal protection provisions of the Pennsylvania Constitution are analyzed . . . under the same standards used by the United States Supreme Court when reviewing equal protection claims under the Fourteenth Amendment to the United States Constitution." *Love*, 597 A.2d at 1139; *see Commonwealth v. Albert*, 758 A.2d 1149, 1151 (Pa. 2000) (recognizing Pennsylvania Supreme Court's holding that equal protection provisions under Pennsylvania Constitution and United States Constitution are analyzed using same standards); *James v. Se. Pa. Transp. Auth.*, 477 A.2d 1302, 1305 (Pa. 1984) (noting that claims made under Fourteenth Amendment to United States Constitution and Article I, Section 26 of Pennsylvania Constitution "are in essence the same"); *Laudenberger v. Port Auth.*

of Allegheny Cty., 436 A.2d 147, 155 n.13 (Pa. 1981) (stating that equal protection claims under United States Constitution and Pennsylvania Constitution "may be reviewed simultaneously, for the meaning and purpose of the two are sufficiently similar to warrant like treatment"), *appeal dismissed*, 456 U.S. 940 (1982); *Baltimore & Ohio R.R. Co. v. Commonwealth.*, 334 A.2d 636, 643 (Pa.) (stating that equal protection under Pennsylvania Constitution and United States Constitution "may be considered together, for the content of the two provisions is not significantly different"), *appeal dismissed*, 423 U.S. 806 (1975). Since *Erfer*, Pennsylvania courts have continued to uphold the Pennsylvania Supreme Court's precedent regarding the coterminous nature of the Equal Protection Guarantee and the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution. *See Kramer v. Workers' Comp. Appeal Bd. (Rite Aid Corp.)*, 883 A.2d 518, 532 (Pa. 2005); *Zauflik v. Pennsbury Sch. Dist.*, 72 A.3d 773, 789 n.24 (Pa. Cmwlth. 2013), *aff'd*, 104 A.3d 1096 (Pa. 2014); *Doe v. Miller*, 886 A.2d 310, 314 n.9 (Pa. Cmwlth. 2005), *aff'd*, 901 A.2d 495 (Pa. 2006).

46. In *1991 Reapportionment*, the Pennsylvania Supreme Court adopted the three-part test set forth by the *Bandemer* plurality as a means to establish a prima facie case of partisan gerrymandering. *1991 Reapportionment*, 609 A.2d at 142.

47. In *Erfer*, the Pennsylvania Supreme Court noted that in determining whether a specific legislation constituted a partisan gerrymander in violation of the Pennsylvania Constitution, the Pennsylvania Supreme Court would "continue the precedent enunciated in *1991 Reapportionment* and apply the test set forth by the *Bandemer* plurality." *Erfer*, 794 A.2d at 331-32. By "carefully parsing out the plurality's language," the Pennsylvania Supreme Court identified

"a simple . . . recitation of the test." *Id.* at 332. "[A] plaintiff raising a gerrymandering claim must establish that there was intentional discrimination against an identifiable political group and that there was an actual discriminatory effect on that group." *Id.* In order to establish discriminatory effect, the plaintiff must show: (1) "that the identifiable group has been, or is projected to be, disadvantaged at the polls"; and (2) "that by being disadvantaged at the polls, the identifiable group will 'lack . . . political power and [be denied] fair representation.'" *Id.* (omission and alteration in original) (quoting *Bandemer*, 478 U.S. at 139).

48. In *Vieth*, a majority of the United States Supreme Court Justices concluded that the test developed by the *Bandemer* plurality was misguided and unworkable. *Vieth*, 541 U.S. at 283-84 (plurality opinion); *id.* at 307-08 (Kennedy, J., concurring). As a result, the *Bandemer* plurality test is no longer used to determine whether a partisan gerrymander violates the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution. *See Common Cause v. Rucho*, 240 F. Supp. 3d 376, 387 (M.D.N.C. 2017) (concluding "the effects test proposed by the *Bandemer* plurality is unworkable, and, therefore, no longer controlling"); *Whitford*, 218 F. Supp. 3d at 877 (holding that, as a result of *Vieth*, "the *specific test* for political gerrymandering set forth in *Bandemer* no longer is good law").

49. While *Erfer* may have been abrogated by the decision of a majority of the United States Supreme Court Justices in *Vieth*, there is no Pennsylvania Supreme Court precedent that specifically abandons the principles set forth in *Erfer*. As *Erfer* is the only Pennsylvania authority that has been developed to evaluate whether a specific congressional redistricting plan is an

unconstitutional partisan gerrymander under the Equal Protection Guarantee of the Pennsylvania Constitution, this Court will apply the *Erfer* test to the facts of this case.

50. Intentional discrimination is "not . . . difficult to show since '[a]s long as redistricting is done by a legislature, it should not be very difficult to prove that the likely political consequences of the reapportionment were intended.'" *Erfer*, 794 A.2d at 332 (quoting *Bandemer*, 478 U.S. at 129).

51. In light of the standard articulated in *Erfer*, and based on the evidence adduced at trial, Petitioners have established intentional discrimination, in that the 2011 Plan was intentionally drawn so as to grant Republican candidates an advantage in certain districts within the Commonwealth.

52. Although the 2011 Plan was drawn to give Republican candidates an advantage in certain districts within the Commonwealth, Petitioners have failed to meet their burden of showing that the 2011 Plan equated to intentional discrimination against an identifiable political group.

53. Voters who are likely to vote Democratic (or Republican) in a particular district based on the candidates or issues, regardless of the voters' political affiliation, are not an identifiable political group for purposes of the Equal Protection Guarantee under the Pennsylvania Constitution.

54. Even assuming, however, that Petitioners satisfy the first prong of the *Erfer/Bandemer* test, Petitioners must also show that the 2011 Plan works an actual discriminatory effect by showing: (1) "that the identifiable group has been, or is projected to be, disadvantaged at the polls"; and (2) "that by being disadvantaged at the polls, the identifiable group will 'lack . . . political power and [be denied] fair representation.'" *Erfer*, 794 A.2d at 332 (omission and alteration

in original) (quoting *Bandemer*, 478 U.S. at 139). With respect to the latter, Petitioners must establish that they have "effectively been shut out of the political process." *Id.* at 334.

55. This second prong is "unquestionably an onerous standard," in recognition of the state legislature's prerogative to craft congressional reapportionment plans. *Id.* at 333-34.

56. Petitioners have failed to meet their burden under the second *Erfer* prong for the following reasons:

a. While Petitioners contend that Republican candidates who prevail in congressional districts do not represent their particular views on issues important to them and will effectively ignore them, the Court refuses to make such a broad finding based on Petitioners' feelings. There is no constitutional provision that creates a right in voters to their elected official of choice. As a matter of law, an elected member of Congress represents his or her district in its entirety, even those within the district who do not share his or her views. This Court will not presume that members of Congress represent only a portion of their constituents simply because some constituents have different priorities and views on controversial issues.

b. At least 3 of the 18 congressional districts in the 2011 Plan are safe Democratic seats. *See Erfer*, 794 A.2d at 334.

c. Petitioners can, and still do, campaign for, financially support, and vote for their candidate of choice in every congressional election.

d. Petitioners can still exercise their right to protest and attempt to influence public opinion in their congressional district and throughout the Commonwealth.

e. Perhaps most importantly, Petitioners and likeminded voters from across the Commonwealth can exercise their political power at the polls to elect legislators and a Governor who will address and remedy any unfairness in the 2011 Plan through the next reapportionment following the 2020 U.S. Census.

57. Based on the evidence presented and the current state of the law, Petitioners have failed to meet their burden of proving that the 2011 Plan clearly, plainly, and palpably violates Petitioners' rights under the Free and Equal Elections Clause and Equal Protection Guarantee of the Pennsylvania Constitution.

F. Summary of Key Findings and Conclusions

58. Petitioners have established by a preponderance of the evidence that partisan considerations are evident in the enacted 2011 Plan, such that the 2011 Plan overall favors Republican Party candidates in certain congressional districts.

59. Petitioners have established by a preponderance of the evidence that Republican candidates have consistently won 13 out of 18 congressional seats in every congressional election under the 2011 Plan.

60. Petitioners have established by a preponderance of the evidence that by using neutral, or nonpartisan, criteria *only*, it is possible to draw alternative maps that are not as favorable to Republican candidates as is the 2011 Plan.

61. While Petitioners characterize the level of partisanship evident in the 2011 Plan as "excessive" and "unfair," Petitioners have not articulated a

judicially manageable standard by which this Court can discern whether the 2011 Plan crosses the line between permissible partisan considerations and unconstitutional partisan gerrymandering under the Pennsylvania Constitution.[24]

62. Petitioners do not contend that the 2011 Plan fails to comply with all provisions of the United States and Pennsylvania Constitutions specifically applicable to congressional reapportionment.

63. A lot can and has been said about the 2011 Plan, much of which is unflattering and yet justified.

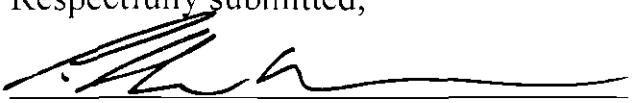
64. Petitioners, however, have failed to meet their burden of proving that the 2011 Plan, as a piece of legislation, clearly, plainly, and palpably violates the Pennsylvania Constitution. For the judiciary, this should be the end of the inquiry.

65. The Court based its conclusions of law on the evidence presented and the current state of the law. Pending before the United States Supreme Court are *Gill* and *Benisek v. Lamone* (U.S. Supreme Court, No. 17-333, jurisdictional statement filed September 1, 2017). In *Gill*, the United States Supreme Court is considering the merits of a split three-judge panel decision by the United States District Court for the Western District of Wisconsin, declaring that the legislatively enacted redistricting plan for state legislative districts violates the

[24] Some unanswered questions that arise based on Petitioners' presentation include: (1) what is a constitutionally permissible efficiency gap; (2) how many districts must be competitive in order for a plan to pass constitutional muster (realizing that a competitive district would result in a skewed efficiency gap); (3) how is a "competitive" district defined; (4) how is a "fair" district defined; and (5) must a plan guarantee a minimum number of congressional seats in favor of one party or another to be constitutional.

First and Fourteenth Amendments to the United States Constitution.[25] In *Benisek*, the United States Supreme Court is considering the merits of a split three-judge panel decision by the United States District Court for Maryland, a political gerrymandering case raising claims under the First Amendment to the United States Constitution, including a claim of retaliation.

Respectfully submitted,



P. Kevin Brobson, Judge
Commonwealth Court of Pennsylvania

[25] By opinion dated June 19, 2017, a divided Supreme Court stayed the district court's judgment in *Whitford*, pending its disposition of the appeal. *Gill*, ___ U.S. ___, 137 S. Ct. 2289 (2017).

Exhibit "A"

Exhibits Admitted into Evidence at Trial Without Objection

Exhibit No.	Description
Petitioners' Ex. 2	Jowei Chen, Ph.D. - Curriculum Vitae
Petitioners' Ex. 3	Chart: Example of a Simulated Districting Plan from Simulation Set 1 (Adhering to Traditional Districting Criteria) [Figure 1 of Chen Report]
Petitioners' Ex. 4	Chart: County and Municipality Splits of 500 Simulated Plans Following Only Traditional Districting Criteria (No Consideration of Incumbent Protection) [Figure 3 of Chen Report]
Petitioners' Ex. 5	Chart: Compactness of 500 Simulated Plans Following Only Traditional Districting Criteria (No Consideration of Incumbent Protection) [Figure 4 of Chen Report]
Petitioners' Ex. 6	Chart: Partisan Breakdown of 500 Simulated Plans Following Only Traditional Districting Criteria [Figure 2 of Chen Report]
Petitioners' Ex. 7	Chart: Example of a Simulated Districting Plan from Simulation Set 2 (Adhering to Traditional Districting Criteria and Protecting 17 Incumbents) [Figure 1A of Chen Report]
Petitioners' Ex. 8	Chart: County and Municipality Splits of 500 Simulated Plans Following Traditional Districting Criteria and Protecting 17 incumbents [Figure 6 of Chen Report]
Petitioners' Ex. 9	Chart: Compactness of 500 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents [Figure 7 to Chen Report]
Petitioners' Ex. 10	Chart: Partisan Breakdown of 500 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents [Figure 8 of Chen Report]
Petitioners' Ex. 11	Table: Paired Incumbents under Simulation Set 2 (Simulations Protecting 17 of 19 Incumbents While Following Traditional Districting Criteria) [Table 3 to Chen Report]
Petitioners' Ex. 12	Table: Summary of Two Sets of Simulated Districting Plans and Enacted Act 131 Plan [Table 1 of Chen Report]
Petitioners' Ex. 13	Racial and ethnic composition of each of the 18 Congressional Districts in Pennsylvania's current enacted congressional plan [Appendix A of Chen Report]
Petitioners' Ex. 14	Racial and ethnic composition of each of the 19 Congressional Districts in the 2002 Congressional Plan [Appendix B of Chen Report]

Petitioners' Ex. 15	Chart: Partisan Breakdown of 205 Simulated Plans Following Only Traditional Districting Criteria (No Incumbent Protection) Containing One District with Black VAP over 56.8% and 54 Simulated Plans Following Traditional Directing Criteria and Protecting 17 Incumbents Containing One District with Black VAP over 56.8% [Figure 10 of Chen Report]
Petitioners' Ex. 16	Chart: Mean-Median Gap of 500 Simulated Plans Following Only Traditional Districting Criteria (No Consideration of Incumbent Protection) [Figure 5 of Chen Report]
Petitioners' Ex. 17	Chart: Mean-Median Gap of 500 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents [Figure 9 of Chen Report]
Petitioners' Ex. 18	Table: Petitioners' Districts in Act 131 and in Simulation Sets 1 and 2 Districting Plans Percent of Simulated Plans Placing Petitioner into a Democratic District [Table 4 of Chen Report]
Petitioners' Ex. 19	Chart: Partisan Breakdown Using 2012-2016 Elections Data of 500 Simulated Plans Following Only Traditional Districting Criteria (No Consideration of Incumbent Protection) and 205 Simulated Plans Following Only Traditional Districting Criteria (No Incumbent Protection) and Containing One District with Black VAP over 56.8% [Figure C1 of Chen Report]
Petitioners' Ex. 20	Chart: Partisan Breakdown Using 2012-2016 Elections Data of 500 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents and 54 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents Containing One District with Black VAP over 56.8% [Figure C2 of Chen Report]
Petitioners' Ex. 25	Chen & Chen Replication Code
Petitioners' Ex. 26	Chen & Cottrell Replication Code
Petitioners' Ex. 34	Analysis of McCarty PVI Data
Petitioners' Ex. 35	Expert Report of Christopher Warshaw, Ph.D.
Petitioners' Ex. 36	Christopher Warshaw, Ph.D. - Curriculum Vitae
Petitioners' Ex. 37	Chart - Distribution of Efficiency Gaps in States with More than 6 Seats: 1972-2016 (Figure 1 to Warshaw Report)
Petitioners' Ex. 38	Chart - Historical Trajectory of the Efficiency Gap (Figure 2 to Warshaw Report)
Petitioners' Ex. 39	Chart - Durability of Efficiency Gap. (Figure 3 to Warshaw

	Report)
Petitioners' Ex. 40	Chart - Historical Trajectory of the Efficiency Gap in Pennsylvania (Figure 4 to Warshaw Report)
Petitioners' Ex. 41	Table - Results in 2012 Pennsylvania Congressional Elections (Table 1 to Warshaw Report)
Petitioners' Ex. 42	Chart - Efficiency Gap in Pennsylvania Relative to Other States (Figure 5 to Warshaw Report)
Petitioners' Ex. 43	Chart - Difference in the Proportion of the Time that Members of Each Party Vote Conservatively (Figure 6 to Warshaw Report)
Petitioners' Ex. 44	Chart - The Average Ideology of Members of Each Party (Figure 7 to Warshaw Report)
Petitioners' Ex. 45	Chart - The Growth in Polarization Between Members of the Two Parties (Figure 8 to Warshaw Report)
Petitioners' Ex. 46	Chart - Polarization Among Pennsylvania Representatives (Figure 9 to Warshaw Report)
Petitioners' Ex. 47	Chart - Proportion of Non-Unanimous Votes Where Representatives from Pennsylvania Vote Together (Figure 10 to Warshaw Report)
Petitioners' Ex. 48	Table – Polarization in Pennsylvania's Delegation: The Percentage of Time PA Representatives Vote with a Majority of Their Party on All Votes and Non- Unanimous Votes (Table 2 to Warshaw Report)
Petitioners' Ex. 49	Table – Effect of Efficiency Gap on Average Legislator Ideology in Each State (Table 3 to Warshaw Report)
Petitioners' Ex. 50	Chart – Association Between Efficiency Gap and the Congruence Between Public Opinion and Legislators' ACA Repeal Vote (Figure 11 to Warshaw Report)
Petitioners' Ex. 51	Chart – Association Between Efficiency Gap and Citizens' Trust in Their Representative in Congress (Figure 12 to Warshaw Report)
Petitioners' Ex. 52	Chart – Validation of the Efficiency Gap Measure (Figure A1 to Warshaw Report)
Petitioners' Ex. 53	Expert Report of John J. Kennedy, Ph.D.
Petitioners' Ex. 54	John J. Kennedy, Ph.D. - Curriculum Vitae
Petitioners' Ex. 56	Table – Split Counties and Municipalities by Decade [Table B to Kennedy Report]
Petitioners' Ex. 57	Table – Number of Municipalities Split at the Block Level by Decade [Table C to Kennedy Report]

Petitioners' Ex. 68	Map – Pennsylvania Congressional Districts (Current Map) [Map 6 to Kennedy Report]
Petitioners' Ex. 70	Map – 1st Congressional District (red/blue)
Petitioners' Ex. 73	Map – 3rd Congressional District (red/blue)
Petitioners' Ex. 75	Map – 4th Congressional District (red/blue)
Petitioners' Ex. 78	Map – 6th Congressional District (red/blue)
Petitioners' Ex. 81	Map – Pennsylvania 7th District (Creed's Seafood and Steak House)
Petitioners' Ex. 82	Map – Pennsylvania 7th District (Brandywine Hospital)
Petitioners' Ex. 83	Map – 7th Congressional District (red/blue)
Petitioners' Ex. 93	Map – 14th Congressional District (red/blue)
Petitioners' Ex. 95	Map – 15th Congressional District (red/blue)
Petitioners' Ex. 97	Map – 16th Congressional District (red/blue)
Petitioners' Ex. 99	Map – 16th Congressional District (Reed's Mulch Products and Degler's Service Center)
Petitioners' Ex. 102	Map – 17th Congressional District (red/blue)
Petitioners' Ex. 117	Expert Report of Wesley Pegden, Ph.D.
Petitioners' Ex. 118	Wesley Pegden, Ph.D. - Curriculum Vitae (Exhibit A to Pegden Report)
Petitioners' Ex. 119	Article – Chikina, Maria et al. "Assessing significance in a Markov chain without mixing" (Exhibit B to Pegden Report)
Petitioners' Ex. 121	Figure 2 to Pegden Report
Petitioners' Ex. 122	Table (page 8 of Pegden Report)
Petitioners' Ex. 123	Pegden Theorem
Petitioners' Ex. 162	McCarty PVI Estimation Errors in Simulated Districts
Petitioners' Ex. 163	Designations from the Deposition of Carmen Febo San Miguel

Petitioners' Ex. 164	Designations from the Deposition of Donald Lancaster
Petitioners' Ex. 165	Designations from the Deposition of Gretchen Brandt
Petitioners' Ex. 166	Designations from the Deposition of John Capowski
Petitioners' Ex. 167	Designations from the Deposition of Jordi Comas
Petitioners' Ex. 168	Designations from the Deposition of John Greiner
Petitioners' Ex. 169	Designations from the Deposition of James Solomon
Petitioners' Ex. 170	Designations from the Deposition of Lisa Isaacs
Petitioners' Ex. 171	Designations from the Deposition of Lorraine Petrosky
Petitioners' Ex. 172	Designations from the Deposition of Mark Lichty
Petitioners' Ex. 173	Designations from the Deposition of Priscilla McNulty
Petitioners' Ex. 174	Designations from the Deposition of Richard Mantell
Petitioners' Ex. 175	Designations from the Deposition of Robert McKinstry
Petitioners' Ex. 176	Designations from the Deposition of Robert Smith
Petitioners' Ex. 177	Designations from the Deposition of Thomas Ulrich
Petitioners' Ex. 178	Designations from the Trial Testimony of State Senator Andrew E. Dinniman in the *Agre* case
Petitioners' Ex. 179	Designations from the Deposition of State Representative Gregory Vitali
Petitioners' Ex. 266	"Does Gerrymandering Cause Polarization?"
Legislative Respondents' Ex. 10	Wendy K. Tam Cho, Ph.D. CV
Legislative Respondents' Ex. 11	Wendy K. Tam Cho, Ph.D. Expert Report
Legislative Respondents' Ex.	Wendy K. Tam Cho, Ph.D. Report – Figures and Tables

12	
Legislative Respondents' Ex. 16	Nolan McCarty, Ph.D. CV
Legislative Respondents' Ex. 17	Nolan McCarty, Ph.D. Expert Report
Legislative Respondents' Ex. 18	Nolan McCarty, Ph.D. Figures and Tables
Legislative Respondents' Ex. 19	Senate Dem. Congressional Plan Map
Lt. Governor Stack's Ex. 11	Affidavit of Lt. Governor Stack
Lt. Governor Stack's Ex. 12	Untitled Document [**ADMITTED FOR ILLUSTRATIVE PURPOSES ONLY**]
Governor Wolf, Acting Secretary Torres, and Commissioner Marks' Ex. 2	Affidavit of Commissioner Marks
Intervenors' Ex. 2	Voter Registration Statistics
Intervenors' Ex. 16	Affidavit of Intervenor Witness Thomas Whitehead
Intervenors' Ex. 17	Affidavit of Intervenor Witness Carol Lynne Ryan

Exhibit "B"

Exhibits Entered into Evidence at Trial Upon Stipulation of the Parties (Attached to Joint Stipulation of Facts Filed 12/8/17)

Exhibit No.	Description
Joint Exhibit 1	SB 1249, PN 1520 (Form of Bill as introduced to the PA Senate on September 14, 2011)
Joint Exhibit 2	SB 1249, PN 1862 (Form of Bill as amended on December 14, 2011 in the PA Senate State Government Committee)
Joint Exhibit 3	SB 1249, PN 1869 (Form of Bill as rewritten in the PA Senate Appropriations Committee on December 14, 2011)
Joint Exhibit 4	SB 1249, PN 1869 (Form of Bill as reported out by the PA House Appropriations Committee on December 20, 2011)
Joint Exhibit 5	2011 Plan
Joint Exhibit 6	Map of the 1st Congressional District
Joint Exhibit 7	Map of the 2nd Congressional District
Joint Exhibit 8	Map of the 3rd Congressional District
Joint Exhibit 9	Map of the 4th Congressional District
Joint Exhibit 10	Map of the 5th Congressional District
Joint Exhibit 11	Map of the 6th Congressional District
Joint Exhibit 12	Map of the 7th Congressional District
Joint Exhibit 13	Map of the 8th Congressional District
Joint Exhibit 14	Map of the 9th Congressional District
Joint Exhibit 15	Map of the 10th Congressional District
Joint Exhibit 16	Map of the 11th Congressional District
Joint Exhibit 17	Map of the 12th Congressional District

Joint Exhibit 18	Map of the 13th Congressional District
Joint Exhibit 19	Map of the 14th Congressional District
Joint Exhibit 20	Map of the 15th Congressional District
Joint Exhibit 21	Map of the 16th Congressional District
Joint Exhibit 22	Map of the 17th Congressional District
Joint Exhibit 23	Map of the 18th Congressional District
Joint Exhibit 24	The Evolution of Pennsylvania's 7th District
Joint Exhibit 25	List of Representatives for Each Congressional District from 2005 to Present
Joint Exhibit 26	Pennsylvania Congressional District Maps for 1943, 1951, 1962, 1972, 1982, 1992, 2002, and 2011 from the Pennsylvania Manual

ATTACHMENT B

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

League of Women Voters of Pennsylvania, Carmen Febo San Miguel, James Solomon, John Greiner, John Capowski, Gretchen Brandt, Thomas Rentschler, Mary Elizabeth Lawn, Lisa Isaacs, Don Lancaster, Jordi Comas, Robert Smith, William Marx, Richard Mantell, Priscilla McNulty, Thomas Ulrich, Robert McKinstry, Mark Lichty, Lorraine Petrosky, Petitioners	:	
v.	:	No. 261 M.D. 2017
The Commonwealth of Pennsylvania; The Pennsylvania General Assembly; Thomas W. Wolf, In His Capacity As Governor of Pennsylvania; Michael J. Stack III, In His Capacity As Lieutenant Governor of Pennsylvania and President of the Pennsylvania Senate; Michael C. Turzai, In His Capacity As Speaker of the Pennsylvania House of Representatives; Joseph B. Scarnati III, In His Capacity As Pennsylvania Senate President Pro Tempore; Pedro A. Cortes, In His Capacity As Secretary of the Commonwealth of Pennsylvania; Jonathan M. Marks, In His Capacity As Commissioner of the Bureau of Commissions, Elections, and Legislation of the Pennsylvania Department of State, Respondents	:	

ORDER

AND NOW, this 13th day of November, 2017, in furtherance of the Order of the Supreme Court of Pennsylvania entered on November 9, 2017, it is hereby **ORDERED**:

1. The Application for Leave to Intervene filed August 10, 2017, is **GRANTED**.

2. Paragraph 3 of the Court's October 16, 2017 Order is **RESCINDED**.

3. In response to the brief filed pursuant to paragraph 2 of the Court's October 16, 2017 Order, Petitioners shall file their brief on or before November 17, 2017. The Court will not accept a reply brief.

4. Preliminary objections challenging the standing of Petitioner League of Women Voters of Pennsylvania (LWVP) are **SUSTAINED**, and LWVP is **DISSMISSED** as a party petitioner in this action. *Erfer v. Commonwealth*, 794 A.2d 325, 330 (Pa. 2002) (holding that entity not authorized by law to exercise right to vote in Commonwealth lacks standing to file political gerrymandering claims).

5. All remaining preliminary objections are **OVERRULED**. This ruling is based on the presence of disputed issues of fact and the exigency of the matter, which does not allow time for the Court to rule on the merits of these preliminary objections.

6. Answers to the Petition for Review must be filed by November 17, 2017.

7. Answers to New Matter, if any, must be filed by November 22, 2017.

8. Oral argument and, if necessary, hearing on motions in limine and remaining pretrial matters will be held on Monday, December 11, 2017, in Courtroom 3001 of the Pennsylvania Judicial Center, Harrisburg,

Pennsylvania, beginning at 9:30 a.m. Trial will begin the same day following disposition thereof and continue day-to-day until concluded.

9. A pre-trial conference will be held Thursday, November 16, 2017, at 1:00 pm., in the President Judge's Conference Room, Suite 5204 of the Pennsylvania Judicial Center, Harrisburg, Pennsylvania, for the purposes of discussing all scheduling matters not addressed in this Order and any other procedural matters which the parties wish to bring to the Court's attention.

10. No extensions of filing deadlines and/or requests for continuances of scheduled proceedings will be considered and/or granted absent extraordinary circumstances.

P. KEVIN BROBSON, Judge

ATTACHMENT C

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

League of Women Voters of Pennsylvania, Carmen Febo San Miguel, James Solomon, John Greiner, John Capowski, Gretchen Brandt, Thomas Rentschler, Mary Elizabeth Lawn, Lisa Isaacs, Don Lancaster, Jordi Comas, Robert Smith, William Marx, Richard Mantell, Priscilla McNulty, Thomas Ulrich, Robert McKinstry, Mark Lichty, Lorraine Petrosky, Petitioners	:	
v.	:	No. 261 M.D. 2017
The Commonwealth of Pennsylvania; The Pennsylvania General Assembly; Thomas W. Wolf, In His Capacity As Governor of Pennsylvania; Michael J. Stack III, In His Capacity As Lieutenant Governor of Pennsylvania And President of the Pennsylvania Senate; Michael C. Turzai, In His Capacity As Speaker of the Pennsylvania House of Representatives; Joseph B. Scarnati III, In His Capacity As Pennsylvania Senate President Pro Tempore; Robert Torres, In His Capacity As Acting Secretary of the Commonwealth of Pennsylvania; Jonathan M. Marks, In His Capacity As Commissioner of the Bureau of Commissions, Elections, and Legislation of the Pennsylvania Department of State, Respondents	:	

MEMORANDUM AND ORDER

Presently before the Court for disposition are various discovery matters, which raise, *inter alia*, the applicability of Article 2, Section 15 of the Pennsylvania

Constitution, also known as the Speech and Debate Clause. Respondents the Pennsylvania General Assembly, Speaker of Pennsylvania House of Representatives Michael C. Turzai, and President Pro Tempore of the Pennsylvania Senate Joseph B. Scarnati III (Legislative Respondents) contend that much, if not all, of the discovery that Petitioners seek in this matter is barred by the immunity afforded under the Speech and Debate Clause, which Legislative Respondents maintain is *absolute*. Petitioners, by contrast, contend that federal courts hearing gerrymandering challenges throughout the country have recognized only a *qualified* legislative privilege, allowing discovery of the type that Petitioners seek here. *See, e.g., Bethune-Hill v. Va. State Bd. of Elections*, 114 F. Supp. 3d 323 (E.D. Va. 2015). Petitioners also directed the Court to the Florida Supreme Court decision in *League of Women Voters of Florida v. Florida House of Representatives*, 132 So. 3d 135 (Fla. 2013) (*LWV of Fl.*), which also recognized only a qualified legislative privilege in the context of a gerrymandering challenge.

Pennsylvania's Speech and Debate Clause provides, in relevant part: "The members of the General Assembly . . . for any speech or debate in either House . . . shall not be questioned in any other place." Pa. Const., Art. 2, § 15. The Pennsylvania Supreme Court has held that the scope of Pennsylvania's Speech and Debate Clause is indistinguishable from its counterpart in the United States Constitution. *Consumers Educ. and Prot. Ass'n v. Nolan*, 368 A.2d 675, 681 (Pa. 1977). Following United States Supreme Court precedent, the Pennsylvania Supreme Court held that the Speech and Debate Clause must be construed "broadly in order to protect legislators from *judicial interference* with their legitimate legislative activities." *Id.* at 680-81 (emphasis added). Our Supreme Court has further explained the breadth of the protection as follows:

> [T]he immunity of the legislators must be absolute as to their actions within the "legitimate legislative sphere." To accomplish this we must not only insulate the legislator against the results of litigation brought against him for acts in the discharge of the responsibilities of his office, but also relieve him of the responsibility of defending against such claims.

Consumer Party of Pa. v. Cmwlth., 507 A.2d 323, 331 (Pa. 1986), *abrogated on other grounds by Pennsylvanians Against Gambling Expansion Fund, Inc. v. Cmwlth.*, 877 A.2d 383 (Pa. 2005). "It is undisputed that legislative immunity [under the Speech and Debate Clause] precludes inquiry into the motives or purposes of a legislative act." *Government of the Virgin Islands v. Lee*, 775 F.2d 514, 522 (3d Cir. 1985).

Not all activities of state legislators, however, are protected. To be protected, the activity in question must fall within "the sphere of legitimate legislative activity." *Id.*; *see Gravel v. United States*, 408 U.S. 606, 624-25 (1972); *Firetree Ltd. v. Fairchild*, 920 A.2d 913, 920 (Pa. Cmwlth. 2007), *appeal denied*, 946 A.2d 689 (Pa. 2008); *but see United States v. Brewster*, 408 U.S. 501, 512 (1972) (noting that legislators often engage in activities—*e.g.*, constituent service and newsletters—that are not purely legislative and thus not protected by Speech and Debate Clause of United States Constitution). The protections of the Speech and Debate Clause are not, however, confined to the walls of the Pennsylvania House or Pennsylvania Senate Chambers. They also extend to "fact-finding, information gathering, and investigative activities," which "are essential prerequisites to the drafting of bills and the enlightened debate over proposed legislation." *Government of the Virgin Islands*, 775 F.2d at 521. It is also now well-settled that the protections of the Speech and Debate Clause extend to legislative staff. *See Gravel*, 408 U.S. at 616-22.

Underlying the speech and debate privilege is the preservation of the structure in our state constitution of separate but equal branches of government: "Two interrelated rationales underlie the Speech or Debate Clause: first, the need to avoid intrusion by the Executive *or Judiciary* into the affairs of a coequal branch, and second, the desire to protect legislative independence." *United States v. Gillock*, 445 U.S. 360, 369 (1980) (emphasis added). "In our system, 'the clause serves the additional function of reinforcing the separation of powers so deliberately established by the Founders.'" *Eastland v. U.S. Servicemen's Fund*, 421 U.S. 491, 502 (1975) (quoting *United States v. Johnson*, 383 U.S. 169 (1966)). As a coequal branch of the Pennsylvania General Assembly, Pennsylvania state courts are so constrained. Federal courts, however, are not. Federal courts are not compelled to honor state constitutional protections afforded to state legislatures. This explains why the federal gerrymandering cases on which Petitioners rely are neither dispositive nor persuasive. The opinions in those cases invariably address only whether state legislators are entitled to "state legislative immunity," a *qualified* privilege sourced not in constitutional law, but in federal common law.

In *Bethune-Hill*, an opinion Petitioners rely upon, the plaintiffs initiated a federal lawsuit, challenging certain state house districts as unlawful racial gerrymanders in violation of the Equal Protection Clause of the United States Constitution. The plaintiffs served discovery on the Virginia House of Delegates (Va. House), seeking both internal and external communications relating to the redistricting process. The Va. House asserted "legislative privilege" to shield the production of certain documents. In addressing the claim of privilege, the District Court distinguished legislative immunity and privilege for *federal* legislators, which

is derived from the Speech and Debate Clause of the United States Constitution, from state legislative immunity recognized by federal courts:

> [F]ederal legislators are entitled to *an absolute* legislative immunity grounded in the Constitution for any civil or criminal action based in substance or evidence upon acts performed within the "sphere of legitimate legislative activity." This immunity is further safeguarded by an absolute legislative privilege preventing compelled testimony or documentary disclosure regarding legislative activities in support of such claims.
>
> . . .
>
> State legislative immunity differs, however, from federal legislative immunity in its source of authority, purpose, and degree of protection. Unlike federal legislative immunity, which is grounded in constitutional law, *state legislative immunity in federal court* is governed by federal common law. Moreover, the principles animating immunity for state legislators under common law—while significant—are distinguishable from these principles underlying the constitutional immunity afforded federal legislators.

Bethune-Hill, 114 F. Supp. 3d at 332-33 (citation omitted) (emphasis added). The District Court specifically noted that the "separation of powers" concerns implicated where a federal court interferes in the affairs of Congress are of greater weight and importance than any concern about federal interference in a state legislative process. *Id.* at 333. Moreover, the District Court cited to the Supremacy Clause of the United States Constitution as empowering the federal courts to enforce federal law over any competing state protections. *Id.* Under federal common law, state legislative privilege and state legislative immunity is "qualified based on the nature of the claim at issue." *Id.* at 334.

Legislative Respondents clearly are not invoking qualified legislative privilege and immunity under federal common law; rather, they are invoking

absolute legislative privilege and immunity based on the Speech and Debate Clause of the Pennsylvania Constitution. This Court is as duty bound to honor this constitutional provision in a lawsuit involving the actions of state legislators as is a federal court bound to honor the identical absolute legislative privilege and immunity sourced in the United States Constitution in a lawsuit involving the actions of federal legislators.[1]

Relying, then, on relevant state and federal precedent in this area, the Court concludes that Legislative Respondents in this case enjoy absolute legislative immunity under Article 2, Section 15 of the Pennsylvania Constitution. This immunity extends to activities within the "sphere of legitimate legislative activity." In their Petition for Review, Petitioners challenge the constitutionality of the 2011 reapportionment of Pennsylvania's congressional seats and the resulting congressional district maps. It is undisputed that Pennsylvania drew the 2011 congressional map through a legislative process, which resulted in the Congressional Redistricting Act of 2011, Act of December 22, 2011, P.L. 599, 25 P.S. §§ 3596.101-.1510 (Act 131 of 2011). Accordingly, the consideration and passage of Act 131 of 2011 was unquestionably a legitimate legislative activity. It is also beyond question that the activities of state legislators and their staff that fall

[1] Petitioners' reliance on *LWV of Fl.* is similarly misplaced. Although that case, like this one, involved a state court challenge to a congressional redistricting plan and the assertion of a legislative privilege in response to discovery requests, different substantive law dictated the outcome in that case. Specifically, as the Florida Supreme Court noted in its opinion, the Florida Constitution does not include a speech and debate clause. *LWV of Fl.*, 132 So. 3d at 143. In the absence of an express legislative privilege, the Florida Supreme Court, recognizing separation of powers concerns, opted to adopt a common law qualified legislative privilege, similar to that recognized by federal courts. *See Bethune-Hill*. Additionally, the state supreme courts in Virginia and Rhode Island, states that have a speech and debate clause in their state constitutions, have held that the speech and debate clause precluded access to legislative materials regarding redistricting. *See Edwards v. Vesilind*, 790 S.E. 2d 469 (Va. 2016); *Holmes v. Farmer*, 475 A.2d 976 (R.I. 1984).

within the sphere of this legitimate legislative activity are protected under the Speech and Debate Clause of the Pennsylvania Constitution. Accordingly, this Court lacks the authority to compel testimony or the production of documents relative to the intentions, motivations, and activities of state legislators and their staff with respect to the consideration and passage of Act 131 of 2011.

AND NOW, this 22nd day of November, 2017, with the foregoing legal principles in mind, the Court now considers the current discovery disputes relating to the 2011 Plan[2] as raised in (1) the objections of Legislative Respondents to Petitioners' notice of intent to serve subpoenas pursuant to Pa. R.C.P. No. 4009.21, filed with this Court on August 9, 2017, (2) Legislative Respondents' objections to Petitioners' notice of intent to serve a subpoena pursuant to Pa. R.C.P. No. 4009.21 on Thomas W. Corbett, former Governor of the Commonwealth of Pennsylvania (Governor Corbett), filed with this Court on August 28, 2017, (3) Petitioners' motion to strike objections to their notice of intent to serve subpoenas, filed with this Court on September 12, 2017, (4) Legislative Respondents' and the General Assembly's response to Petitioners' motion to strike objections to their notice of intent to serve subpoenas filed with this Court on September 26, 2017, and (5) assertions of privilege by Legislative Respondents with respect to Petitioners' first set of interrogatories and document requests, and makes the following rulings:

1. **Legislative Subpoenas:** Legislative Respondents object to the 11 subpoenas noticed by Petitioners and directed to the following individuals

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[2] For purposes of the subpoenas, Petitioners define the "2011 Plan" as

> the 2011 Congressional Redistricting Plan for Pennsylvania that was signed into law in 2011 by the Governor of Pennsylvania, any preliminary or draft plans that preceded the 2011 Congressional Redistricting Plan, and any proposal, strategies or plans to redraw Pennsylvania's congressional districts following the 2010 Census.

whom Legislative Respondents describe as current and/or former employees, legislative aides, consultants, experts, and agents of Legislative Respondents: Tony Aliano, Erik Arneson, Heather Cevasco, Krysjan Callahan, Drew Crompton, Glenn Grell, John Memmi, William Schaller, Dave Thomas, Gail Reinard, and David W. Woods (collectively referred to as the Legislative Subpoenas). The Legislative Subpoenas are hereby QUASHED, as the Court lacks the authority under the Speech and Debate Clause of the Pennsylvania Constitution to compel the production of the documents sought therein. In light of this ruling, the Court need not consider the other bases for objection raised by Legislative Respondents.

2. **Third-Party Subpoenas:** Legislative Respondents object to the subpoenas noticed by Petitioners and directed to the Republican National Committee (RNC), the National Republican Congressional Committee (NRCC), the Republican State Leadership Committee (RSLC), and the State Government Leadership Foundation (SGLF) (collectively, Entities), and to Adam Kincaid and Thomas B. Hofeller (Individuals), whom Legislative Respondents believe are or have been associated with the RNC or the NRCC (collectively, the Third-Party Subpoenas).[3] The subpoenas directed to the Entities seek:

> 1. All documents referring or relating to the 2011 Plan, including, but not limited to:
>
> > a. All proposals, analyses, memoranda, notes, and calendar entries in whatever medium (*e.g.*, paper, computerized format, e-mail, photograph, audiotape) they are maintained referring or relating to the 2011 Plan.

[3] In addition to objecting based on the Speech and Debate Clause, Legislative Respondents also raised objections on the bases of a privilege under the First Amendment, attorney-client privilege, attorney work product doctrine, the deliberative process privilege, and the executive privilege, and that the requests are overly broad and not relevant to Petitioners' claims.

b. All documents referring or relating to all considerations or criteria that were used to develop the 2011 Plan, such as compactness, contiguity, keeping political units or communities together, equal population, race or ethnicity, incumbent protection, a voter['s] or area's likelihood of supporting Republican or Democratic candidates, and any others.

c. All documents referring or relating to how each consideration or criterion was measured, including the specific data and specific formulas used in assessing compactness and partisanship.

d. All documents referring or relating to how each consideration or criterion affected the 2011 Plan, including any rule or principle guiding the use of each consideration or criteria in developing the 2011 Plan.

e. All communications since January 1, 2009, referring or relating to the 2011 Plan, including all communications to, from, or between the following organizations or individuals referring or relating to the 2011 Plan: [the RNC, the RSLC, REDMAP, the SGLF, Governor Corbett, former State Senators Pileggi and Brubaker, State Senators Scarnati, McIlhinney, Corman, Folmer, White, State Representatives Metcalfe, Grove, Cox, Dunbar, Evankovich, Gabler, Grell, Hahn, Kauffman, Knowles, Krieger, Mustio, Roae, Schlegel-Culver, Stern, any other member of the General Assembly, Thomas B. Hofeller, David W. Woods, Erik Arneson, John Memmi, William Schaller, Drew Crompton, Dave Thomas, Krysjan Callahan, Tony Aliano, Glenn Grell, Gail Reinard, Heather Cevasco, and the Republican Party of Pennsylvania.]

f. All communications with any consultants, advisors, attorneys, or political scientists referring or relating to the 2011 Plan.

g. All communications with any committees, legislators, or legislative staffers referring or relating to the 2011 Plan.

> 2. All documents referring or relating to the planning, purpose, execution, and results of Project REDMAP from its inception through the date of service of this subpoena.
>
> 3. All communications and reports to donors or contributors to the [RSLC] or the [SGLF] that refer, reflect, or discuss the purpose of or the strategy behind the REDMAP project or which report or evaluate the success or effectiveness of the REDMAP project in bringing about the reapportionment of congressional districts following the 2010 Census.
>
> 4. All PowerPoint slides from any training on redistricting presented to members of the Pennsylvania General Assembly (or their agents, employees, consultants, or representatives) or to Pennsylvania Governor Thomas Corbett.

The requests set forth in paragraph 1 of the subpoenas directed to the Individuals seek all documents referring or relating to the 2011 Plan, including, but not limited to:

> a. All proposals, analyses, memoranda, notes, and calendar entries in whatever medium (*e.g.*, paper, computerized format, e-mail, photograph, audiotape) they are maintained referring or relating to the 2011 Plan.
>
> b. All documents referring or relating to all considerations or criteria that were used to develop the 2011 Plan, such as compactness, contiguity, keeping political units or communities together, equal population, race or ethnicity, incumbent protection, a voter['s] or area's likelihood of supporting Republican or Democratic candidates, and any others.
>
> c. All documents referring or relating to how each consideration or criterion was measured, including the specific data and specific formulas used in assessing compactness and partisanship.
>
> d. All documents referring or relating to how each consideration or criterion affected the 2011 Plan, including any rule or principle guiding the use of each consideration or criteria in developing the 2011 Plan.

> e. All communications since January 1, 2009, with any affiliate of the Republican Party, including, but not limited to, the [RNC, the NRCC, the RSLC, REDMAP, or the SGLF that refer or relate to the 2011 Plan.
>
> f. All communications with any consultants, advisors, attorneys, or political scientists referring or relating to the 2011 Plan.
>
> g. All communications with any committees, legislators, or legislative staffers referring or relating to the 2011 Plan.

Paragraph 1(g) of each of the Third-Party Subpoenas is hereby STRICKEN based on the Speech and Debate Clause of the Pennsylvania Constitution.

Paragraph 1(e) of the subpoenas directed at the Entities is hereby STRICKEN based on the Speech and Debate Clause of the Pennsylvania Constitution to the extent that it seeks communications with former State Senators Pileggi and Brubaker; State Senators Scarnati, McIlhinney, Corman, Folmer, and White; State Representatives Metcalfe, Grove, Cox, Dunbar, Evankovich, Gabler, Grell, Hahn, Kauffman, Knowles, Krieger, Mustio, Roae, Schlegel-Culver, Stern, any other member of the General Assembly; David W. Woods, Erik Arneson, John Memmi, William Schaller, Drew Crompton, Dave Thomas, Krysjan Callahan, Tony Aliano, Glenn Grell, Gail Reinard, and Heather Cevasco.

As to the remaining categories of documents sought in the Third-Party Subpoenas, it is not clear from the wording that any and all responsive documents from the Entities and Individuals would fall within the scope of the indemnity and privilege protected by the Speech and Debate Clause of the Pennsylvania Constitution. Accordingly, the Court will not strike the Third-Party Subpoenas outright. Nonetheless, recognizing the Court's inability to compel production of testimony or documents with respect to matters protected by the Speech and Debate

Clause of the Pennsylvania Constitution, the remaining categories of documents sought in the Third-Party Subpoenas SHALL BE INTERPETED as *excluding* those documents that reflect the intentions, motivations, and activities of state legislators and their staff with respect to the consideration and passage of Act 131 of 2011.

3. **Governor Corbett Subpoena:** Legislative Respondents object to Petitioners' notice of intent to serve a subpoena pursuant to Pa. R.C.P. No. 4009.21 on Governor Corbett, filed with this Court on August 28, 2017.[4] The subpoena seeks all documents referring or relating to the 2011 Plan, including, but not limited to:

> a. All proposals, analyses, memoranda, notes, and calendar entries in whatever medium (*e.g.*, paper, computerized format, e-mail, photograph, audiotape) they are maintained referring or relating to the 2011 Plan.
>
> b. All documents referring or relating to all considerations or criteria that were used to develop the 2011 Plan, such as compactness, contiguity, keeping political units or communities together, equal population, race or ethnicity, incumbent protection, a voter or area's likelihood of supporting Republican or Democratic candidates, and any others.
>
> c. All documents referring or relating to how each consideration or criterion was measured, including the specific data and specific formulas used in assessing compactness and partisanship.
>
> d. All documents referring or relating to how each consideration or criterion affected the 2011 Plan, including any rule or principle guiding the use of each consideration or criteria in developing the 2011 Plan.
>
> e. All communications since January 1, 2009 with any affiliate of the Republican Party, including, but not limited to, the [RNC, the NRCC, the RSLC, the REDistricting

[4] In addition to objecting based on the Speech and Debate Clause, Legislative Respondents also raised objections on the bases of a privilege under the First Amendment, attorney-client privilege, attorney work-product doctrine, deliberative process privilege and executive privilege, and that the requests are overly broad and not relevant to Petitioners' claims.

> Majority Project (REDMAP), or the SGLF] that refer or relate to the 2011 Plan.
>
> f. All communications with any consultants, advisors, attorneys, or political scientists referring or relating to the 2011 Plan.
>
> g. All communications with any committees, legislators, or legislative staffers referring or relating to the 2011 Plan.

It not clear from the wording that any and all responsive documents from Governor Corbett would fall within the scope of the indemnity and privilege protected by the Speech and Debate Clause of the Pennsylvania Constitution. Accordingly, the Court will not strike the subpoena outright. Nonetheless, recognizing the Court's inability to compel production of testimony or documents with respect to matters protected by the Speech and Debate Clause of the Pennsylvania Constitution, the categories of documents sought from Governor Corbett SHALL BE INTERPETED as *excluding* those documents that reflect the intentions, motivations, and activities of state legislators and their staff with respect to the consideration and passage of Act 131 of 2011.

4. Nothing in this Memorandum and Order precludes Legislative Respondents from contesting the admissibility of any document secured from a third party on the basis of legislative immunity and privilege under the Speech and Debate Clause of the Pennsylvania Constitution. To the extent that the categories set forth in the subpoenas may be overbroad or not likely to lead to relevant evidence, the parties and recipients of the subpoenas shall work together to refine the categories in an appropriate and expeditious manner. Nothing in this Memorandum and Order precludes the recipients from interposing their own timely objections following service. Finally, Legislative Respondents cannot raise the Governor's deliberate process privilege or the executive privilege.

5. **Attorney-Client Privilege and Attorney Work Product Doctrine:** Legislative Respondents cannot raise objections based on attorney-client privilege or attorney work product doctrine on behalf of entities or persons to whom a subpoena will be directed.

6. **Privilege Log:** Every responsive document withheld pursuant to any asserted privilege or doctrine must be identified on a privilege log served with the response to the subpoena.

7. Petitioners are DIRECTED to serve a copy of this Order with any subpoenas served pursuant to the Order.

8. **Petitioners' First Set of Requests for Production and First Set of Interrogatories**: Petitioners have served on all Respondents a First Set of Requests for Production and First Set of Interrogatories, to which Legislative Respondents interposed objections and claimed privileges, including the protections of the Speech and Debate Clause. The Court, having reviewed the document requests and interrogatories, concludes, based on the above legal analysis, that the Court lacks the authority to compel Legislative Respondents to produce documents or provide information responsive to the interrogatories, as all topics set forth therein fall within the sphere of legitimate legislative activity under the Speech and Debate Clause of the Pennsylvania Constitution. It is, therefore, unnecessary for the Court to address the other objection and privileges raised by the Legislative Respondents.

P. KEVIN BROBSON, Judge

Certified from the Record

NOV 22 2017

and Order Exit

Exhibit D

[J-1-2018]
IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

SAYLOR, C.J., BAER, TODD, DONOHUE, DOUGHERTY, WECHT, MUNDY, JJ.

LEAGUE OF WOMEN VOTERS OF PENNSYLVANIA, CARMEN FEBO SAN MIGUEL, JAMES SOLOMON, JOHN GREINER, JOHN CAPOWSKI, GRETCHEN BRANDT, THOMAS RENTSCHLER, MARY ELIZABETH LAWN, LISA ISAACS, DON LANCASTER, JORDI COMAS, ROBERT SMITH, WILLIAM MARX, RICHARD MANTELL, PRISCILLA MCNULTY, THOMAS ULRICH, ROBERT MCKINSTRY, MARK LICHTY, LORRAINE PETROSKY,	:	No. 159 MM 2017
	:	On the Recommended Findings of Fact and Conclusions of Law of the Commonwealth Court of Pennsylvania entered on 12/29/18 at No. 261 MD 2017
	:	ARGUED: January 17, 2018
Petitioners	:	
v.	:	
THE COMMONWEALTH OF PENNSYLVANIA; THE PENNSYLVANIA GENERAL ASSEMBLY; THOMAS W. WOLF, IN HIS CAPACITY AS GOVERNOR OF PENNSYLVANIA; MICHAEL J. STACK III, IN HIS CAPACITY AS LIEUTENANT GOVERNOR OF PENNSYLVANIA AND PRESIDENT OF THE PENNSYLVANIA SENATE; MICHAEL C. TURZAI, IN HIS CAPACITY AS SPEAKER OF THE PENNSYLVANIA HOUSE OF REPRESENTATIVES; JOSEPH B. SCARNATI III, IN HIS CAPACITY AS PENNSYLVANIA SENATE PRESIDENT PRO TEMPORE; ROBERT TORRES, IN HIS CAPACITY AS ACTING SECRETARY OF THE COMMONWEALTH OF PENNSYLVANIA; JONATHAN M. MARKS, IN HIS CAPACITY AS COMMISSIONER OF THE	:	

BUREAU OF COMMISSIONS, ELECTIONS, AND LEGISLATION OF THE PENNSYLVANIA DEPARTMENT OF STATE,

Respondents

OPINION

JUSTICE TODD **FILED: February 7, 2018**

It is a core principle of our republican form of government "that the voters should choose their representatives, not the other way around."[1] In this case, Petitioners allege that the Pennsylvania Congressional Redistricting Act of 2011[2] (the "2011 Plan") does the latter, infringing upon that most central of democratic rights – the right to vote. Specifically, they contend that the 2011 Plan is an unconstitutional partisan gerrymander. While federal courts have, to date, been unable to settle on a workable standard by which to assess such claims under the federal Constitution, we find no such barriers under our great Pennsylvania charter. The people of this Commonwealth should never lose sight of the fact that, in its protection of essential rights, our founding document is the ancestor, not the offspring, of the federal Constitution. We conclude that, in this matter, it provides a constitutional standard, and remedy, even if the federal charter does not. Specifically, we hold that the 2011 Plan violates Article I, Section 5 – the Free and Equal Elections Clause – of the Pennsylvania Constitution.

[1] Mitchell N. Berman, *Managing Gerrymandering*, 83 Tex. L. Rev. 781, 781 (2005), quoted in *Arizona State Legislature v. Arizona Indep. Redistricting Comm'n*, 135 S. Ct. 2652, 2677 (2015).

[2] Act of Dec. 22, 2011, P.L. 599, No. 131, 25 P.S. §§ 3596.101 *et seq.*

The challenge herein was brought in June 2017 by Petitioners, the League of Women Voters[3] and 18 voters – all registered Democrats, one from each of our state's congressional districts – against Governor Thomas W. Wolf, Lieutenant Governor Michael J. Stack, III, Secretary Robert Torres, and Commissioner Jonathan M. Marks (collectively, "Executive Respondents"), and the General Assembly, Senate President Pro Tempore Joseph B. Scarnati, III, and House Speaker Michael C. Turzai (collectively, "Legislative Respondents").[4] [5] Petitioners alleged that the 2011 Plan violated several provisions of our state Constitution.

On January 22, 2018, this Court entered a *per curiam* order[6] agreeing with Petitioners, and deeming the 2011 Plan to "clearly, plainly and palpably violate[]" our state Constitution, and so enjoined its further use.[7] *See* Order, 1/22/18. We further

[3] On November 17, 2017, the Commonwealth Court dismissed the League of Women Voters from the case based on a lack of standing. On the presentations before us, *see* Petitioners' Brief at 41 n.5, and given our resolution of this matter, we do not revisit that decision.

[4] A similar challenge, under federal law, was brought by citizen-petitioners against the Governor, the Secretary, and the Commissioner in federal district court, contending that Plan violates the Elections Clause, Article I, Section 4, of the federal Constitution. Trial in that case was held in December, one week prior to the trial in the instant matter. In a 2-1 decision, on January 10, 2018, the three-judge panel of the United States District Court for the Eastern District of Pennsylvania rejected the petitioners' challenge. *See Agre v. Wolf*, No. 17-4392, 2018 WL 351603 (E.D. Pa. Jan. 10, 2018).

[5] On November 13, 2017, the Commonwealth Court permitted to intervene certain registered Republican voters from each district, including announced or potential candidates for Congress and other active members of the Republican Party (the "Intervenors").

[6] To our Order, Justice Baer filed a Concurring And Dissenting Statement, Chief Justice Saylor filed a Dissenting Statement, joined by Justice Mundy, and Justice Mundy filed a Dissenting Statement.

[7] In our order, we excepted the March 13, 2018 special election for Pennsylvania's 18th Congressional District. *See* Order, 1/22/18, ¶ "Sixth."

provided that, if the General Assembly and the Governor did not enact a remedial plan by February 15, 2018, this Court would choose a remedial plan. For those endeavors, we set forth the criteria to be applied in measuring the constitutionality of any remedial plan, holding that:

> any congressional districting plan 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.

Order, 1/22/18, ¶ "Fourth."[8] Our Order indicated that an opinion would follow. This is that Opinion, and we emphasize that, while explicating our rationale, nothing in this Opinion is intended to conflict with, or in any way alter, the mandate set forth in our Order of January 22, 2018.[9]

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[8] On January 23, 2018, Legislative Respondents filed with this Court an application for a stay of our Order, alleging the Order would have a chaotic effect on the 2018 elections, and arguing the Order implicated an important question of federal law on which they would base an appeal to the United States Supreme Court. Intervenors filed a similar application. Both applications were denied on January 25, 2018, with dissents noted by Chief Justice Saylor, and Justices Baer and Mundy. On January 26, 2018, Legislative Respondents filed with the United States Supreme Court an emergency application for a stay of this Court's January 22, 2018 Order; the application was denied on February 5, 2018.

[9] A brief description of the Court's process in issuing orders with opinions to follow is instructive. Upon agreement of the majority of the Court, the Court may enter, shortly after briefing and argument, a *per curiam* order setting forth the court's mandate, so that the parties are aware of the court's ultimate decision and may act accordingly. This is particularly so in election matters, where time is of the essence. Justices in the minority, or who disagree with any part of the order, may issue brief concurring or dissenting statements, or may simply note their concurrence with or dissent from the order.

The Court is, however, still a deliberative body, meaning there is a back-and-forth nature not only to decision-making, but to legal analysis. Many analyses, such as those in this case, are complex and nuanced. Thus, the Court's process involves, in the first instance, the drafting of an opinion by the majority author, and, of course, involves exhaustive research and multiple interactions with other Justices. Once a majority (continued…)

I. Background

A. Redistricting Mandate

Article I, Section 2 of the United States Constitution requires that a census be taken every 10 years for the purpose of apportioning the United States House of Representatives. Following the 2010 federal census, Pennsylvania's share in the House was reduced from 19 to 18 members.[10] As a result, the Commonwealth was required to redraw its congressional district map.

Pennsylvania's congressional districts are drawn by the state legislature as a regular statute, subject to veto by the Governor.[11] While this process is dictated by federal law, it is delegated to the states. The federal Constitution's Elections Clause provides that "[t]he Times, Places and Manner of holding Elections for Senators and Representatives, shall be prescribed in each State by the Legislature thereof," unless Congress should "make or alter such Regulations." U.S. Const. art. I, § 4, cl. 1. Pursuant to the Elections Clause, Congress passed 2 U.S.C. § 2a, which provides that,

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(…continued)
opinion is completed, it is circulated to all of the other Justices for their review and comment. At that point, each of the other Justices has the opportunity to write his or her own concurring or dissenting opinions, expressing that Justice's ultimate views on the issues presented. These responsive opinions are then circulated to the other Justices for their responses, if any. Only then, after every member of the Court has been afforded the time and opportunity to express his or her views, are the opinions finalized. At that point, a majority opinion, along with any concurring and dissenting opinions, are filed with our Prothonotary and released to the public. It is a process, and it is one to which this Court rigorously adheres.

[10] Public Law 94-171, enacted by Congress in 1975, requires the Census Bureau to deliver redistricting results to state officials for legislative redistricting. *See* 13 U.S.C. § 141. For the 2010 federal census, the Census Bureau was required to deliver redistricting data to the states no later than April 1, 2011.

[11] By contrast, the state legislative lines are drawn by a five-member commission pursuant to the Pennsylvania Constitution. *See* Pa. Const. art. II, § 17.

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." 2 U.S.C. § 2a. If the state does not do so, Representatives are to be elected as further provided in Section 2a.[12]

B. Plan Passage

The 2011 Plan, Senate Bill 1249, was enacted on December 22, 2011, setting forth Pennsylvania's 18 congressional districts.[13] In the November 2010 general election, voters elected Republicans to majorities in both houses of the General Assembly and elected a Republican, Tom Corbett, as Governor. Thus, in 2011, the Republican-led General Assembly was tasked with reconstituting Pennsylvania's congressional districts, reducing their number by one, and adjusting their borders in light of population changes reflected by the 2010 Census. On May 11, June 9, and June 14, 2011, the Pennsylvania House and Senate State Government Committees held hearings on the subject of redistricting, for the ostensible purpose of receiving testimony and public comment on the subject of redistricting generally. On September 14, 2011, Senate Bill 1249, Printer's Number 1520, principally sponsored by the Republican leadership, was introduced, but contained absolutely no information concerning the

[12] Both the Elections Clause and Section 2a have been interpreted as envisioning that the redistricting process will be subject to state law restrictions, including gubernatorial veto, judicial remedies, citizen referenda, and even the reconstitution, via citizen initiative, of the authority to redistrict into independent redistricting agencies. The role of courts generally, and this Court in particular, in fashioning congressional districts is a matter we discuss more fully below in Part VI, "Remedy."

[13] This history is based on the joint stipulation of the parties. *See* Joint Stipulation of Facts, 12/8/17.

boundaries of any congressional districts. On December 7, 2011, the bill was brought up for first consideration, and, on December 11, 2011, for second consideration.

Thereafter, the bill was referred to the Senate State Government Committee, where, on December 14, 2011, it was amended and reprinted as Senate Bill 1249, Printer's Number 1862, now providing proposed boundaries for each of Pennsylvania's 18 congressional districts, before being reported out of committee. The same day, the bill was referred to the Senate Appropriations Committee, where it was again amended and reprinted as Senate Bill 1249, Printer's Number 1869, and reported out of committee to the floor. There, Democratic Senator Jay Costa introduced an amendment to the bill he indicated would modify it to create 8 Republican-favorable districts, 4 Democrat-favorable districts, and 6 swing districts, but the Senate declined to adopt the amendment and passed Senate Bill 1249, Printer's Number 1869, in a 26-24 vote, with all Democrats voting against passage. The same day, Senate Bill 1249, Printer's Number 1869, proceeded to the House of Representatives, where it was referred to the House State Government Committee, and reported out of committee. The next day, on December 15, 2011, Senate Bill 1249, Printer's Number 1869, was brought up for first consideration, and, on December 19, 2011, second consideration. On December 20, 2011, the bill was referred to the House Appropriations Committee, reported out of the committee, and passed in a 136-61 vote, with 36 Democrats voting in favor of passage.[14] On December 22, 2011, Senate Bill 1249, Printer's Number 1869, proceeded to the governor's desk where then-Governor Corbett signed it into law as Act 131 of 2011, the 2011 Plan.

[14] Notably, 33 of the 36 Democrats who voted in favor of passage serve districts within the 1st, 2nd, 13th, 14th, or 17th Congressional Districts, which, as detailed herein, are safe Democratic districts under the 2011 Plan.

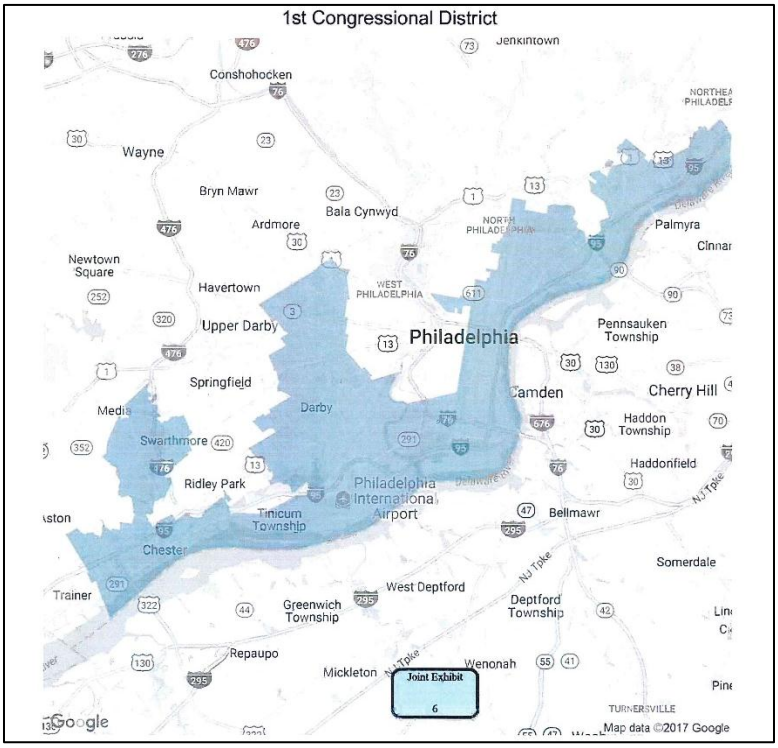
C. The 2011 Plan

A description of the 2011 Plan and some of its characteristics is appropriate.[15] A map of the entire 2011 Plan is attached as Appendix A.

1. The Districts

a. 1st Congressional District

The 1st Congressional District is composed of parts of Delaware and Philadelphia Counties, and appears as follows:

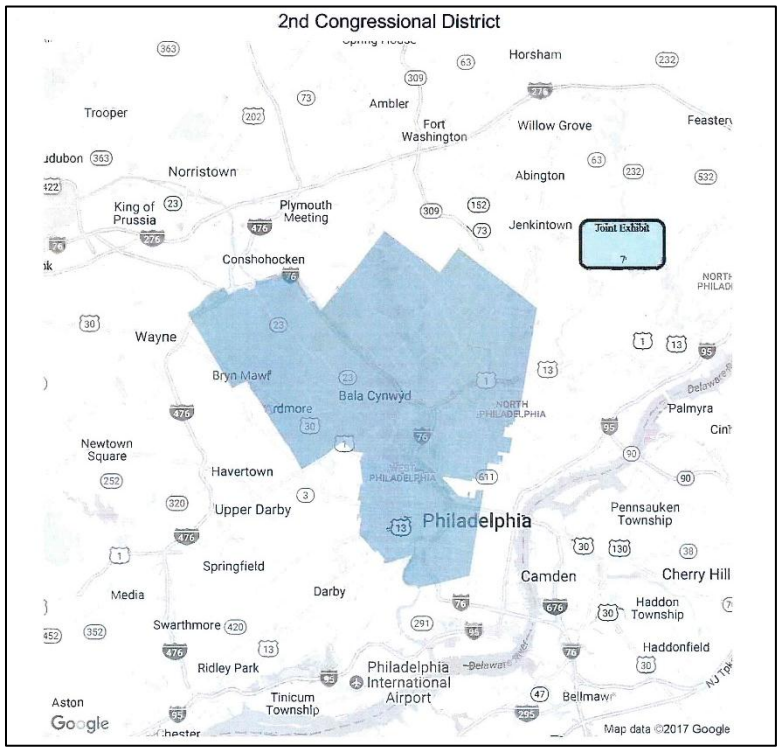


See Joint Exhibit 6.

[15] As with the legislative history of the 2011 Plan, this description is based upon the joint stipulation of the parties.

b. 2nd Congressional District

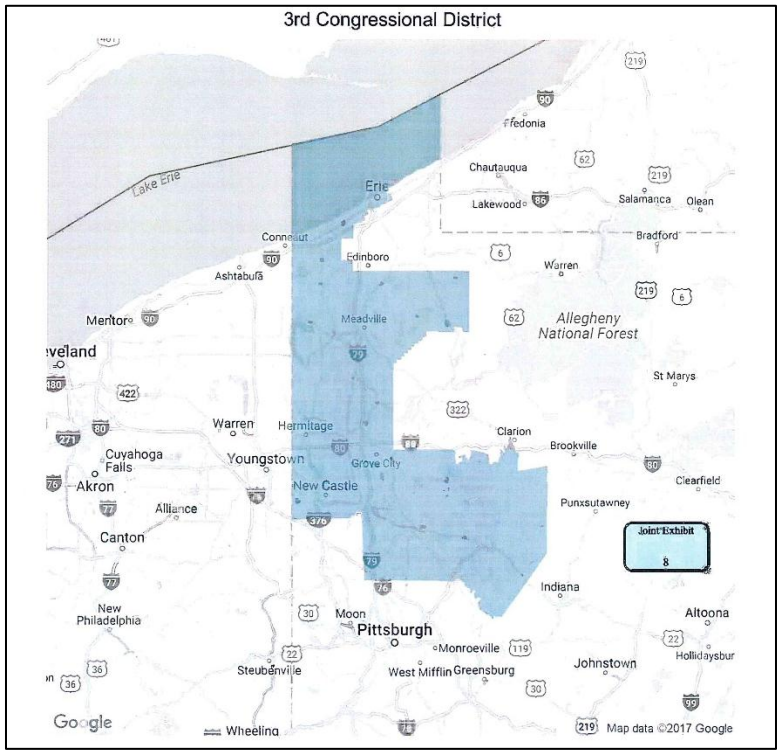
The 2nd Congressional District is composed of parts of Montgomery and Philadelphia Counties, and appears as follows:



See Joint Exhibit 7.

c. 3rd Congressional District

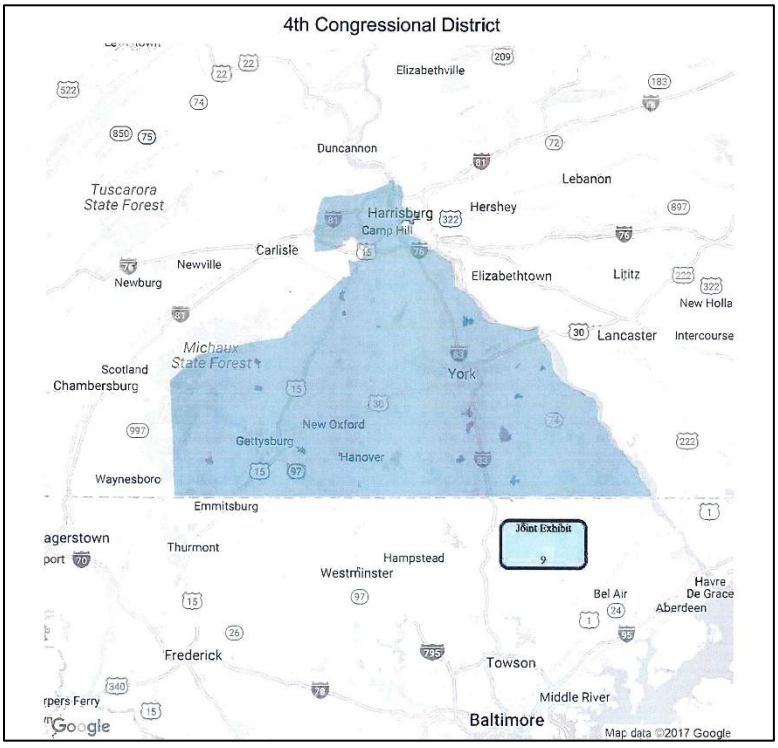
The 3rd Congressional District is composed of Armstrong, Butler, and Mercer Counties, together with parts of Clarion, Crawford, Erie, and Lawrence Counties, and appears as follows:



See Joint Exhibit 8.

d. 4th Congressional District

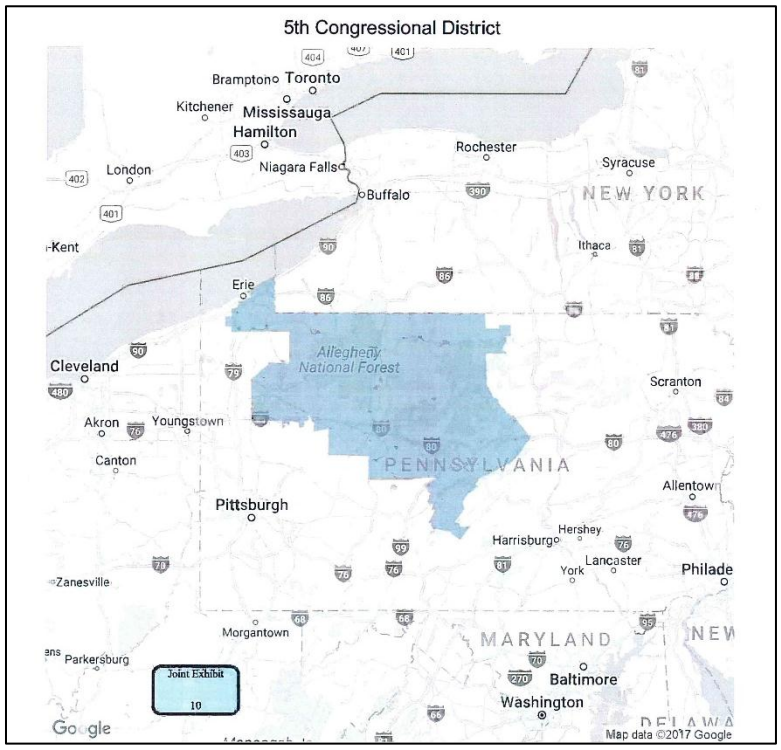
The 4th Congressional District is composed of Adams and York Counties, together with parts of Cumberland and Dauphin Counties, and appears as follows:



See Joint Exhibit 9.

e. 5th Congressional District

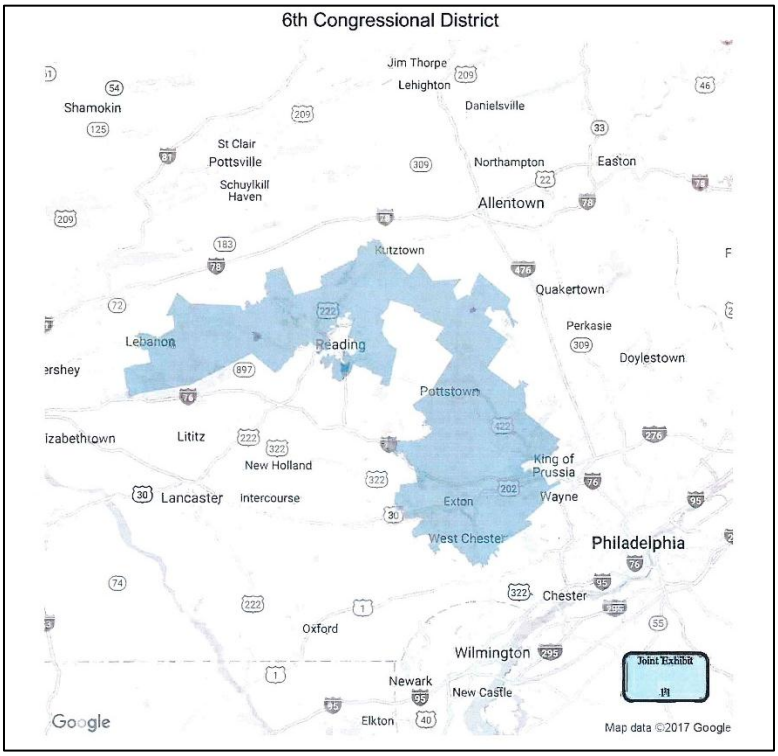
The 5th Congressional District is composed of Cameron, Centre, Clearfield, Clinton, Elk, Forest, Jefferson, McKean, Potter, Venango, and Warren Counties, together with parts of Clarion, Crawford, Erie, Huntingdon, and Tioga Counties, and appears as follows:



See Joint Exhibit 10.

f. 6th Congressional District

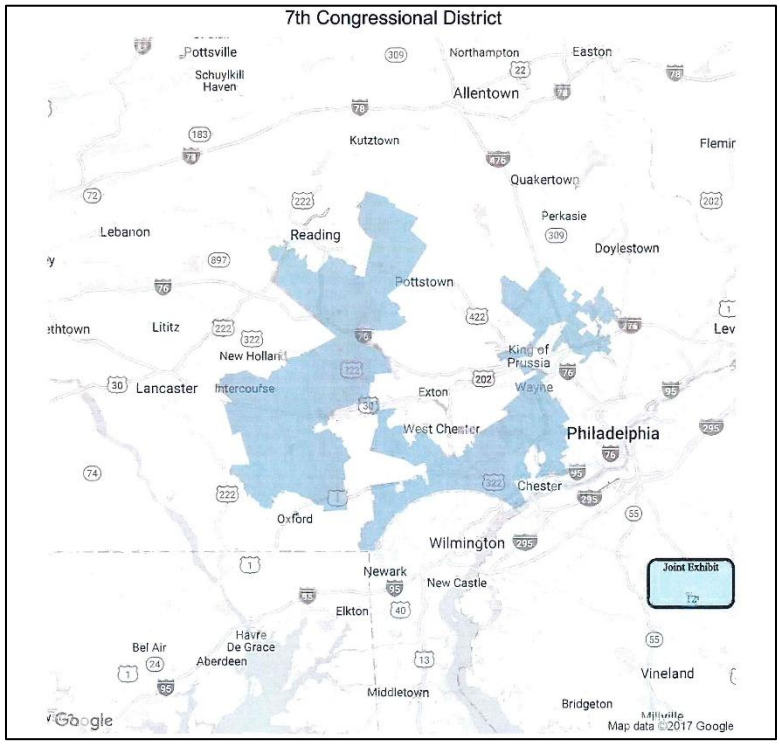
The 6th Congressional District is composed of parts of Berks, Chester, Lebanon, and Montgomery Counties, and appears as follows:



See Joint Exhibit 11.

g. 7th Congressional District

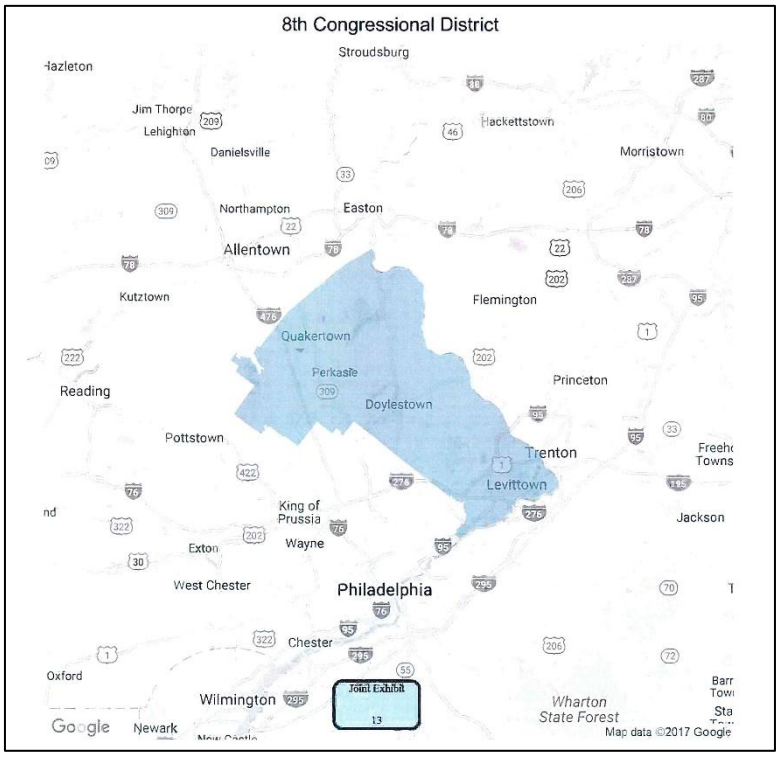
The 7th Congressional District is composed of parts of Berks, Chester, Delaware, Lancaster, and Montgomery Counties, and appears as follows:



See Joint Exhibit 12.

h. 8th Congressional District

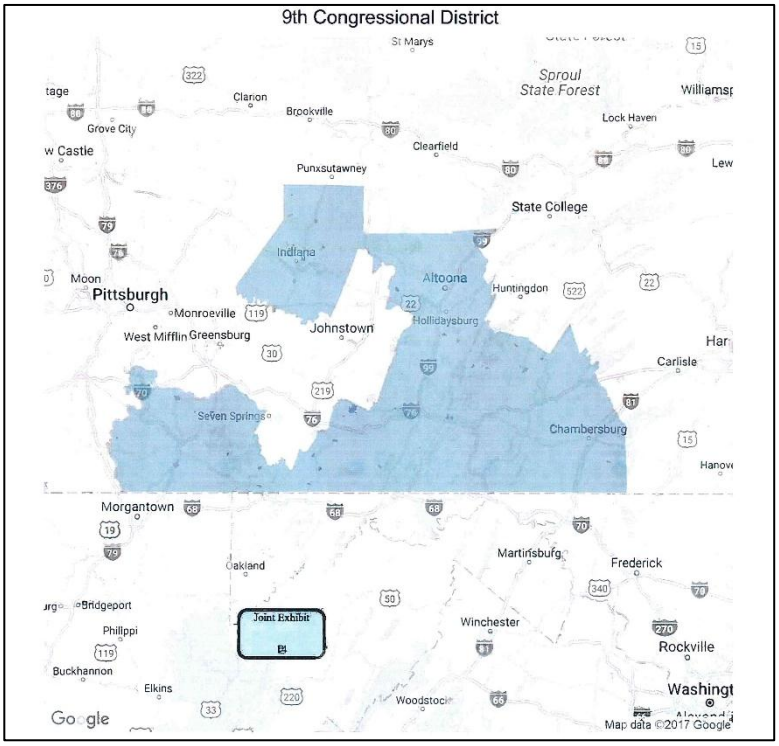
The 8th Congressional District is composed of Bucks County, together with parts of Montgomery County, and appears as follows:



See Joint Exhibit 13.

i. 9th Congressional District

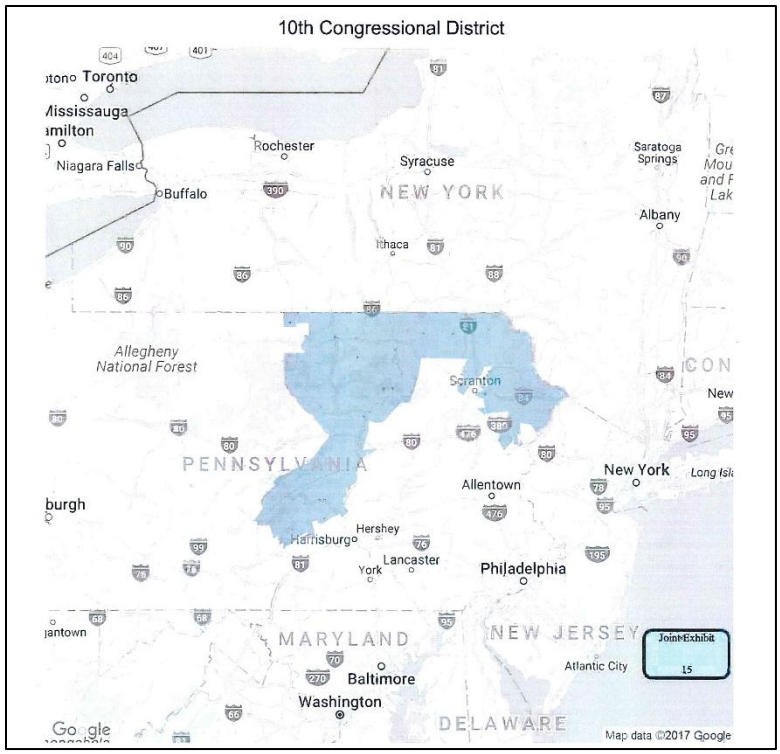
The 9th Congressional District is composed of Bedford, Blair, Fayette, Franklin, Fulton, and Indiana Counties, together with parts of Cambria, Greene, Huntingdon, Somerset, Washington, and Westmoreland Counties, and appears as follows:



See Joint Exhibit 14.

j. 10th Congressional District

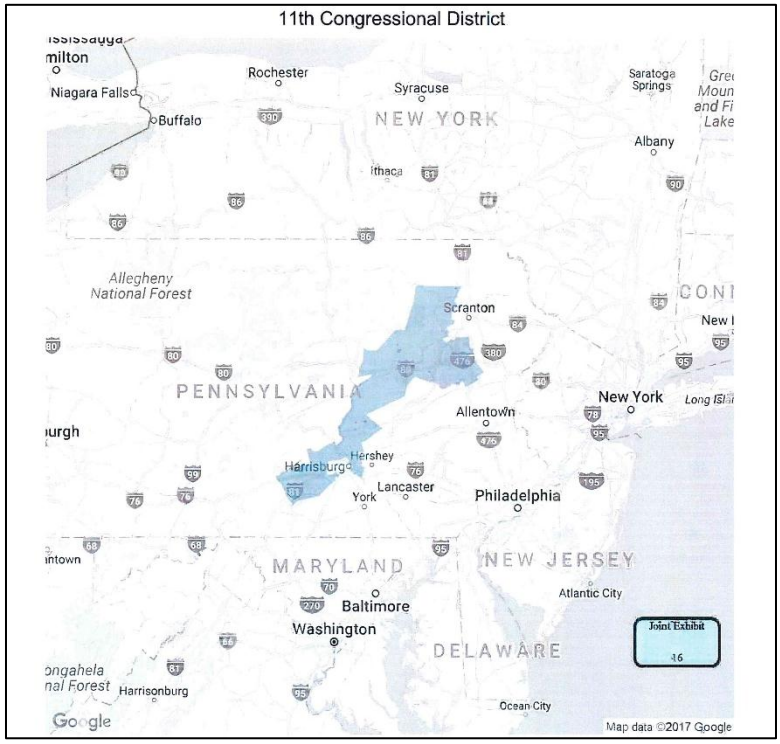
The 10th Congressional District is composed of Bradford, Juniata, Lycoming, Mifflin, Pike, Snyder, Sullivan, Susquehanna, Union, and Wayne Counties, together with parts of Lackawanna, Monroe, Northumberland, Perry, and Tioga Counties, and appears as follows:



See Joint Exhibit 15.

k. 11th Congressional District

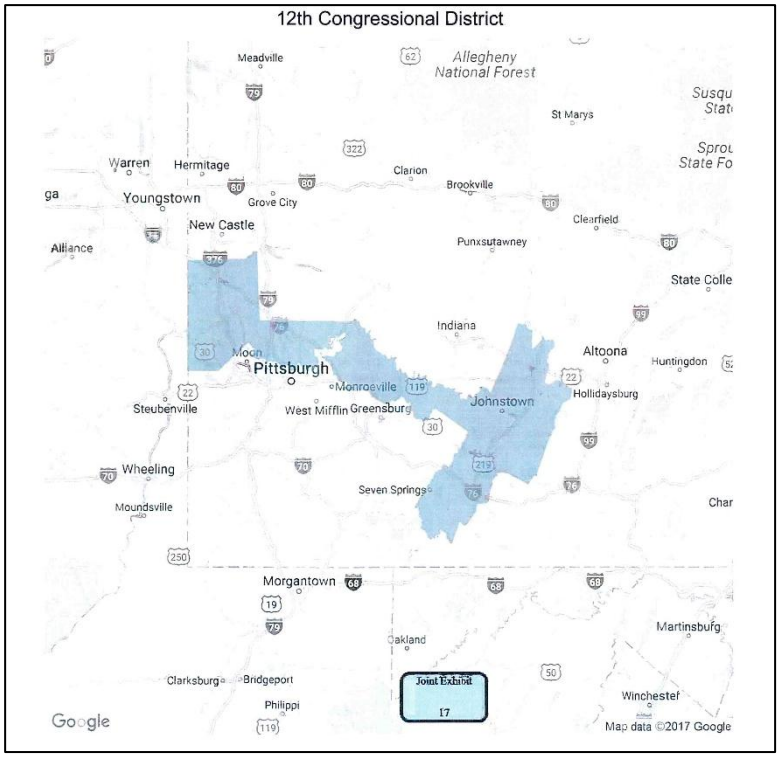
The 11th Congressional District is composed of Columbia, Montour, and Wyoming Counties, together with parts of Carbon, Cumberland, Dauphin, Luzerne, Northumberland, and Perry Counties, and appears as follows:



See Joint Exhibit 16.

I. 12th Congressional District

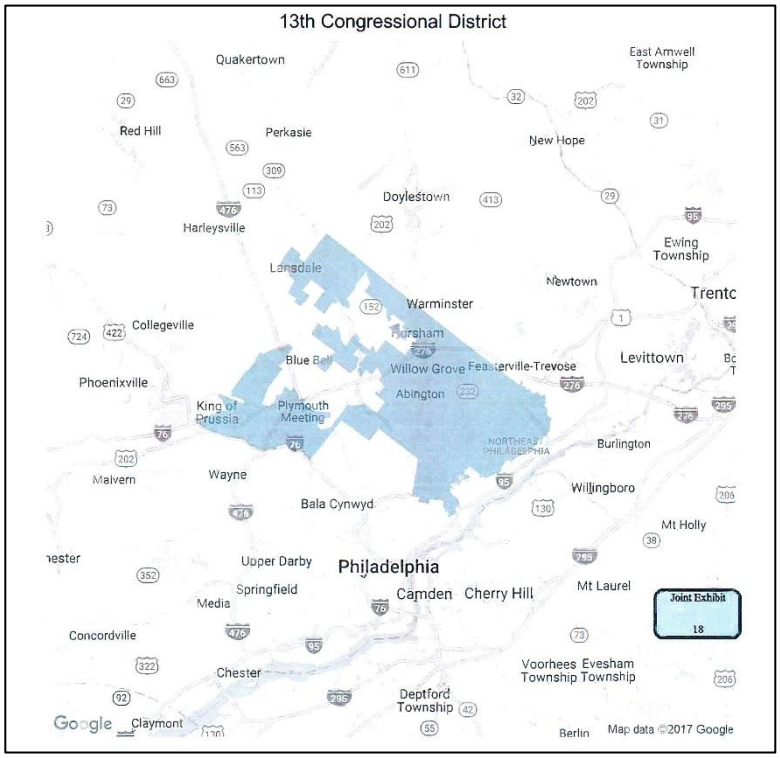
The 12th Congressional District is composed of Beaver County, together with parts of Allegheny, Cambria, Lawrence, Somerset, and Westmoreland Counties, and appears as follows:



See Joint Exhibit 17.

m. 13th Congressional District

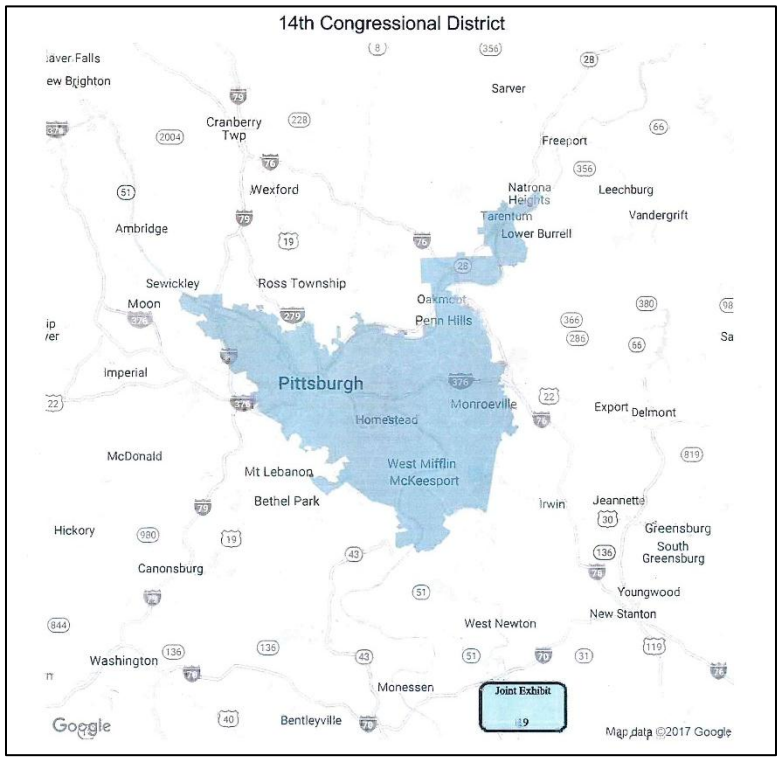
The 13th Congressional District is composed of parts of Montgomery and Philadelphia Counties, and appears as follows:



See Joint Exhibit 18.

n. 14th Congressional District

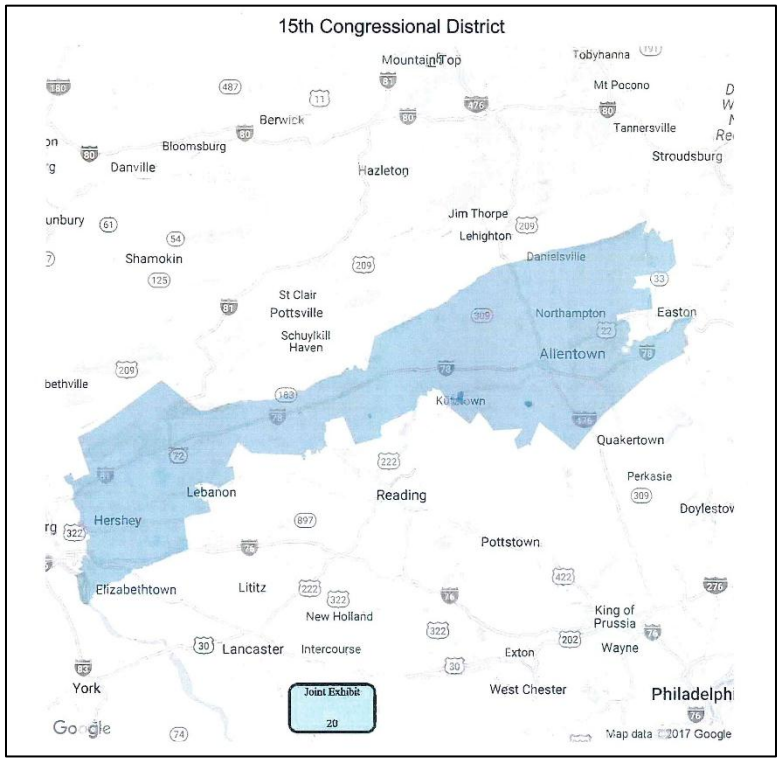
The 14th Congressional District is composed of parts of Allegheny and Westmoreland Counties, and appears as follows:



See Joint Exhibit 19.

o. 15th Congressional District

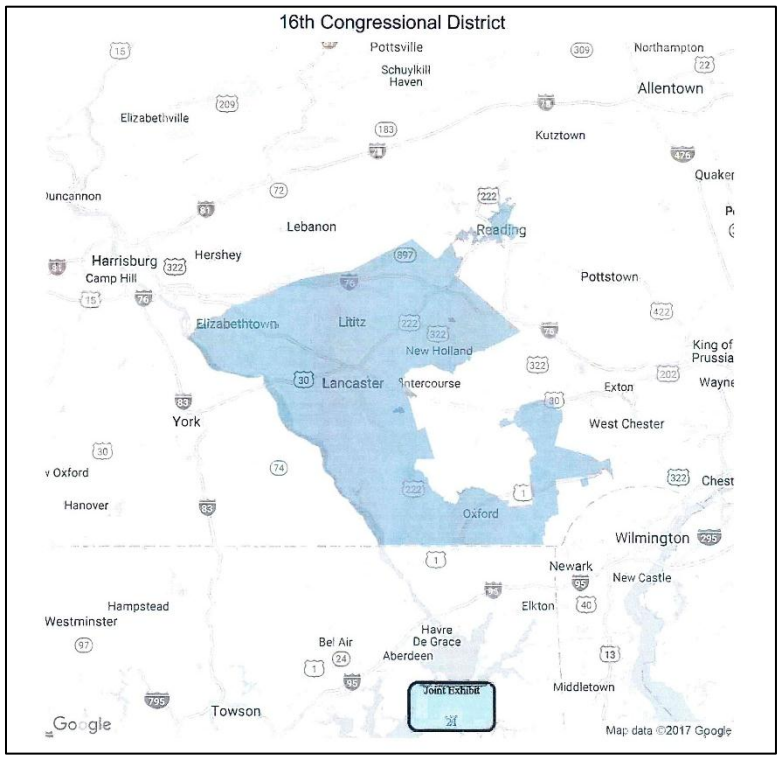
The 15th Congressional District is composed of Lehigh County and parts of Berks, Dauphin, Lebanon, and Northampton Counties, and appears as follows:



See Joint Exhibit 20.

p. 16th Congressional District

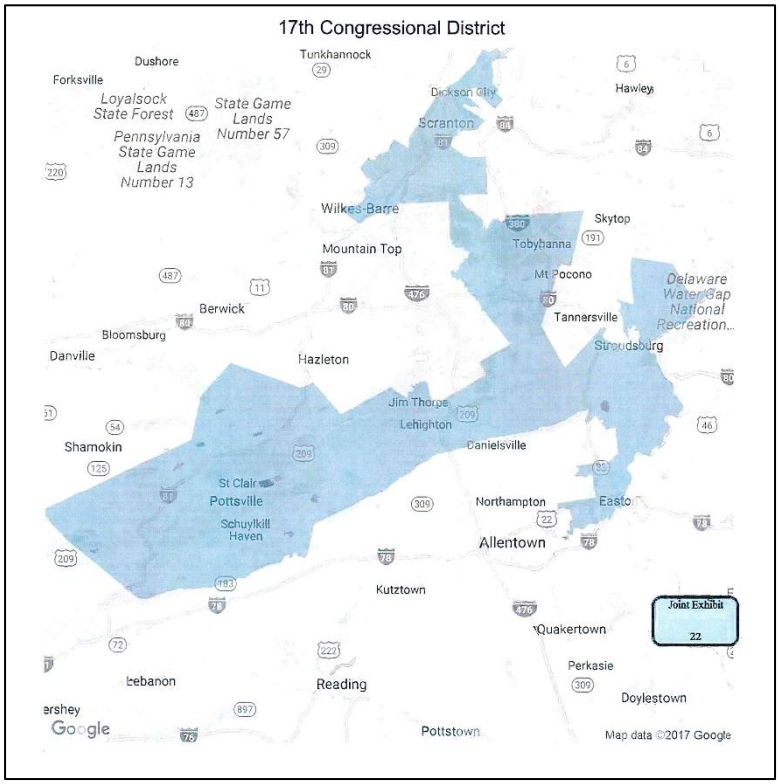
The 16th Congressional District is composed of parts of Berks, Chester, and Lancaster Counties, and appears as follows:



See Joint Exhibit 21.

q. 17th Congressional District

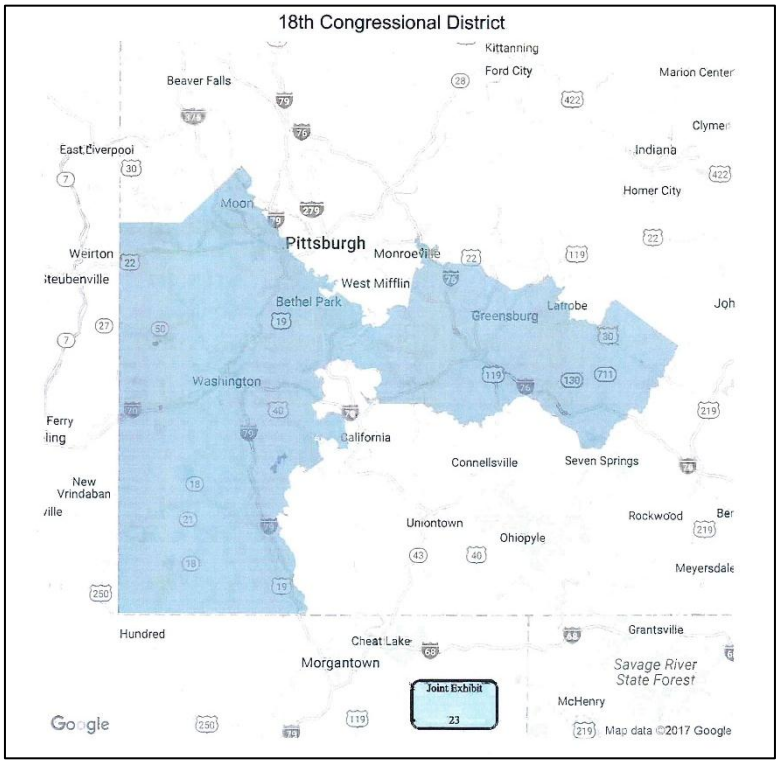
The 17th Congressional District is composed of Schuylkill County and parts of Carbon, Lackawanna, Luzerne, Monroe, and Northampton Counties, and appears as follows:



See Joint Exhibit 22.

r. 18th Congressional District

Finally, the 18th Congressional District is composed of parts of Allegheny, Greene, Washington, and Westmoreland Counties, and appears as follows:



See Joint Exhibit 23.

2. Other Characteristics

Of the 67 counties in Pennsylvania, the 2011 Plan divides a total of 28 counties between at least two different congressional districts:[16] Montgomery County is divided among five congressional districts; Berks and Westmoreland Counties are each divided

[16] The 2011 Plan also consolidates previously split counties: prior to the 2011 Plan, Armstrong, Butler, Mercer, Venango, and Warren Counties were split between congressional districts, whereas, under the 2011 Plan, they are not.

among four congressional districts;[17] Allegheny, Chester,[18] and Philadelphia Counties are each divided among three congressional districts; and Cambria, Carbon, Clarion, Crawford, Cumberland, Delaware, Erie,[19] Greene, Huntingdon, Lackawanna, Lancaster, Lawrence, Lebanon, Luzerne, Monroe, Northampton,[20] Northumberland, Perry, Somerset, Tioga, and Washington Counties are each split between two congressional districts.[21] Additionally, whereas, prior to 1992, no municipalities in Pennsylvania were divided among multiple congressional districts, the 2011 Plan divides 68, or 2.66%, of Pennsylvania's municipalities between at least two Congressional districts.[22]

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[17] The City of Reading is separated from the remainder of Berks County. From at least 1962 to 2002, Berks County was situated entirely within a single congressional district.

[18] The City of Coatesville is separated from the remainder of Chester County.

[19] From at least 1931 until 2011, Erie County was not split between congressional districts.

[20] The City of Easton is separated from the remainder of Northampton County.

[21] In total, 11 of the 18 congressional districts contain more than three counties which are divided among multiple congressional districts.

[22] The municipalities include Archbald, Barr, Bethlehem, Caln, Carbondale, Chester, Cumru, Darby, East Bradford, East Carroll, East Norriton, Fallowfield, Glenolden, Harrisburg, Harrison, Hatfield, Hereford, Horsham, Kennett, Laureldale, Lebanon, Lower Alsace, Lower Gwynedd, Lower Merion, Mechanicsburg, Millcreek, Monroeville, Morgan, Muhlenberg, North Lebanon, Northern Cambria, Olyphant, Penn, Pennsbury, Perkiomen, Philadelphia, Piney, Plainfield, Plymouth Township, Ridley, Riverside, Robinson, Sadsbury, Seven Springs, Shippen, Shippensburg, Shirley, Spring, Springfield, Stroud, Susquehanna, Throop, Tinicum, Trafford, Upper Allen, Upper Darby, Upper Dublin, Upper Gwynedd, Upper Hanover, Upper Merion, Upper Nazareth, West Bradford, West Hanover, West Norriton, Whitehall, Whitemarsh, Whitpain, and Wyomissing. Monroeville, Caln, Cumru, and Spring Township are split into three separate congressional districts. Three of these municipalities – Seven Springs, Shippensburg, and Trafford – are naturally divided between multiple counties, and Cumru is naturally noncontiguous. Additionally, wards in Bethlehem and Harrisburg are split between congressional districts.

Finally, as noted above, the General Assembly was tasked with reducing the number of Pennsylvania's congressional districts from 19 to 18, necessitating the placement of at least two congressional incumbents into the same district. The 2011 Plan placed then-Democratic Congressman for the 12th Congressional District Mark Critz and then-Democratic Congressman for the 4th Congressional District Jason Altmire into the same district. Notably, the two faced off in an ensuing primary election, in which Critz prevailed. He subsequently lost the general election to now-Congressman Keith Rothfus, who has prevailed in each biannual election thereafter.

D. Electoral History

As grounding for the parties' claims and evidentiary presentations, we briefly review the Commonwealth's electoral history before and after the 2011 Plan was enacted.[23] As noted above, the map for the 2011 Plan is attached at Appendix A. The parties have provided copies of prior congressional district maps – for 1943, 1951, 1962, 1972, 1982, 1992, and 2002 – which were procured from the Pennsylvania Manual.[24] They are attached as Joint Exhibit 26 to the Joint Stipulations of Fact. *See* Joint Stipulation of Facts, 12/8/17, at ¶ 93.

[23] As above, this information is derived from the parties' Joint Stipulation of Facts.

[24] The Pennsylvania Manual is a regularly published book issued by the Pennsylvania Department of General Services. We cite it as authoritative. *See, e.g., Erfer v. Commonwealth*, 794 A.2d 325 (Pa. 2002).

The distribution of seats in Pennsylvania from 1966 to 2010 is shown below:

Year	Districts	Democratic Seats	Republican Seats
1966	27	14	13
1968	27	14	13
1970	27	14	13
1972	25	13	12
1974	25	14	11
1976	25	17	8
1978	25	15	10
1980	25	12[25]	12
1982	23	13	10
1984	23	13	10
1986	23	12	11
1988	23	12	11
1990	23	11	12
1992	21	11	10
1994	21	11	10
1996	21	11	10
1998	21	11	10
2000	21	10	11
2002	19	7	12
2004	19	7	12
2006	19	11	8
2008	19	12	7
2010	19	7	12

[25] One elective representative, Thomas M. Foglietta, was not elected as either a Democrat or Republican in 1980.

Joint Stipulation of Facts, 12/8/17, at ¶ 70.

In the three elections since the 2011 Plan was enacted, Democrats have won the same five districts, and Republicans have won the same 13 districts. In the 2012 election, Democrats won five congressional districts with an average of 76.4% of the vote in each, whereas Republicans won the remaining 13 congressional districts with an average 59.5% of the vote in each, and, notably, Democrats earned a statewide share of 50.8% of the vote, an average of 50.4% per district, with a median of 42.8% of the vote, whereas Republicans earned only a statewide share of 49.2% of the vote.[26]

In the 2014 election, Democratic candidates again won five congressional races, with an average of 73.6% of the vote in each, whereas Republicans again won 13 congressional districts, with an average of 63.4% of the vote in each.[27] In 2014,

[26] Specifically, in 2012, Democratic candidates won in the 1st Congressional District with 84.9% of the vote; the 2nd Congressional District with 90.5% of the vote; the 13th Congressional District with 69.1% of the vote; the 14th Congressional District with 76.9% of the vote; and the 17th Congressional District with 60.3% of the vote. On the other hand, Republican candidates won in the 3rd Congressional District with 57.2% of the vote; the 4th Congressional District with 63.4% of the vote; the 5th Congressional District with 62.9% of the vote; the 6th Congressional District with 57.1% of the vote; the 7th Congressional District with 59.4% of the vote; the 8th Congressional District with 56.6% of the vote; the 9th Congressional District with 61.7% of the vote; the 10th Congressional District with 65.6% of the vote; the 11th Congressional District with 58.5% of the vote; the 12th Congressional District with 51.7% of the vote; the 15th Congressional District with 56.8% of the vote; the 16th Congressional District with 58.4% of the vote; and the 18th Congressional District with 64.0% of the vote.

[27] Specifically, in 2014, Democrats won in the 1st Congressional District with 82.8% of the vote; the 2nd Congressional district with 87.7% of the vote; the 13th Congressional District with 67.1% of the vote; the 14th Congressional District, which was uncontested, with 100% of the vote; and the 17th Congressional District with 56.8% of the vote. Republican candidates won in the 3rd Congressional District with 60.6% of the vote; the 4th Congressional District with 74.5% of the vote; the 5th Congressional District with 63.6% of the vote; the 6th Congressional district with 56.3% of the vote; the 7th Congressional District with 62.0% of the vote; the 8th Congressional District with 61.9% of the vote; the 9th Congressional District with 63.5% of the vote; the 10th Congressional District with 71.6% of the vote; the 11th Congressional District with 66.3% of the vote; the 12th Congressional District with 59.3% of the vote; the 15th Congressional District, (continued…)

Democrats earned a 44.5% statewide vote share in contested races, whereas Republicans earned a 55.5% statewide vote share in contested races, with a 54.1% statewide share vote in the aggregate.

In the 2016 election, Democrats again won those same five congressional districts, with an average of 75.2% of the vote in each and a statewide vote share of 45.9%, whereas Republicans won those same 13 districts with an average of 61.8% in each and a statewide vote share of 54.1%.[28] [29]

(…continued)
which was uncontested, with 100% of the vote; the 16th Congressional District with 57.7% of the vote; and the 18th Congressional District, which was uncontested, with 100% of the vote.

[28] Specifically, in 2016, Democrats again prevailed in the 1st Congressional District with 82.2% of the vote; the 2nd Congressional District with 90.2% of the vote; the 13th Congressional District, which was uncontested, with 100% of the vote; the 14th Congressional District with 74.4% of the vote; and the 17th Congressional District with 53.8% of the vote. Republicans again prevailed in the remainder of the districts: in the 3rd Congressional district, which was uncontested, with 100% of the vote; in the 4th Congressional District with 66.1% of the vote; in the 5th Congressional District with 67.2% of the vote; in the 6th Congressional District with 67.2% of the vote; in the 7th Congressional District with 59.5% of the vote; in the 8th Congressional District with 54.4% of the vote; in the 9th Congressional District with 63.3% of the vote; in the 10th Congressional District with 70.2% of the vote; in the 11th Congressional District with 63.7% of the vote; in the 12th Congressional District with 61.8% of the vote; in the 15th Congressional District with 60.6% of the vote; in the 16th Congressional District with 55.6% of the vote; and in the 18th Congressional District, which was uncontested, with 100% of the vote.

[29] Notably, voters in the 6th and 7th Congressional Districts reelected Republican congressmen while simultaneously voting for Democratic nominee and former Secretary of State Hillary Clinton for president. Contrariwise, voters in the 17th Congressional District reelected a Democratic congressman while voting for Republican nominee Donald Trump for president. Additionally, several traditionally Democratic counties voted for now-President Trump.

In short, in the last three election cycles, the partisan distribution has been as follows:

Year	Districts	Democratic Seats	Republican Seats	Democratic Vote Percentage	Republic Vote Percentage
2012	18	5	13	50.8%	49.2%
2014	18	5	13	44.5%	55.5%
2016	18	5	13	45.9%	54.1%

Joint Stipulation of Facts, 12/8/18, at ¶ 102.

II. Petitioners' Action

Petitioners filed this lawsuit on June 15, 2017, in the Commonwealth Court. In Count I of their petition for review, Petitioners alleged that the 2011 Plan[30] violates their rights to free expression and association under Article I, Sections 7[31] and 20[32] of the Pennsylvania Constitution. More specifically, Petitioners alleged that the General Assembly created the 2011 Plan by "expressly and deliberately consider[ing] the political views, voting histories, and party affiliations of Petitioners and other Democratic voters" with the intent to burden and disfavor Petitioners' and other Democratic voters'

[30] Petitioners challenged, and before us continue to challenge, the Plan as a whole. Whether such challenges are properly brought statewide, or must be district specific, is an open question. *See Vieth v. Jubelirer*, 541 U.S. 267 (2004). However, no such objection is presented to us.

[31] Article I, Section 7 of the Pennsylvania Constitution provides in relevant part: "The free communication of thoughts and opinions is one of the invaluable rights of man, and every citizen may freely speak, write and print on any subject, being responsible for the abuse of that liberty." Pa. Const. art. I, § 7.

[32] Article I, Section 20 provides: "The citizens have a right in a peaceable manner to assemble together for their common good . . . ." Pa. Const. art. I, § 20.

rights to free expression and association. Petition for Review, 6/15/17, at ¶¶ 105. Petitioners further alleged that the 2011 Plan had the effect of burdening and disfavoring Petitioners' and other Democratic voters' rights to free expression and association because the 2011 Plan "prevented Democratic voters from electing the representatives of their choice and from influencing the legislative process" and suppressed "the political views and expression of Democratic voters." *Id.* at ¶ 107. They contended the Plan "also violates the Pennsylvania Constitution's prohibition against retaliation against individuals who exercise their rights under" these articles. *Id.* at ¶ 108. Specifically, Petitioners alleged that the General Assembly's "cracking" of congressional districts in the 2011 Plan has resulted in their inability "to elect representatives of their choice or to influence the political process." *Id.* at ¶112.

In Count II, Petitioners alleged the Plan violates the equal protection provisions of Article 1, Sections 1 and 26[33] of the Pennsylvania Constitution, and the Free and Equal Elections Clause of Article I, Section 5[34] of the Pennsylvania Constitution. More specifically, Petitioners alleged that the Plan intentionally discriminates against Petitioners and other Democratic voters by using "redistricting to maximize Republican seats in Congress and entrench [those] Republican members in power." *Id.* at ¶ 116. Petitioners further alleged that the Plan has an actual discriminatory effect, because it

[33] Article 1, Section 1, provides: "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." Pa. Const. art. I, § 1. Section 26 provides: "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." Pa. Const. art. I, § 26.

[34] Article I, Section 5 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.

"disadvantages Petitioners and other Democratic voters at the polls and severely burdens their representational rights." *Id.* at ¶ 117. They contended that "computer modeling and statistical tests demonstrate that Democrats receive far fewer congressional seats than they would absent the gerrymander, and that Republicans' advantage is nearly impossible to overcome." *Id.* at ¶ 118. Petitioners claimed that individuals who live in cracked districts under the 2011 Plan are essentially excluded from the political process and have been denied any "realistic opportunity to elect representatives of their choice," and any "meaningful opportunity to influence legislative outcomes." *Id.* at ¶ 119. Finally, Petitioners claimed that, with regard to individuals living in "packed" Democratic districts under the Plan, the weight of their votes has been "substantially diluted," and their votes have no "impact on election outcomes." *Id.* at ¶ 120.

In response to Respondents' application, on October 16, 2017, Judge Dan Pellegrini granted a stay of the Commonwealth Court proceedings pending the United States Supreme Court's decision in *Gill v. Whitford*, No. 16-1161 (U.S. argued Oct. 3, 2017). However, thereafter, Petitioners filed with this Court an application for extraordinary relief, asking that we exercise extraordinary jurisdiction over the matter.[35] On November 9, 2017, we granted the application and assumed plenary jurisdiction over the matter, but, while retaining jurisdiction, remanded the matter to the Commonwealth Court to "conduct all necessary and appropriate discovery, pre-trial and trial proceedings so as to create an evidentiary record on which Petitioners' claims may

[35] *See* 42 Pa.C.S. § 726 ("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 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."); *see also Vaccone v. Syken*, 899 A.2d 1103, 1108 (Pa. 2006).

be decided." Supreme Court Order, 11/9/17, at 2. We ordered the court to do so on an expedited basis, and to submit to us findings of fact and conclusions of law no later than December 31, 2017. *Id.* Finally, we directed that the matter be assigned to a commissioned judge of that court.

The Commonwealth Court, by the Honorable P. Kevin Brobson, responded with commendable speed, thoroughness, and efficiency, conducting a nonjury trial from December 11 through 15, and submitting to us its recommended findings of fact and conclusions of law on December 29, 2017, two days prior to our deadline.[36] Thereafter, we ordered expedited briefing, and held oral argument on January 17, 2018.

III. Commonwealth Court Proceedings

In the proceedings before the Commonwealth Court, that court initially disposed of various pretrial matters. Most notably, the court ruled on Petitioners' discovery requests, and Legislative Respondents' objections thereto, directed to gleaning the legislators' intent behind the passage of the 2011 Plan. By order and opinion dated November 22, 2017, the court concluded that, under the Speech and Debate Clause of the Pennsylvania Constitution,[37] the court "lack[ed] the authority to compel testimony or

[36] The court's December 29, 2017 Recommended Findings of Fact and Conclusions of Law is broken into two principal, self-explanatory parts. Herein, we refer to those two parts as "Findings of Fact" and "Conclusions of Law."

[37] The Speech and Debate Clause provides:

> The members of the General Assembly shall in all cases, except treason, felony, violation of their oath of office, and breach or surety of the peace, be privileged from arrest during their attendance at the sessions of their respective Houses and in going to and returning from the same; and for any speech or debate in either House they shall not be questioned in any other place.

Pa. Const. art. II, § 15.

the production of documents relative to the intentions, motivations, and activities of state legislators and their staff with respect to the consideration and passage of" the 2011 Plan, Commonwealth Court Opinion, 11/22/17, at 7, and so quashed those requests.[38]

[38] Petitioners sought discovery from various third parties, including, *inter alia*, the Republican National Committee, the National Republican Congressional Committee, the Republican State Leadership Committee, the State Government Leadership Foundation, and former Governor Corbett, requesting all documents pertaining to the 2011 Plan, all documents pertaining the Redistricting Majority Project (REDMAP), all communications and reports to donors that refer to or discuss the strategy behind REDMAP or evaluate its success, and any training materials on redistricting presented to members, agents, employees, consultants or representatives of the Pennsylvania General Assembly and former Governor Corbett. The discovery request was made for the purpose of establishing the intent of Legislative Respondents to dilute the vote of citizens who historically cast their vote for Democratic candidates. Legislative Respondents opposed the request, asserting, in relevant part, that the information sought was privileged under the Speech and Debate Clause of Article I, Section 15 of the Pennsylvania Constitution. Agreeing with Legislative Respondents, the Commonwealth Court denied the discovery request, excluding any documents that reflected communications with members of the General Assembly or "the intentions, motivations, and activities of state legislators and their staff with respect to the consideration and passage of [the 2011 Plan]," *see* Commonwealth Court Opinion, 11/22/17, at 11-13, and later denied the admission of such information produced in the federal court action.

Given the other unrebutted evidence of the intent to dilute the vote of citizens who historically voted for Democratic candidates, we need not resolve the question of whether our Speech and Debate Clause confers a privilege protecting this information from discovery and use at trial in a case, such as this one, involving a challenge to the constitutionality of a statute. However, we caution against reliance on the Commonwealth Court's ruling. This Court has never interpreted our Speech and Debate Clause as providing anything more than immunity from suit, in certain circumstances, for individual members of the General Assembly. *See, e.g., Sweeney v. Tucker*, 375 A.2d 698 (Pa. 1977). Although not bound by decisions interpreting the federal Speech or Debate Clause in Article I, Section 6 of the United States Constitution, *see id.* at 703 n.14, we note that the high Court has recognized an evidentiary privilege only in cases where an individual legislator is facing criminal charges. *See, e.g., United States v. Johnson*, 383 U.S. 169 (1966); *United States v. Helstoski*, 442 U.S. 477 (1979). To date, the United States Supreme Court has never held that an evidentiary privilege exists under the Speech or Debate Clause in lawsuits challenging the constitutionality of a statute. Further, we are not aware of any precedent to support the application of any such privilege to information in the possession of third parties, not legislators.

In addition, Petitioners sought to admit, and Legislative Respondents sought to exclude, certain materials produced by House Speaker Mike Turzai in the federal litigation in *Agre v. Wolf*, *supra*, in response to permitted discovery in that case, along with Petitioners' expert Dr. Jowei Chen's expert reports and testimony based on those materials. (As noted, similar discovery was denied in this case, per the Commonwealth Court's Speech and Debate Clause ruling.) These materials include redistricting maps revealing partisan scoring down to the precinct level, demonstrating that some legislators designing the 2011 Plan relied upon such partisan considerations. Ultimately, the court permitted Dr. Chen's testimony about these materials, but refused to admit the materials themselves, refused to make any findings about them, *see* Findings of Fact at ¶ 307, and submitted a portion to this Court under seal, *see* Petitioners' Exhibit 140. Notably, that sealing order required Petitioners to submit both a "Public" and a "Sealed" version of their brief in order to discuss Exhibit 140.[39] Given our disposition of this matter, we do not further address these materials or the court's evidentiary rulings with respect to them.

In all, the court heard oral argument and ruled on eight motions *in limine.*[40]

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[39] The sole redaction in this regard in the "Public Version" of Petitioners' Brief is on page 8. Thus, the remainder of the citations in this Opinion merely generically refer to "Petitioners' Brief."

[40] The other motions included:

> (1) Petitioners' motion to exclude or limit Intervenors' witness testimony, including precluding the testimony of an existing congressional candidate, limiting the number of witnesses who could testify as Republican Party Chairs to one, and limiting the number of witnesses who could testify as "Republicans at large" to one. The motion was granted. N.T. Trial, 12/11/17, at 94.
>
> (2) Petitioners' motion to exclude testimony from Dr. Wendy K. Tam Cho regarding Dr. Chen. The motion was denied. *Id.* at 95.
>
> (3) Petitioners' motion to exclude the expert testimony of Dr. James Gimpel regarding the intended or actual effect of the 2011 Plan on Pennsylvania's

(continued…)

A. Findings of Fact of the Commonwealth Court

Prior to the introduction of testimony, the parties and Intervenors stipulated to certain background facts, much of which we have discussed above, and to the introduction of certain portions of deposition and/or prior trial testimony as exhibits.[41]

1. Voter Testimony

(…continued)

communities of interest. Legislative Respondents subsequently agreed to withdraw the challenged portion of the Dr. Gimpel's report. *Id.* at 95-96.

(4) Legislative Respondents' motion to exclude documents and testimony regarding REDMAP. The motion was denied. *Id.* at 96.

[41] Petitioners introduced designated excerpts from the depositions of: Carmen Febo San Miguel, Petitioners' Exhibit 163; Donald Lancaster, Petitioners' Exhibit 164; Gretchen Brandt, Petitioners' Exhibit 165; John Capowski, Petitioners' Exhibit 166; Jordi Comas, Petitioners' Exhibit 167; John Greiner, Petitioners' Exhibit 168; James Solomon, Petitioners' Exhibit 169; Lisa Isaacs, Petitioners' Exhibit 170; Lorraine Petrosky; Petitioners' Exhibit 171; Mark Lichty, Petitioners' Exhibit 172; Priscilla McNulty, Petitioners' Exhibit 173; Richard Mantell, Petitioners' Exhibit 174; Robert McKinstry, Jr., Petitioners' Exhibit 175; Robert Smith, Petitioners' Exhibit 176; and Thomas Ulrich, Petitioners' Exhibit 177. Generally, the testimony of the aforementioned Petitioners demonstrates a belief that the 2011 Plan has negatively affected their ability to influence the political process and/or elect a candidate who represents their interests. *See* Findings of Fact at ¶¶ 221-34. Petitioners also introduced excerpts from the trial testimony of State Senator Andrew E. Dinniman in *Agre v. Wolf*, Petitioners' Exhibit 178, and excerpts from the deposition testimony of State Representative Gregory Vitali, Petitioners' Exhibit 179. Senator Dinniman and Representative Vitali both testified as to the circumstances surrounding the enactment of the 2011 Plan.

Respondents introduced affidavits from Lieutenant Governor Stack and Commissioner Marks. Lieutenant Governor Stack's affidavit stated, *inter alia*, that "it is beneficial, when possible, to keep individual counties and municipalities together in a single congressional district." Affidavit of Lieutenant Governor Stack, 12/14/17, at 3, ¶ 8, Respondents' Exhibit 11. Commissioner Marks' affidavit addressed the ramifications with respect to timing in the event a new plan be ordered. Affidavit of Commissioner Marks, 12/14/17, Respondents' Exhibit 2. Intervenors introduced affidavits from Thomas Whitehead and Carol Lynne Ryan, both of whom expressed concern that granting Petitioners relief would adversely affect their political activities. *See* Intervenors' Exhibits 16 and 17.

Initially, several Petitioners testified at trial. They testified as to their belief that, under the 2011 Plan, their ability to elect a candidate who represents their interests and point of view has been compromised. William Marx, a resident of Delmont in Westmoreland County, testified that he is a registered Democrat, and that, under the 2011 Plan, he lives in the 12th Congressional District, which is represented by Congressman Keith Rothfus, a Republican. Marx testified that Congressman Rothfus does not represent his views on, *inter alia*, taxes, healthcare, the environment, and legislation regarding violence against women, and he stated that he has been unable to communicate with him. Marx believes that the 2011 Plan precludes the possibility of having a Democrat elected in his district. N.T. Trial, 12/11/17, at 113-14.

Another Petitioner, Mary Elizabeth Lawn, testified that she is a Democrat who lives in the city of Chester. Under the 2011 Plan, Chester is in the 7th Congressional District, which is represented by Congressman Patrick Meehan, a Republican.[42] *Id.* at 134, 137-39. According to Lawn, Chester is a "heavily African-American" city, and, prior to the enactment of the 2011 Plan, was a part of the 1st Congressional District, which is represented by Congressman Bob Brady, a Democrat.[43] *Id.* at 135, 138-39. According to Lawn, since the enactment of the 2011 Plan, she has voted for the Democratic candidate in three state elections, and her candidate did not win any of the elections. *Id.* at 140. Lawn believes that the 2011 Plan has affected her ability to participate in the

[42] Reportedly, Congressman Meehan will not seek reelection in 2018. Mike DeBonis and Robert Costa, *Rep. Patrick Meehan, Under Misconduct Cloud, Will Not Seek Reelection*, Wash. Post, Jan. 25, 2018 *available at* https://www.washingtonpost.com/news/powerpost/wp/2018/01/25/rep-patrick-meehan-under-misconduct-cloud-will-not-seek-reelection/?utm_term=.9216491ff846.

[43] Reportedly, Congressman Brady also will not seek reelection in 2018. Daniella Diaz, *Democratic Rep. Bob Brady is Not Running for Re-election*, CNN Politics, Jan. 31, 2018, *available at* https://www.cnn.com/2018/01/31/politics/bob-brady-retiring-from-congress-pennsylvania-democrat/index.html.

political process because she was placed in a largely Republican district where the Democratic candidate "doesn't really have a chance." *Id.* Like Marx, Lawn testified that her congressman does not represent her views on many issues, and that she found her exchanges with his office unsatisfying. *Id.* at 140-44.

Finally, Thomas Rentschler, a resident of Exeter Township, testified that he is a registered Democrat. N.T. Trial, 12/12/17, at 669. Rentschler testified that he lives two miles from the City of Reading, and that he has a clear "community of interest" in that city. *Id.* at 682. Under the 2011 Plan, however, Reading is in the 16th Congressional District, and Rentschler is in the 6th Congressional District, which is represented by Congressman Ryan Costello, a Republican. *Id.* at 670-71, 677. Rentschler testified that, while he voted for the Democratic candidate in the last three state elections, all three contests were won by the Republican candidate. *Id.* at 673. In Rentschler's view, the 2011 Plan "has unfairly eliminated [his] chance of getting to vote and actually elect a Democratic candidate just by the shape and the design of the district." *Id.* at 674.

2. Expert Testimony

Petitioners presented the testimony of four expert witnesses, and the Legislative Respondents sought to rebut this testimony through two experts of their own. We address this testimony *seriatim*.

Dr. Jowei Chen

Petitioners presented the testimony of Dr. Jowei Chen, an expert in the areas of redistricting and political geography who holds research positions at the University of Michigan, Stanford University, and Willamette University.[44] Dr. Chen testified that he evaluated the 2011 Plan, focusing on three specific questions: (1) whether partisan

[44] None of the experts presented to the Commonwealth Court were objected to based upon their qualifications as an expert in their respective fields.

intent was the predominant factor in the drawing of the Plan; (2) if so, what was the effect of the Plan on the number of congressional Democrats and Republicans elected from Pennsylvania; and (3) the effect of the Plan on the ability of the 18 individual Petitioners to elect a Democrat or Republican candidate for congress from their respective districts. N.T. Trial, 12/11/17, at 165.

In order to evaluate the 2011 plan, Dr. Chen testified that he used a computer algorithm to create two sets, each with 500 plans, of computer-simulated redistricting plans for Pennsylvania's congressional districts. *Id.* at 170. The computer algorithm used to create the first set of simulated plans ("Simulation Set 1") utilized traditional Pennsylvania districting criteria, specifically: population equality; contiguity; compactness; absence of splits within municipalities, unless necessary; and absence of splits within counties, unless necessary. *Id.* at 167. The computer algorithm used to create the second set of simulated plans ("Simulation Set 2") utilized the aforementioned criteria, but incorporated the additional criteria of protecting 17 incumbents,[45] which, according to Dr. Chen, is not a "traditional districting criterion." *Id.* at 206. Dr. Chen testified that the purpose of adding incumbent protection to the criteria for the second set of computer-simulated plans was to determine whether "a hypothetical goal by the General Assembly of protecting incumbents in a nonpartisan manner might somehow explain or account for the extreme partisan bias" of the 2011 Plan. *Id.*

With regard to Simulation Set 1, the set of computer-simulated plans utilizing only traditional districting criteria, Dr. Chen noted that one of those plans, specifically, "Chen

[45] Dr. Chen noted that there were 19 incumbents in the November 2012 congressional elections, but that, as discussed, Pennsylvania lost one congressional district following the 2010 census. N.T. Trial, 12/11/17, at 207-08.

Figure 1: Example of a Simulated Districting Plan from Simulation Set 1 (Adhering to Traditional Districting Criteria)" (hereinafter "Simulated Plan 1"), which was introduced as Petitioners' Exhibit 3, results in only 14 counties being split into multiple congressional districts, as compared to the 28 counties that are split into multiple districts under the 2011 Plan. *Id.* at 173-74. Indeed, referring to a chart titled "Chen Figure 3: Simulation Set 1: 500 Simulated Plans Following Only Traditional Districting Criteria (No Consideration of Incumbent Protection)," which was introduced as Petitioners' Exhibit 4, Dr. Chen explained that the maximum number of split counties in any of the 500 Simulation Set 1 plans is 16, and, in several instances, is as few as 11. *Id.* at 179. The vast majority of the Simulation Set 1 plans have 12 to 14 split counties. *Id.*

With respect to splits between municipalities, Dr. Chen observed that, under the 2011 Plan, there are 68 splits, whereas the range of splits under the Simulation Set 1 plans is 40 to 58. *Id.* at 180; Petitioners' Exhibit 4. Based on the data contained in Petitioners' Exhibit 4, Dr. Chen noted that the 2011 Plan "splits significantly more municipalities than would have resulted from the simulated plans following traditional districting criteria, and [it] also split significantly more counties." N.T. Trial, 12/11/17, at 180. He concluded that the evidence demonstrates that the 2011 Plan "significantly subordinated the traditional districting criteria of avoiding county splits and avoiding municipal splits. It shows us that the [2011 Plan] split far more counties, as well as more municipalities, than the sorts of plans that would have arisen under a districting process following traditional districting principles in Pennsylvania." *Id.* at 181.

In terms of geographic compactness, Dr. Chen explained that he compared Simulated Plan 1 to the 2011 Plan utilizing two separate and widely-accepted standards. First, Dr. Chen calculated the Reock Compactness Score, which is 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. *Id.* at 175. The range of Reock Compactness Scores for the congressional districts in Simulated Set 1 was "about .38 to about .46," *id.* at 182, and Simulated Plan 1 had an average Reock Compactness Score range of .442, as compared to the 2011 Plan's score of .278, revealing that, according to Dr. Chen, the 2011 Plan "is significantly less compact" than Simulated Plan 1. *Id.* at 175.

Dr. Chen also calculated the Popper-Polsby Compactness Score of both plans. The 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. *Id.* at 176-77. The range of Popper-Polsby Compactness Scores for congressional districts in the Simulated Set 1 plans was "about .29 up to about .35," *id.* at 183, and Simulated Plan 1 had an average Popper-Polsby Score of .310, as compared to the 2011 Plan's score of .164, again leading Dr. Chen to conclude that "the enacted map is significantly far less geographically compact" than Simulated Plan 1. *Id.* at 177.

Utilizing a chart showing the mean Popper-Polsby Compactness Score and the mean Reock Compactness Score for each of the 500 Simulation Set 1 plans, as compared to the 2011 Plan, *see* Petitioners' Exhibit 5 ("Chen Figure 4: Simulation Set 1: 500 Simulated Plans Following Only Traditional Districting Criteria (No Consideration of Incumbent Protection)"), Dr. Chen opined that "no matter which measure of compactness you use, it's very clear that the [2011 Plan] significantly and completely sacrifice[s] the traditional districting principle of geographic compactness compared to

the sorts of plans that would have emerged under traditional districting principles." N.T. Trial, 12/11/17, at 184.

Dr. Chen next addressed the 500 Simulation Set 2 Plans, which, as noted above, included the additional criteria of protecting the 17 incumbents. Dr. Chen stated that, in establishing the additional criteria, no consideration was given to the identities or party affiliations of the incumbents. *Id.* at 208. One of the Simulation Set 2 plans, "Chen Figure 1A: Example of a Simulated Districting Plan from Simulation Set 2 (Adhering to Traditional Districting Criteria And Protecting 17 Incumbents)" (hereinafter "Simulated Plan 1A"), which was introduced as Petitioners' Exhibit 7, resulted in only 15 counties being split into multiple congressional districts, as compared to the 28 counties that are split into multiple districts under the 2011 Plan. *Id.* at 213. Referring to Petitioners' Exhibit 8, titled "Chen Figure 6: Simulation Set 2: 500 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents," Dr. Chen further observed that the 2011 Plan split more municipalities (68) than any of the Simulated Set 2 plans, which resulted in a range of splits between 50 and 66. Based on this data, Dr. Chen opined:

> We're able to conclude from [Petitioners' Exhibit 8] that the [2011 Plan] subordinate[s] the traditional districting criteria of avoiding county splits and avoiding municipal splits and the subordination of those criteria was not somehow justified or explained or warranted by an effort to protect 17 incumbents in an nonpartisan manner. To put that in layman's terms, an effort to protect incumbents would not have justified splitting up as many counties and as many municipalities as we saw split up in the [2011 Plan].

Id. at 217.

With respect to geographic compactness, Dr. Chen explained that Simulated Plan 1A had an average Reock Compactness Score of .396, as compared to the 2011 Plan's score of .278, and Simulated Plan 1A had a Popper-Polsby Compactness Score

of .273, as compared to the 2011 Plan's score of .164. *Id.* at 214; Petitioners' Exhibit 7. Based on an illustration of the mean Popper-Polsby Compactness Score and the mean Reock Compactness Score for each of the 500 Simulation Set 2 plans, as compared to the 2011 Plan, *see* Petitioners' Exhibit 9 ("Chen Figure 7: Simulation Set 2: 500 Simulated Plans Following Traditional Districting Criteria and Protecting 17 Incumbents"), Dr. Chen concluded that the 2011 Plan "significantly subordinated [the] traditional districting criteria of geographic compactness and that subordination of geographic compactness of districts was not somehow justified or necessitated or explained by a hypothetical effort to protect 17 incumbents." N.T. Trial, 12/11/17, at 220.

Dr. Chen also testified regarding the partisan breakdown of the 2011 Plan. Dr. Chen explained that he requested and obtained from the Department of State the actual election data for each voting precinct in Pennsylvania for the six 2008 and 2010 statewide elections. *Id.* at 185-86. Those elections included the elections for the President, Attorney General, Auditor General, and State Treasurer in 2008, and the United States Senate election and the state gubernatorial election in 2010. *Id.* at 187. The election data obtained by Dr. Chen indicated how many votes were cast for each party candidate. *Id.* at 189. By overlaying the precinct-level election results on top of the geographic boundaries as shown on a particular map, he was able to determine whether a particular district had more Republican or Democratic votes during the elections. *Id.* at 196-97. Those districts that had more Republican votes would, naturally, be classified as Republican.

Dr. Chen observed that, under the 2011 Plan, 13 of the 18 congressional districts are classified as Republican. *Id.* at 198. However, when Dr. Chen overlaid the precinct-level election results on Simulated Plan 1, only 9 of the 18 congressional

districts would be classified as Republican. *Id.* at 197. Indeed, in the 500 Simulation Set 1 plans, the highest number of classified Republican districts was 10, and in none of the simulated plans would 13 of the congressional districts be classified as Republican. *Id.* at 200. Based on this data, Dr. Chen stated "I'm able to conclude with well-over 99.9 percent statistical certainty that the [2011 Plan's] creation of a 13-5 Republican advantage in Pennsylvania's Congressional delegation is an outcome that would never have emerged from a districting process adhering to and following traditional districting principles." *Id.* at 203-04.

Moreover, Dr. Chen testified that, even under the Simulation Set 2 plans, which took into account preservation of incumbent candidates, none of the 500 plans resulted in a Republican District/Democratic District ratio of more than 10 to 8. *Id.* at 221-22; Petitioners' Exhibit 10. Based on a comparison of the 2011 Plan and his simulated redistricting plans, Dr. Chen determined that "partisan intent predominated the drawing of the [2011 Plan] . . . and the [2011 Plan] was drawn with a partisan intent to create a 13-5 Republican advantage and that this partisan intent subordinated traditional districting principles in the drawing of the enacted plan." *Id.* at 166.

Dr. Chen was asked to consider whether the partisan breakdown of the 2011 Plan might be the result of a "hypothetical effort to produce a certain racial threshold of having one district of over a 56.8 percent African-American voting-age population." *Id.* at 245.[46] To answer this question, Dr. Chen explained that he analyzed the 259 computer-simulated plans from Simulation Sets 1 and 2 that included a congressional voting district with an African-American voting age population of at least 56.8%. Dr.

[46] Under the 2011 Plan, the only congressional district with an African-American voting-age population of more than 50% is the 2nd Congressional District, which includes areas of Philadelphia; the African-American voting-age population for that district is 56.8%. N.T. Trial, 12/11/17, at 239.

Chen testified that, of those 259 simulated plans, *none* resulted in a Republican-Democrat congressional district ratio of 13 to 5. *Id.* at 244-45, 250. Indeed, of the Simulated Set 1 plans, which did not take into account protection of incumbents, the maximum ratio was 9 to 9, and of the Simulated Set 2 plans, which did protect incumbents, the maximum ratio was 11 to 8, and, in one case, was as low as 8 to 11. *Id.*; Petitioners' Exhibit 15 ("Chen Figure 10"). Dr. Chen concluded "the 13-5 Republican advantage of the enacted map is an outcome that is not plausible, even if one is only interested in plans that create one district with over 56.8 percent African-American voting-age population." N.T. Trial, 12/11/17, at 245.

Dr. Chen also was asked whether the 13-5 Republican advantage in the 2011 Plan could be explained by political geography – that is, the geographic patterns of political behavior. *Id.* at 251. Dr. Chen explained that political geography can create natural advantages for one party over another; for example, he observed that, in Florida, Democratic voters are often "far more geographically clustered in urban areas," whereas Republicans "are much more geographically spaced out in rural parts" of the state, resulting in a Republican advantage in control over districts and seats in the state legislature. *Id.* at 252-53.

In considering 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. *Id.* at 257. To calculate the mean, one looks at the average vote share per party in a particular district. *Id.* 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. *Id.* at 258. The median district is the district that either party has to win in order to win the election. *Id.* Dr. Chen testified that, under the 2011 Plan, the Republican Party has a mean vote share of 47.5%, and a

median vote share of 53.4%. *Id.* at 261; Petitioners' Exhibit 1, at 20. This results in a mean-median gap of 5.9%, which, according to Dr. Chen, indicates that, under the 2011 Plan, "Republican votes . . . are spread out in a very advantageous manner so as to allow -- in a way that would allow the Republicans to more easily win that median district." N.T. Trial, 12/11/17, at 259. The converse of this mean-median gap result is that Democratic voters "are very packed into a minority of the districts, which they win by probably more comfortable margins," which makes it "much harder for Democrats under that scenario to be able to win the median district. So, in effect, what that means is it's much harder for the Democrats to be able to win a majority of the Congressional delegation." *Id.* at 260.

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 255. However, Dr. Chen observed that the range of 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; Petitioners' Exhibit 16 ("Chen Figure 5"). Dr. Chen explained that this is a "normal range," and that a 6% gap "is a very statistically extreme outcome that cannot be explained by voter geography or by traditional districting principles alone." N.T. Trial, 12/11/17, at 263-64. Dr. Chen noted that the range of mean/median gaps created by any of the Simulated Set 2 plans also did not approach 6%, and, thus, that the 2011 Plan's "extreme partisan skew of voters is not an outcome that naturally emerges from Pennsylvania's voter geography combined with traditional districting principles and an effort to protect 17 incumbents in a nonpartisan manner. It's not a plausible outcome given those conditions." *Id.* at 266; Petitioners' Exhibit 17 ("Chen Figure 9").

In sum, Dr. Chen "statistically conclude[d] with extremely high certainty . . . that, certainly, there is a small geographic advantage for the Republicans, but it does not come close to explaining the extreme 13-5 Republican advantage in the [2011 Plan]." N.T. Trial, 12/11/17, at 255-56.

Ultimately, the Commonwealth Court found Dr. Chen's testimony credible; specifically, the court held that Dr. Chen's testimony "established that the General Assembly included factors other than nonpartisan traditional districting criteria in creating the 2011 Plan in order to increase the number of Republican-leaning congressional voting districts." Findings of Fact at ¶ 309. The court noted, however, that Dr. Chen's testimony "failed to take into account the communities of interest when creating districting plans," and "failed to account for the fact that courts have held that a legislature may engage in some level of partisan intent when creating redistricting plans." *Id.* at ¶¶ 310, 311.

Dr. John Kennedy

Petitioners next presented the testimony of Dr. John Kennedy, an expert in the area of political science, specializing in the political geography and political history of Pennsylvania, who is a professor of political science at West Chester University. Dr. Kennedy testified that he analyzed the 2011 Plan "to see how it treated communities of interest, whether there were anomalies present, whether there are strangely designed districts, whether there are things that just don't make sense, whether there are tentacles, whether there are isthmuses, whether there are other peculiarities." N.T. Trial, 12/12/17, at 580. Dr. Kennedy also explained several concepts used to create a gerrymandered plan. For example, he described that "cracking" is a method by which a particular party's supporters are separated or divided so they cannot form a larger, cohesive political voice. *Id.* at 586. Conversely, "packing" is a process by which

individual groups who reside in different communities are placed together based on their partisan performance, in an effort to lessen those individuals' impact over a broader area. *Id.* Finally, Dr. Kennedy defined "highjacking" as the combining of two congressional districts, both of which have the majority support of one party – the one not drawing the map – thereby forcing two incumbents to run against one another in the primary election, and automatically eliminating one of them. *Id.* at 634.

When asked specifically about the 2011 Plan, Dr. Kennedy opined that the 2011 Plan "negatively impacts Pennsylvania's communities of interest to an unprecedented degree and contains more anomalies than ever before." *Id.* at 579. For example, Dr. Kennedy noted that Erie County, in the 3rd Congressional District, is split under the 2011 Plan for "no apparent nonpartisan reason," when it had never previously been split. *Id.* at 591. According to Dr. Kennedy, Erie County is a historically Democratic county, and, in splitting the county, the legislature "cracked" it, diluting its impact by pushing the eastern parts of the county into the rural and overwhelmingly Republican 5th Congressional District. *Id.* at 597; *see* Petitioners' Exhibit 73.

Dr. Kennedy next addressed the 7th Congressional District, which he noted "has become famous certainly systemwide, if not nationally, as one of the most gerrymandered districts in the country," earning the nickname "the Goofy kicking Donald district." N.T. Trial, 12/11/17, at 598-99; *see* Joint Exhibit 12. According to Dr. Kennedy, the 7th Congressional District was historically based in southern Delaware County; under the 2011 Plan, it begins in Delaware County, moves north into Montgomery County, then west into Chester County, and finally, both north into Berks County and south into Lancaster County. At one point, along Route 30, the district is contiguous only by virtue of a medical facility, N.T. Trial, 12/11/17, at 600-01; at another point, in King of Prussia, it remains connected by a single steak and seafood restaurant.

Id. at 604. Dr. Kennedy further observed that the 7th Congressional District contains 26 split municipalities. *Id.* at 615.

Dr. Kennedy offered the 1st Congressional District as an example of a district which has been packed. *Id.* at 605; *see* Petitioners' Exhibit 70. He described that the 1st Congressional District begins in Northeast Philadelphia, an overwhelmingly Democratic district, and largely tracks the Delaware River, but occasionally reaches out to incorporate other Democratic communities, such as parts of the city of Chester and the town of Swarthmore. N.T. Trial, 12/11/17, at 605-08.

Dr. Kennedy also discussed the 4th Congressional District, as shown in Petitioners' Exhibit 75, observing that the district is historically "a very Republican district." *Id.* at 631. In moving the northernmost tip of the City of Harrisburg, which is predominantly a Democratic city, to the 4th Congressional District from the district it previously shared with central Pennsylvania and the Harrisburg metro area, which are part of the same community of interest, the 2011 Plan has diluted the Democratic vote in Harrisburg. *Id.* at 631-32.[47]

In sum, Dr. Kennedy concluded that the 2011 Plan "gives precedence to political considerations over considerations of communities of interest and disadvantages Democratic voters, as compared to Republican voters. This is a gerrymandered map." *Id.* at 644. The Commonwealth Court found Dr. Kennedy's testimony credible. However, it concluded that Dr. Kennedy "did not address the intent behind the 2011 Plan," and it specifically "disregarded" Dr. Kennedy's opinion that the 2011 Plan was an unconstitutional gerrymander as an opinion on the ultimate question of law in this case. Findings of Fact at ¶¶ 339-41.

[47] Dr. Kennedy's testimony was not limited to discussion of the four specific congressional districts discussed herein.

Dr. Wesley Pegden

Petitioners next presented the testimony of Dr. Wesley Pegden, an expert in the area of mathematical probability, and professor of mathematical sciences at Carnegie Mellon University. Dr. Pegden testified that he evaluated the 2011 Plan to determine whether it "is an outlier with respect to partisan bias and, if so, if that could be explained by the interaction of political geography and traditional districting criteria in Pennsylvania." N.T. Trial, 12/13/17, at 716-17. In evaluating the 2011 Plan, Dr. Pegden utilized a computer algorithm that starts with a base plan − in this case, the 2011 Plan − and then makes a series of small random changes to the plan. Dr. Pegden was able to incorporate various parameters, such as maintaining 18 contiguous districts, maintaining equal population, and maintaining compactness. *Id.* at 726. Dr. Pegden then noted whether the series of small changes resulted in a decrease in partisan bias, as measured by the mean/median. *Id.* at 722-23.

The algorithm made approximately 1 trillion computer-generated random changes to the 2011 Plan, and, of the resulting plans, Dr. Pegden determined that 99.999999% of them had less partisan bias than the 2011 Plan. *Id.* at 749; Petitioners' Exhibit 117, at 1. Based on this data, Dr. Pegden concluded the General Assembly "carefully crafted [the 2011 Plan] to ensure a Republican advantage." Petitioners' Exhibit 117, at 1. He further testified the 2011 Plan "was indeed an extreme outlier with respect to partisan bias in a way that could not be explained by the interaction of political geography and the districting criteria" that he considered. N.T. Trial, 12/13/17, at 717.

The Court found Dr. Pegden's testimony to be credible; however, it noted that, like Dr. Chen's testimony, his testimony did not take into account "other districting considerations, such as not splitting municipalities, communities of interest, and some

permissible level of incumbent protection and partisan intent." Findings of Fact at ¶¶ 360-61. Further, as with Dr. Kennedy, the Commonwealth Court "disregarded" Dr. Pegden's opinion that the 2011 Plan was an unconstitutional gerrymander as an opinion on a question of law. *Id.* at ¶ 363.

Dr. Christopher Warshaw

Petitioners next presented the testimony of Dr. Christopher Warshaw, an expert in the field of American politics – specifically, political representation, public opinion, elections, and polarization – and professor of political science at George Washington University. Dr. Warshaw testified that he was asked to evaluate the degree of partisan bias in the 2011 Plan, and to place any such bias into "historical perspective." N.T. Trial, 12/13/17, at 836.

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. *Id.* at 839. He explained that, in a cracked district, the disadvantaged party loses narrowly, wasting a large number of votes without winning a seat; in a packed district, the disadvantaged party wins overwhelmingly, again, wasting a large number of votes. *Id*. at 839-40. To calculate the efficiency gap, Dr. Warshaw 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 ratio for the other party. The larger the number, the greater the partisan bias. For purposes of evaluating the 2011 Plan, Dr. Warshaw explained that an efficiency gap of a negative percentage represents a

Republican advantage, and a positive percentage represents a Democratic advantage. *Id.* at 842. (The decision of which party's gap is deemed negative versus positive – the scale's polarity – is arbitrary. *Id.* at 854.) He summed up the approach as follows:

> The efficiency gap is just a way of translating this intuition that what gerrymandering is ultimately about is efficiently translating votes into seats by wasting as many of your opponent's supporters as possible and as few as possible -- as possible of your own. So it's really just a formula that captures this intuition that that's what gerrymandering is at its core.

Id. at 840.

Dr. Warshaw testified that, historically, in states with more than six congressional districts, the efficiency gap is close to 0%. An efficiency gap of 0% indicates no partisan advantage. *Id.* at 864. He explained that 75% of the time, the efficiency gap is between 10% and negative 10%, and, less than 4% of the time, the efficiency gap is outside the range of 20% and negative 20%. *Id.* at 865.

In analyzing the efficiency gap in Pennsylvania for the years 1972 through 2016, Dr. Warshaw discovered that, during the 1970s, there was "a very modest" Democratic advantage, but that the efficiency gap was relatively close to zero. *Id.* at 870; *see* Petitioner's Exhibit 40. In the 1980s and 90s, the efficiency gap indicated no partisan advantage for either party. *Id.* Beginning in 2000, there was a "very modest Republican advantage," but the efficiency gaps "were never very far from zero." *Id.* at 870-71. However, in 2012, the efficiency gap in Pennsylvania was negative 24%, indicating that "Republicans had a 24-percentage-point advantage in the districting process." *Id.* at 871. In 2014, "Republicans continued to have a large advantage in the districting process with negative 15 percent," and, in 2016, Republicans "continued to have a very large and robust" advantage with an efficiency gap of negative 19%. *Id.*

Dr. Warshaw confirmed that, prior to the 2011 Plan, Pennsylvania never had an efficiency gap of 15% in favor of either party, and only once had there been an efficiency gap of even 10%. *Id.* at 872. Thus, Dr. Warshaw concluded that the efficiency gaps that occurred after the 2011 Plan were "extreme" relative to the prior plans in Pennsylvania. *Id.* Indeed, he noted that the efficiency gap in Pennsylvania in 2012 was the largest in the country for that year, and was the second largest efficiency gap in modern history "since one-person, one-vote went into effect in 1972." *Id.* at 874. The impact of an efficiency gap between 15% and 24%, according to Dr. Warshaw, "implies that Republicans won an average of three to four extra Congressional seats each year over this timespan." *Id.* at 873.

When asked to consider whether geography may have contributed to the large efficiency gap in Pennsylvania, Dr. Warshaw stated, "it's very unlikely that some change in political geography or some other aspect of voting behavior would have driven this change. This change was likely only due to the districts that were put in place." *Id.* at 879. With regard to the change in the efficiency gap between the 2010 and 2012 elections, Dr. Warshaw opined that "there's no possible change in political geography that would lead to such a dramatic shift." *Id.* Dr. Warshaw further concluded that "the efficiency gaps that occured immediately after the 2011 Redistricting Plans went into place are extremely persistent," and are unlikely to be remedied by the "normal electoral process." *Id.* at 890-91.

In addition to his testimony regarding the efficiency gap, Dr. Warshaw discussed the concept of polarization, which he defined as the difference in voting patterns

between Democrats and Republicans in Congress, *id.* at 903, and the impact of partisan gerrymandering on citizens' faith in government. *Id.* at 953.[48]

The Commonwealth Court found Dr. Warshaw's testimony to be credible, particularly with respect to the existence of an efficiency gap in Pennsylvania. Nevertheless, the court opined that the full meaning and effect of the gap "requires some speculation and does not take into account some relevant considerations, such as quality of candidates, incumbency advantage, and voter turnout." Findings of Fact at ¶ 389. The court expressed additional concerns that the efficiency gap "devalues competitive elections," in that even in a district in which both parties have an equal chance of prevailing, a close contest will result in a substantial efficiency gap in favor of the prevailing party. *Id.* at ¶ 390. Finally, the court concluded that Dr. Warshaw's comparison of the efficiency gap in Pennsylvania and other states was of limited value, as it failed to take into consideration whether there were state differences in methods and limitations for drawing congressional districts. *Id.* at 89-90 ¶ 391.[49]

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[48] A detailed explanation of this aspect of his testimony is unnecessary for purposes of this Opinion.

[49] Following the presentation of Dr. Warshaw's testimony, Petitioners requested permission to admit into the record several documents, including: Petitioners' Exhibit 124 (Declaration of Stacie Goede, Republican State Leadership Conference); Petitioners' Exhibit 126 (Redistricting 2010 Preparing for Success); Petitioners' Exhibit 127 (RSLC Announces Redistricting Majority Project (REDMAP); Petitioners' Exhibit 128 (REDistricting MAjority Project); Petitioners' Exhibit 129 (REDMAP Political Report: July 2010); Petitioners' Exhibit 131 (REDMAP 2012 Summary Report); Petitioners' Exhibit 132 (REDMAP Political Report: Final Report); Petitioners' Exhibit 133 (2012 RSLC Year in Review); Petitioners' Exhibit 134 (REDMAP fundraising letter); and Petitioners' Exhibit 140 ("Map-CD18 Maximized"). As noted above, the Commonwealth Court sustained Respondents' objections to the admission of these documents, but admitted them under seal "for the sole purpose of . . . allowing the Supreme Court to revisit my evidentiary ruling if it so chooses." N.T. Trial, 12/13/17, at 1061; *see id.* at 1070. Petitioners also moved for the admission of Exhibits 27, 28, 29, 30, 31, and 33. The court refused to admit Exhibits 27, 28, 29, 30, and 31, and reiterated that it had (continued…)

Dr. Wendy K. Tam Cho

In response to the testimony offered by Petitioners, Legislative Respondents presented the testimony of their own experts, beginning with Wendy K. Tam Cho, Ph.D., a professor at the University of Illinois, who was certified as an expert in the areas of political science with a focus on political geography, redistricting, American elections, operations research, statistics, probability, and high-performance computing; she was called to rebut Dr. Chen's and Dr. Pegden's testimony. N.T. Trial, 12/14/17, at 1132. Dr. Cho opined that, based upon her review of one of Dr. Chen's prior papers, she believed that his methodology was a flawed attempt at a Monte Carlo simulation – *i.e.*, a flawed attempt to use random sampling to establish the probability of outcomes. Specifically, Dr. Cho explained that Dr. Chen's methodology was flawed because, although his algorithm randomly selected an initial voting district from which to compile a redistricting plan, it subsequently followed a determined course in actually compiling it, thereby undermining its ability to establish probabilistic outcomes. *Id.* at 1137-38. Dr. Cho also criticized Dr. Chen's algorithm on, *inter alia*, the basis that it had not been academically validated, *id.* at 1170-73; that many or all of the alternative plans failed to include all legally applicable and/or traditional redistricting principles "as [she] understand[s] them," *id.* at 1176; and that the algorithm generated too small a sample size of alternative plans to establish probabilistic outcomes. *Id.* at 1181-85.

Dr. Cho testified that, based upon her review of Dr. Pegden's published work, she believed his methodology too was flawed, in that it failed to incorporate ordinary

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previously ruled on Exhibit 33 and held it was not admissible. *Id.* at 1077. The court also refused to admit Exhibits 135, 136, 137, 138, 139, and 141-161. *Id.* at 1083.

redistricting criteria such as avoiding municipal splits and protecting incumbents. *Id.* at 1219.

Notably, however, Dr. Cho conceded that she did not actually review either Dr. Chen's or Dr. Pegden's algorithms or codes, *id.* at 1141, 1296, and both Dr. Pegden and Dr. Chen testified on rebuttal that the bulk of Dr. Cho's assumptions regarding their methodology – and, thus, derivatively, her criticisms thereof – were erroneous. *Id.* at 1368-95; N.T. Trial, 12/15/17, at 1650-75. Ultimately, the Commonwealth Court found Dr. Cho's testimony incredible "with regard to her criticisms of the algorithms used by Dr. Chen and Dr. Pegden, but credible with regard to her observation that Dr. Pegden's algorithm failed to avoid municipal splits and did not account for permissible incumbency protection." Findings of Fact at ¶ 398. Nevertheless, the court found Dr. Cho's testimony did not lessen the weight of either Dr. Chen's conclusion that adherence to what he viewed as traditional redistricting criteria could not explain the 2011 Plan's partisan bias, or Dr. Pegden's conclusion that the 2011 Plan is a statistical outlier as compared to maps with nearly identical population equality, contiguity, compactness, and number of county splits. *Id.* at ¶¶ 399-400. The court also concluded that Dr. Cho offered no meaningful guidance as to an appropriate test for determining the existence of an unconstitutional partisan gerrymander. *Id.* at ¶ 401.

Dr. Nolan McCarty

Respondents also presented the testimony of Dr. Nolan McCarty, an expert in the area of redistricting, quantitative election and political analysis, representation and legislative behavior, and voting behavior, and professor of politics and public affairs at Princeton University. Dr. McCarty was asked to comment on the expert reports of Dr. Chen and Dr. Warshaw. Dr. McCarty explained that he analyzed whether the 2011 Plan resulted in a partisan bias by calculating the partisan voting index ("PVI") of each

congressional district. N.T. Trial, 12/15/17, at 1421. The PVI is calculated by taking the presidential voting returns in a congressional district for the previous two elections, subtracting the national performance of each political party, and then calculating the average over those two elections. *Id.* Utilizing the PVI, Dr. McCarty opined that there was no evidence of a partisan advantage to the Republican Party under the 2011 Plan. *Id.* at 1489-90. He further suggested that, under the 2011 Plan, the Democratic Party should have won 8 of the 18 congressional seats, and that its failure to do so was the result of other factors, including candidate quality, incumbency, spending, national tides, and trends within the electorate. *Id.* at 1447-48.

Dr. McCarty criticized Dr. Chen's method of calculating the partisan performance of a district, opining that it is an imperfect predictor of how a district will vote in congressional elections. *Id.* at 1458-76. However, Dr. Chen addressed Dr. McCarty's criticisms on rebuttal, *id.* at 1675-701, "to the satisfaction of the Court." Findings of Fact at ¶ 407.

Dr. McCarty also criticized Dr. Warshaw's reliance on the efficiency gap as an indicator of gerrymandering, contending (1) that the efficiency gap does not take into consideration partisan bias that results naturally from geographic sorting; (2) that proponents of the efficiency gap have not developed principled ways of determining when an efficiency gap is too large to be justified by geographic sorting; and (3) close elections can have an effect on the calculation of efficiency gaps. N.T. Trial, 12/15/17, at 1484; *see also* Legislative Respondents' Exhibit 17 at 18-20. He further suggested there are many components to wasted votes that are not related to partisan districting. N.T. Trial, 12/15/17, at 1483-84. Finally, Dr. McCarty criticized Dr. Warshaw's testimony regarding the effect gerrymandering has on the polarization of political parties. *Id.* at 1477-82.

The Commonwealth Court found Dr. McCarty's testimony not credible with regard to his criticism of Dr. Chen's report; indeed, the court concluded that "the methodology employed by Dr. Chen to calculate partisan performance appears to have been a reliable predictor of election outcomes in Pennsylvania since the enactment of the 2011 Plan." Findings of Fact at ¶ 409. Moreover, the Commonwealth Court observed that "Dr. Chen's methodology resulted in accurate predictions for 54 out of 54 congressional elections under the 2011 Plan." *Id.*

With regard to Dr. Warshaw's expert report, the Commonwealth Court likewise determined that Dr. McCarty's criticisms were not credible to the extent he (1) disagreed that gerrymandering does not exacerbate problems associated with polarization, and (2) suggested that cracking and packing may actually benefit voters. *Id.* at ¶ 410. The court further rejected as incredible Dr. McCarty's criticism of Dr. Warshaw's reliance on the efficiency gap, noting that "Dr. Warshaw accounted for some geographic sorting in his analysis of the efficiency gap and did not dispute that close elections can impact the calculation of an efficiency gap." *Id.* Although the court credited Dr. McCarty's testimony that proponents of the efficiency gap have not developed principled methods of determining when an efficiency gap is so large it necessarily evidences partisan gerrymandering, and that wasted votes are not always the result of partisan districting, the Commonwealth Court concluded that Dr. McCarty's testimony did not lessen (1) "the weight given to Dr. Chen's testimony that the 2011 Plan is an outlier with respect to its partisan advantage," or (2) "the weight given to Dr. Warshaw's testimony that an efficiency gap exists in Pennsylvania." *Id.* at ¶¶ 411-12. The court also concluded that Dr. McCarty offered no guidance as to the appropriate test for determining when a legislature's use of partisan considerations results in unconstitutional gerrymandering. *Id.* at ¶ 413.

B. Conclusions of Law of the Commonwealth Court

After setting forth its findings of fact, the Commonwealth Court offered recommended conclusions of law. Preliminarily, the court explained that the federal Constitution requires that seats in the United States House of Representatives be reapportioned decennially among the states according to their populations as determined in the census, and commits post-reapportionment redistricting to the states' legislatures, subject to federal law. Conclusions of Law at ¶¶ 1-2 (quoting the federal Elections Clause). The court reasoned that, in Pennsylvania, although the General Assembly in performing post-reapportionment redistricting is subject to federal restrictions – *e.g.*, the requirement that districts be as equal in population as possible and the requirements of the Voting Rights Act of 1965 – it is largely free from state restrictions, as its task is not subject to explicit, specific, constitutional or statutory requirements.[50] The Commonwealth Court intimated that, although a party's claim that a legislative redistricting plan is unconstitutional on the ground that it is a partisan gerrymander is justiciable under federal and state law, *id.* at ¶ 10 (citing *Davis v. Bandemer*, 478 U.S. 109, 124-27 (1986);[51] *Erfer v. Commonwealth*, 794 A.2d 325, 331

[50] The court contrasted the General Assembly's freedom in this regard with the Legislative Reapportionment Commission's relatively lesser freedom in performing state legislative redistricting, which, as noted above, is governed by Article II, Section 16 of the Pennsylvania Constitution; political subdivisions' lesser freedom in performing political-subdivision redistricting, which is governed by Article IX, Section 11 of the Pennsylvania Constitution; and other states' lesser freedom in performing congressional redistricting subject to their own state restrictions, *see* Conclusions of Law at ¶ 7 (citing, as an example, Va. Const. art. II, § 6 (requiring Virginia's Congressional districts to be contiguous and compact)).

[51] Actually, such a claim's justiciability under federal law is, at best, unclear. In *Bandemer*, the United States Supreme Court held that such claims are justiciable under the Equal Protection Clause, but was unable to agree on an adjudicative standard. However, in *Vieth*, the court revisited the issue, and a four-Justice plurality indicated they would overrule *Bandemer*'s holding, with an equal number of Justices indicating they would reaffirm it, although they remained unable to agree on an adjudicative (continued…)

(Pa. 2002)), it is insufficient to allege that a redistricting plan employs partisan or political classifications *per se*: rather, a party must demonstrate that the plan employs *excessive* partisan or political classifications, *see id.* at ¶¶ 10-15 (citing, *inter alia*, *Vieth, supra*, at 307 (Kennedy, J., concurring) (opining that such a claim predicated on partisan or political classifications *per se* is nonjusticiable, but that one predicated on the allegation that "the [partisan or political] classifications . . . were applied in an invidious manner or in a way unrelated to any legitimate legislative objective" might be justiciable); *Erfer*, 794 A.2d at 334 (describing such a claim's justiciability as "not amenable to judicial control or correction save for the most egregious abuses."); *Holt v. 2011 Legislative Reapportionment Comm'n*, 38 A.3d 711, 745 (Pa. 2012) ("*Holt I*") (acknowledging, in the context of state legislative redistricting, that redistricting "has an inevitably legislative, and therefore an inevitably political, element," but indicating that constitutional requirements function as a "brake on the most overt of potential excesses and abuse")). The court noted that Petitioners, insofar as they are challenging the 2011 Plan's constitutionality, bear the burden of proving its unconstitutionality, and that it is insufficient for them to demonstrate that a better or fairer plan exists; rather, they must demonstrate that the 2011 Plan clearly, plainly, and palpably violates constitutional

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standard. *See Vieth*, 541 U.S. at 270-306 (plurality opinion) (Scalia, J., joined by Rehnquist, C.J., O'Connor, J., and Thomas, J.); *id.* at 317 (Stevens, J. dissenting); *id.* at 342-55 (Souter, J., joined by Ginsburg, J., dissenting); *id.* at 355-68 (Breyer, J., dissenting). Justice Kennedy, concurring in the judgment, agreed with the plurality that the claim at bar was nonjusticiable, insofar as he viewed some political partisan or political classifications as permissible and, largely due to that circumstance, could not glean an appropriate adjudicative standard, but declined to foreclose future claims for which he expressed optimism that such a standard might be determined. *See id.* at 308-17 (Kennedy, J., concurring in the judgment).

requirements. *See id.* at ¶ 16 (citing, *inter alia*, *Singer v. Sheppard*, 346 A.2d 897, 900 (Pa. 1975)).

Turning to Petitioners' claims, the Commonwealth Court first rejected Petitioners' argument that the 2011 Plan violated their rights to free speech pursuant to Article I, Section 7 of the Pennsylvania Constitution and free assembly pursuant to Article I, Section 20 of the Pennsylvania Constitution. The court acknowledged that these provisions predate the First Amendment to the United States Constitution, and that, although their interpretation is often guided by analogy to First Amendment jurisprudence, they provide broader protection of individual freedom of speech and association. The court cited its decision in *Working Families Party v. Commonwealth*, 169 A.3d 1247 (Pa. Cmwlth. 2017), for the proposition that, where a party challenges a statute as violative of Article I, Sections 7 and 20, the fundamental adjudicative framework is a means-ends test weighing "the character and magnitude of the burden imposed by the [statute] against the interests proffered to justify that burden": specifically, "'regulations imposing severe burdens on plaintiffs' rights must be narrowly tailored and advance a compelling state interest[;] [l]esser burdens, however, trigger less exacting review, and a [s]tate's important regulatory interests will usually be enough to justify reasonable, nondiscriminatory restrictions.'" Conclusions of Law at ¶ 25 (quoting *Working Families Party*, 169 A.3d at 1260-61 (internally quoting *Timmons v. Twin Cities Area New Party*, 520 U.S. 351 (1997) (internal quotation marks omitted))). The court then explained that this Court has recognized that the right to free speech includes the right to free speech unencumbered by official retaliation:

> To prove a claim of retaliation, a plaintiff must establish: (1) the plaintiff was engaged in a constitutionally protected activity; (2) the defendant's action caused the plaintiff to suffer an injury that would likely chill a person of ordinary firmness from continuing to engage in that activity; and (3)

> the adverse action was motivated at least in part as a response to the exercise of the plaintiff's constitutional rights.

Id. at ¶ 26 (quoting *Uniontown Newspapers, Inc. v. Roberts*, 839 A.2d 185, 198 (Pa. 2003) (internal citations and quotation marks omitted)).

Observing that no majority of the United States Supreme Court has yet addressed a challenge to a redistricting plan as violative of the First Amendment and that no Pennsylvania court has yet considered a challenge to a redistricting plan as violative of Article I, Sections 7 and 20, the court remarked that Petitioners are not precluded by the 2011 Plan from freely associating with any candidate or political party or from voting. The court characterized Petitioners' claims as actually seeking a declaration that they are entitled to a redistricting plan "free of any and all partisan considerations," noting that such a right was "not apparent in the Pennsylvania Constitution or in the history of gerrymandering decisions in Pennsylvania or throughout the country," and that both the United States Supreme Court and this Court have previously acknowledged that partisan considerations may play some role in redistricting. *Id.* at ¶¶ 27-38 (citing *Vieth* and *Holt I*).

The court then noted Justice Kennedy's remarks in *Vieth* that courts must have some judicially administrable standard by which to appraise partisan gerrymanders, and found that Petitioners presented no such standard.[52] Finally, assuming *arguendo* that

[52] Later, the Commonwealth Court explained:

> [s]ome unanswered questions that arise based on Petitioners' presentation include: (1) what is a constitutionally permissible efficiency gap; (2) how many districts must be competitive in order for a plan to pass constitutional muster (realizing that a competitive district would result in a skewed efficiency gap); (3) how is a "competitive" district defined; (4) how is a "fair" district defined; and (5) must a plan guarantee a minimum number of congressional seats in favor of one party or another to be constitutional.

(continued…)

Petitioners' putative retaliation claim is cognizable under Pennsylvania law, the court found that Petitioners failed to establish the same. Although conceding that Petitioners were engaged in constitutionally-protected political activity, the court first found that they failed to establish that the General Assembly caused them to suffer any injury that would chill a person of ordinary firmness from continuing to engage in such activity, essentially because they remained politically active:

> With respect to the second element, Petitioners all continue to participate in the political process. Indeed, they have voted in congressional races since the implementation of the 2011 Plan. The Court assumes that each Petitioner is a person of [at least] ordinary firmness.

Id. at ¶ 34.

The court also determined that Petitioners failed to establish that the General Assembly's adoption of the 2011 Plan was motivated in part as a response to Petitioners' participation in the political process, essentially reasoning that intent to gain a partisan advantage over a rival faction is not equivalent to an intent to punish the faction's voters, that gleaning the intent of the General Assembly as a body was largely impossible, and that the fact that some Democratic state representatives voted in favor of the 2011 Plan undermined the notion that its intent was to punish Democratic voters:

> With respect to the third element, Petitioners have similarly failed to adduce evidence that the General Assembly passed the 2011 Plan with any motive to retaliate against Petitioners (or others who voted for Democratic candidates in any particular election) for exercising their right to vote. . . .
>
> Intent to favor one party's candidates over another should not be conflated with motive to retaliate against voters for casting their votes for a particular candidate in a prior election. There is no record evidence to suggest that in

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Conclusions of Law at ¶ 61 n.24.

> voting for the 2011 Plan, the General Assembly, or any particular member thereof, was motivated by a desire to punish or retaliate against Pennsylvanians who voted for Democratic candidates. Indeed, it is difficult to assign a singular and dastardly motive to a branch of government made up of 253 individual members elected from distinct districts with distinct constituencies and divided party affiliations. . . .
>
> On final passage of the 2011 Plan in the PA House, of the 197 members voting, 136 voted in the affirmative, with some Republican members voting in the negative and 36 Democratic members voting in the affirmative. Given the negative Republican votes, the 2011 Plan would not have passed the PA House without Democratic support. The fact that some Democrats voted in favor of the 2011 Plan further militates against a finding or conclusion that the General Assembly passed the 2011 Plan, in whole or in part, as a response to actual votes cast by Democrats in prior elections.

Id. at ¶¶ 35-37 (paragraph numbering omitted).

Next, the court rejected Petitioners' argument that the 2011 Plan violated their rights to equal protection pursuant to Article I, Sections 1 and 26 of the Pennsylvania Constitution (the "Equal Protection Guarantee") and their right to free and equal elections pursuant to Article I, Section 5 of the Pennsylvania Constitution. The court opined that, "[i]n the context of partisan gerrymandering, the Pennsylvania Supreme Court has stated that the Equal Protection Guarantee is coterminous with the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution," Conclusions of Law at ¶ 45 (citing *Erfer*, 794 A.2d at 332 (citing *Love v. Borough of Stroudsburg*, 597 A.2d 1137, 1139 (Pa. 1991)); *Kramer v. Workers' Comp. Appeal Bd. (Rite Aid Corp.)*, 883 A.2d 518, 532 (Pa. 2005); *Zauflik v. Pennsbury Sch. Dist.*, 72 A.3d

773, 789 n. 24 (Pa. Cmwlth. 2013), ***aff'd***, 104 A.3d 1096 (Pa. 2014); *Doe v. Miller*, 886 A.2d 310, 314 n.9 (Pa. Cmwlth. 2005), ***aff'd per curiam***, 901 A.2d 495 (Pa. 2006)).[53] [54]

The Commonwealth Court further opined that this Court has previously described the Free and Equal Elections Clause as requiring that elections "are public and open to all qualified electors alike;" that "every voter has the same right as any other voter;" that "each voter under the law has the right to cast his ballot and have it honestly counted;" that "the regulation of the right to exercise the franchise does not deny the franchise[;]" and that "no constitutional right of the qualified elector is subverted or denied him[,]" but, in the context of partisan gerrymandering, merely reiterates the protections of the Equal

[53] The court further opined that *Erfer* was "consistent with decades of Pennsylvania Supreme Court precedent holding that the 'equal protection provisions of the Pennsylvania Constitution are analyzed . . . under the same standards used by the United States Supreme Court when reviewing equal protection claims under the Fourteenth Amendment to the United States Constitution.'" Conclusions of Law at ¶ 45 (quoting *Love*, 597 A.2d at 1139; citing *Commonwealth v. Albert*, 758 A.2d 1149, 1151 (Pa. 2000); *James v. SEPTA*, 477 A.2d 1302, 1305 (Pa. 1984); *Laudenberger v. Port Auth. of Allegheny Cnty.*, 436 A.2d 147, 155 n.13 (Pa. 1981); *Baltimore & Ohio R.R. Co. v. Commonwealth*, 334 A.2d 636, 643 (Pa. 1975)).

[54] Notably, in *Erfer*, our determination that the Equal Protection Guarantee was to be adjudicated as coterminous with the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution was predicated on *Love*, in which we merely remarked that the Equal Protection Guarantee and Equal Protection Clause involve the same jurisprudential framework – *i.e.*, a means-ends test taking into account a law's use of suspect classification, burdening of fundamental rights, and its justification in light of its objectives. *See Erfer*, 794 A.3d at 331-32; *Love*, 597 A.2d at 1139. The same was true in *Kramer*, where we remarked that we had previously employed "the same standards applicable to federal equal protection claims" and that the parties therein did not dispute "that the protections [were] coterminous[.]" *Kramer*, 883 A.2d at 532. Moreover, our affirmance in *Zauflik* was rooted in the parties' failure to conduct an analysis under *Commonwealth v. Edmunds*, 586 A.2d 887 (Pa. 1991). *See Zauflik*, 104 A.3d at 1117 n.10; *infra* note 53. Finally, concerning *Doe*, the issue was not meaningfully litigated before the Commonwealth Court, and, in any event, this Court affirmed its decision *per curiam*, rendering it of no salient precedential value in the instant case. *See Commonwealth v. Tilghman*, 673 A.2d 898, 903-05 (Pa. 1996) (noting that orders affirming a lower court's *decision*, as opposed to its *opinion*, *per curiam* should not be construed as endorsing its reasoning).

Protection Guarantee. *Id.* at ¶¶ 40 (citing *In re 1991 Pa. Legislative Reapportionment Comm'n*, 609 A.2d 132 (Pa. 1992) (quoting *City Council of City of Bethlehem v. Marcincin*, 515 A.2d 1320, 1323 (Pa. 1986)), and *Erfer*, 794 A.2d at 332).[55]

The court explained that, in *In re 1991 Legislative Reapportionment Comm'n*, this Court adopted a standard suggested by a plurality of justices in *Bandemer* for determining whether a redistricting plan was unconstitutional on the basis of partisan gerrymandering:

> A plaintiff raising a gerrymandering claim must establish that there was intentional discrimination against an identifiable political group and that there was an actual discriminatory effect on that group. In order to establish discriminatory effect, the plaintiff must show: (1) that the identifiable group has been, or is projected to be, disadvantaged at the polls; (2) that by being disadvantaged at the polls, the identifiable group will lack political power and be denied fair representation.

Conclusions of Law at ¶ 47 (internal quotation marks, citations, and brackets omitted). The Commonwealth Court acknowledged that *Bandemer*'s and, with it, *Erfer*'s test, was abrogated by *Vieth* as a matter of federal law, but, noting that this Court has not yet specifically discarded it, nevertheless endeavored to apply it to Petitioners' claim. Although acknowledging that Petitioners had established intentional discrimination – in that the General Assembly was likely aware of, and intended, the 2011 Plan's political consequences – the court determined that Petitioners could not establish that they constituted an identifiable political group:

[55] Notably, as discussed below, although we did reject in *Erfer* the suggestion that the Free and Equal Elections Clause provided greater protection of the right to vote than the Equal Protection Guarantee, our rejection was predicated on the lack of a persuasive argument to that end. *Erfer*, 794 A.2d at 331-32.

> In light of the standard articulated in *Erfer*, and based on the evidence adduced at trial, Petitioners have established intentional discrimination, in that the 2011 Plan was intentionally drawn so as to grant Republican candidates an advantage in certain districts within the Commonwealth. . . . Although the 2011 Plan was drawn to give Republican candidates an advantage in certain districts within the Commonwealth, Petitioners have failed to meet their burden of showing that the 2011 Plan equated to intentional discrimination against an identifiable political group. . . . Voters who are likely to vote Democratic (or Republican) in a particular district based on the candidates or issues, regardless of the voters' political affiliation, are not an identifiable political group for purposes of the Equal Protection Guarantee under the Pennsylvania Constitution.

Id. at ¶¶ 51-53 (paragraph numbering omitted).

Moreover, the court found that Petitioners had failed to establish that they would be disadvantaged at the polls or would lack political power or fair representation, noting that they remain free to participate in democratic processes:

> While Petitioners contend that Republican candidates who prevail in congressional districts do not represent their particular views on issues important to them and will effectively ignore them, the Court refuses to make such a broad finding based on Petitioners' feelings. There is no constitutional provision that creates a right in voters to their elected official of choice. As a matter of law, an elected member of Congress represents his or her district in its entirety, even those within the district who do not share his or her views. This Court will not presume that members of Congress represent only a portion of their constituents simply because some constituents have different priorities and views on controversial issues. . . . At least 3 of the 18 congressional districts in the 2011 Plan are safe Democratic seats. . . . Petitioners can, and still do, campaign for, financially support, and vote for their candidate of choice in every congressional election. . . . Petitioners can still exercise their right to protest and attempt to influence public opinion in their congressional district and throughout the Commonwealth. . . . Perhaps most importantly, Petitioners and likeminded voters from across the Commonwealth can exercise their political power at the polls to elect legislators and a Governor who will address and remedy any unfairness

> in the 2011 Plan through the next reapportionment following the 2020 U. S. Census.

Conclusions of Law at ¶ 56 (paragraph labeling omitted).[56]

Finally, in a post-script summary, the court reiterated its view that Petitioners had failed to identify a judicially manageable standard for claims of partisan gerrymandering, and noted that it predicated its conclusions of law on what it viewed as the "evidence presented and the current state of the law," acknowledging that there are matters pending before the United States Supreme Court that might impact the applicable legal framework. *Id.* at ¶ 65 (citing *Gill v. Whitford, supra*; *Benisek v. Lamone* No. 17-333 (U.S. jurisdictional statement filed Sept. 1, 2017)).

IV. Arguments

A. Petitioners and Aligned Respondents and *Amici*

We now address the arguments presented to this Court. We begin with Petitioners, those Respondents arguing that Petitioners are entitled to relief, and Petitioners' supporting *amici*.

Petitioners first assert that the 2011 Plan violates the free expression and free association clauses of the Pennsylvania Constitution, *see* Pa. Const. art. I, §§ 7, 20, which, they highlight, pre-date the First Amendment and provide broader protections for speech and associational rights than those traditionally recognized under the federal Constitution. Consistent with that notion, Petitioners emphasize that, in contrast to federal challenges to laws restricting the freedom of expression, which are assessed under the rubric of intermediate scrutiny, courts apply the more exacting strict scrutiny standard to challenges to such laws under the Pennsylvania Constitution. *See*

[56] On the court's last point, one imagines that Petitioners find cold comfort in their right to protest and advocate for change in an electoral system that they allege has been structurally designed to marginalize their efforts in perpetuity.

Petitioners' Brief at 46-47 (citing *Pap's A.M. v. City of Erie*, 812 A.2d 591 (2002) ("*Pap's II*")).

According to Petitioners, these broad protections under the Pennsylvania Constitution's Article I, Section 7 free expression clause necessarily extend to the act of voting, as voting constitutes direct "personal expression of favor or disfavor for particular policies, personalities, or laws," Petitioners' Brief at 47-48 (quoting *Commonwealth v. Cobbs*, 305 A.2d 25, 27 (Pa. 1973)), and gives voters a firsthand opportunity to "express their own political preferences." *Id.* (quoting *Norman v. Reed*, 502 U.S. 279, 288 (1992)). Petitioners further suggest that the political nature of the expression inherent in voting deserves even greater protection than other forms of expression, as "the right to participate in electing our political leaders" is the most "basic [right] in our democracy." *Id.* (quoting *McCutcheon v. FEC*, 134 S. Ct. 1434, 1440-41 (2014) (plurality)).

While Petitioners recognize that, in the instant matter, the 2011 Plan does not entirely limit Democratic voters' political expression, they note that laws which discriminate against or burden protected expression based on content or viewpoint — including those laws which render speech less effective — are nevertheless subject to strict scrutiny analysis. Petitioners' Brief at 49 (citing *Ins. Adjustment Bureau v. Ins. Com'r for Com. of Pa.*, 542 A.2d 1317, 1323-24 (Pa. 1988)). Petitioners maintain that such is the case here, as the Plan was drawn to give Republicans an advantage in 13 out of 18 congressional districts (*see* Conclusions of Law at ¶ 52; Findings of Fact at ¶ 291) and discriminates against the political viewpoint of Democratic voters across the Commonwealth by: splitting traditionally Democratic strongholds to reduce the effectiveness of the Democratic vote — *i.e.*, Erie County, Harrisburg, and Reading; removing predominantly Democratic municipalities from their broader communities and

combining them with other Democratic municipalities to dilute the weight of the Democratic vote — *i.e.*, Swarthmore, Easton, Bethlehem, Scranton, Wilkes-Barre, and the Allegheny River Valley; or knitting together "disparate Republican precincts while excising Democratic strongholds" to diminish the representational rights of Democrats — *i.e.*, Pennsylvania's 12th District. Petitioners' Brief at 52.

As further proof of the diminished value of the Democratic vote under the 2011 Plan, Petitioners emphasize that, in each of the past three elections, Democrats won only 5 of the 18 seats, despite winning the majority of the statewide congressional vote in 2012 and nearly half of that vote in 2014 and 2016. Petitioners also rely upon the experts' testimony and alternative plans, described above, which they contend constitute "powerful evidence" of the intent to disadvantage Democratic voters. *Id.* at 53 (quoting *Holt I*, 38 A.3d at 756-57).

In light of the above evidence, Petitioners argue that the 2011 Plan does not satisfy strict scrutiny — or *any* scrutiny, for that matter — because Legislative Respondents failed to identify any legitimate, much less compelling, governmental interest served by drawing the congressional district boundaries to disadvantage Democratic voters. As such, Petitioners criticize the Commonwealth Court for failing to address whether the Plan constitutes viewpoint discrimination and for failing to assess the Plan with any measure of judicial scrutiny — strict scrutiny or otherwise.

While the Commonwealth Court found that Petitioners failed to offer a manageable standard for determining when permissible partisanship in drawing districts becomes unconstitutional, Petitioners maintain that the constitutional prohibition against viewpoint discrimination and the strict scrutiny standard are indeed the appropriate standards by which to assess their claim, noting that courts have long applied modern constitutional principles to invalidate traditionally acceptable practices, such as the

gerrymandering employed in the instant case. Petitioners' Brief at 55 (citing *Elrod v. Burns*, 427 U.S. 347 (1976) (holding that the First Amendment to the United States Constitution prohibited the practice of terminating government employees on a partisan basis); *Reynolds v. Sims*, 377 U.S. 533, 579 (1964) (invalidating the practice of drawing legislative districts with unequal population)). Petitioners additionally take issue with the Commonwealth Court's conclusion that there is no right to a "nonpartisan, neutral redistricting process," Conclusions of Law at ¶ 30, noting that the cases upon which the Commonwealth Court relied in reaching this conclusion were equal protection cases, and, thus, distinguishable from free speech-based gerrymandering challenges, which the high Court allowed to proceed in *Shapiro v. McManus*, 136 S. Ct. 450 (2015). Petitioners' Brief at 57 (citing *Erfer*, 794 A.2d at 328 n.2).

Based on the foregoing, Petitioners urge this Court to find that the Pennsylvania Constitution categorically prohibits partisan gerrymandering to any degree, as it "serves no good purpose and offers no societal benefit." *Id.* However, Petitioners argue that, even if some partisan considerations were permitted in drafting the map of congressional districts, this Court should nevertheless hold that the 2011 Plan's "extreme and obvious viewpoint discrimination" is unconstitutional. *Id.* at 58. Petitioners offer that, at a minimum, the subordination of traditional districting criteria in an attempt to disadvantage a party's voters based on their political beliefs, as they claim Respondents did in the instant case, should be prohibited.

Alternatively, Petitioners allege that the 2011 Plan impermissibly retaliates against Democratic voters based upon their voting histories and party affiliation. Petitioners note that, to establish a free-speech retaliation claim in the context of redistricting, a party must establish that: (1) the plan intended to burden them "because of how they voted or the political party with which they were affiliated"; (2) they suffered

a "tangible and concrete adverse effect"; and (3) the retaliatory intent was a "but for" cause of their injury. *Id.* at 59-60 (quoting *Shapiro v. McManus*, 203 F. Supp.3d 579, 596-98 (D. Md. 2016)). Petitioners maintain that they have satisfied each of the three elements of this test and that the Commonwealth Court erred in finding otherwise.

With respect to the first retaliation prong, Petitioners assert that the materials provided by Speaker Turzai in the federal litigation, discussed above, are "direct, conclusive evidence that the mapmakers drew district boundaries to disadvantage Democratic voters *specifically* based on their voting histories, which the mapmakers measured for every precinct, municipality, and county in Pennsylvania." *Id.* at 60 (emphasis original). Petitioners claim this is further evidenced by the testimony of their experts, which demonstrated that the mapmakers used Democratic voters' past voting history when "packing and cracking" legislative districts to subject those voters to disfavored treatment. *Id.* Regarding the second prong, Petitioners argue that they proved the Plan caused them to suffer a tangible and concrete adverse effect — namely, losing several seats statewide. Finally, as to the third prong, Petitioners contend that they would have won at least several more seats had the Plan not been drawn to intentionally burden Democratic voters based on their past voting histories.

In rejecting their claim, the Commonwealth Court relied upon the three-part test in *Uniontown Newspapers*, which required, *inter alia*, the challenger to establish that the action caused "an injury that would likely chill a person of ordinary firmness from continuing to engage in that activity." *Uniontown Newspapers*, 839 A.2d at 198. However, Petitioners submit that doing so was improper because "chilling" is not an element of a constitutional retaliation claim. Rather, according to Petitioners, the focus on "chilling" in *Uniontown Newspapers* was due to the fact that it was the only injury alleged in the case, not because it was the only cognizable injury in a retaliation case.

Indeed, Petitioners suggest that they suffered multiple concrete harms wholly separate from any chilling, which they claim is sufficient to establish the second prong of the retaliation test. In any event, Petitioners argue that they were, in fact, chilled, as, objectively, the Plan's "uncompetitive districts clearly would deter many 'ordinary' persons from voting." Petitioners' Brief at 63.

Lastly, Petitioners reject the Commonwealth Court's conclusion that the General Assembly lacked a retaliatory motive, noting the "overwhelming evidence" — including the documents produced by Speaker Turzai — conclusively established that the mapmakers considered Democrats' votes in prior elections when drawing the map to disadvantage Democratic voters.

Petitioners next argue that the Plan violates equal protection principles and the Free and Equal Elections Clause of the Pennsylvania Constitution. *Id.* at 64 (quoting Pa. Const. art I, §§ 1, 5, 26). Specifically, principally relying upon the standard articulated in *Erfer*, Petitioners explain that a congressional districting map violates the equal protection clause if it reflects "intentional discrimination against an identifiable political group" and if "there was an actual discriminatory effect on that group." *Id.* at 65 (quoting *Erfer*, 794 A.2d at 332). First, regarding the intentional discrimination requirement, Petitioners maintain that the overwhelming evidence proved that the 2011 Plan intentionally discriminated against Democratic voters, noting the Commonwealth Court specifically found that such discrimination occurred. Second, with respect to the identifiable political group requirement, Petitioners argue that Democratic voters do, in fact, constitute an identifiable political group, citing the statistical evidence from Dr. Chen regarding the high correlation in the level of support for Democratic candidates in particular geographic units and Dr. Warshaw's expert opinion with respect to the highly predictable nature of congressional elections based on political party.

Third, Petitioners assert that the Plan had an actual discriminatory effect on Democratic voters in the Commonwealth, arguing that, thereby, they have been discriminated against in an exercise of their civil right to vote in violation of Article I, Section 26, and deprived of an "equal" election in violation of the Free and Equal Elections Clause. As noted, at least as a matter of equal protection, Petitioners must prove: (1) that the Plan created disproportionate results at the polls, and (2) that they have "essentially been shut out of the political process." *Erfer*, 794 A.2d at 333. Petitioners allege, based upon the evidence detailed above, that they satisfy the first element because drawing the Plan to purposely diminish the effectiveness of Democrats' votes and to give Republicans the advantage at the polls created disproportional election results, denying Democrats political power and fair representation. Petitioners submit, however, that the second "shut out of the political process" element should be eliminated because it is vague and "unworkable," claiming that *Erfer* provided no guidance regarding the type of evidence that would satisfy that standard, and that *Bandemer*, *supra*, upon which *Erfer* was based, did not impose such a requirement. Petitioners further suggest that imposing an "essentially shut out" requirement is counterintuitive, as it would allow partisan map drawers to continue to politically gerrymander so long as the minority party receives *some* of the congressional seats. In any event, Petitioners argue that, because the Plan artificially deprives Democratic voters of the ability to elect a Democratic representative, and, given the extreme political polarization between the two political parties, Republican representatives will not adequately represent Democrats' interests, thus shutting Democratic voters out of the political process.

Finally, Petitioners reject the Commonwealth Court's conclusion that the Plan satisfies equal protection principles because Democrats potentially will have the

opportunity to influence the new map in 2020. Petitioners emphasize that "the possibility that the legislature may itself change the law and remedy the discrimination is not a defense under the Pennsylvania Constitution," as, under that logic, *every* discriminatory law would be constitutional. Petitioners' Brief at 73.

Petitioners requested that this Court give the legislature two weeks to develop a new, constitutional plan that satisfies non-partisan criteria, and that we adopt a plan ourselves with the assistance of a special master if the legislature fails to do so.

Executive Respondents Governor Wolf, Secretary Torres, Commissioner Marks and Lieutenant Governor Stack have filed briefs supporting Petitioners, arguing, for largely the same reasons advanced by Petitioners, that the 2011 Plan violates the free expression and free association provisions of the Pennsylvania Constitution, as well as equal protection principles and the Free and Equal Elections Clause. Further, Executive Respondents agree that the evidence provided by Petitioners was sufficient to establish that the Plan is unconstitutional.

Beyond the points raised by Petitioners, Executive Respondents Wolf, Torres, and Marks assert that, although the Commonwealth Court found that Petitioners were required to provide a standard to assess when partisan considerations in creating a redistricting plan cross the line into unconstitutionality, no such bright line rule was necessary to determine that the Plan was unconstitutional in this case, given the extreme and, indeed, flagrant level of partisan gerrymandering that occurred. Additionally, while the Commonwealth Court suggested that Petitioners' standard must account for a variety of specific variables such as the number of districts which must be competitive and the constitutionally permissible efficiency gap percentage, Respondents Wolf, Torres, and Marks argue that precise calculations are not required, noting that "courts routinely decide constitutional cases using judicially manageable standards that

are rooted in constitutional principles but that are not susceptible of precise calculation." Wolf, Marks, and Stack Brief at 8 (citing, *e.g.*, *BMW of N. Am., Inc. v. Gore*, 517 U.S. 559, 585-86 (1996) (declining "to draw a bright line marking the limits of a constitutionally acceptable punitive damages award," but finding "the grossly excessive award imposed in this case transcends the constitutional limit")). *Id.* at 9. Respondents Wolf, Torres, and Marks further observe that this Court, in invalidating a prior state legislative redistricting plan as contrary to law in *Holt I*, expressly rejected "the premise that any predetermined [population] percentage deviation [existed] with which any reapportionment plan [had to comply]," and declined to "set any immovable 'guideposts' for a redistricting commission to meet that would guarantee a finding of constitutionality." *Id.* at 10 (quoting *Holt I*, 38 A.3d at 736).

For his part, Respondent Stack adds that, while he concurs with Petitioners' position that the Plan fails strict scrutiny analysis, in his view, the Plan also fails under the rational basis standard, as the Plan "lacks a legitimate state interest, and instead advances the impermissible interest of achieving partisan advantage." Stack Brief at 24. Respondent Stack further argues that, "[a]lthough the Legislative Respondents proffered the hypothetical state interests of redrawing the district maps to conform to the results of the census, they cannot and do not offer any rational relationship between that interest and the map they drew." *Id.* at 27. Additionally, with respect to Petitioners' claim under the Free and Equal Elections Clause, Respondent Stack emphasizes that "[t]he constitutional requirement of 'free and equal elections' contemplates that all voters are to be treated equally." *Id.* at 25. As the Plan was overtly drawn to favor Republicans, Respondent Stack maintains that the Plan "exhibits the heavy hand of state action . . . offensive to democracy," violating the Commonwealth's duty to ensure that it provides free and equal elections. *Id.* at 26.

Executive Respondents provide additional insight into how this Court should fashion a remedy, noting that, as representatives of the department that administers elections in Pennsylvania, they are uniquely positioned to make suggestions in this regard. Specifically, Respondents Wolf, Torres, and Marks offer that it is still possible to hold the primary on the scheduled May 15 date if a new redistricting map is in place by February 20, 2018. However, they submit that it would also be possible, through a series of internal administrative adjustments and date changes, to postpone the primary elections from May to the summer of 2018, which would allow a new plan to be administered as late as the beginning of April.

As to the process of creating a new plan, Respondents Wolf, Torres, and Marks assert that three weeks is a reasonable time period for the General Assembly and Governor to enact and sign into law a new redistricting plan, noting that the General Assembly previously enacted a revised congressional districting plan within only 10 days of the court's order to do so. Wolf, Torres, Marks Brief at 25 (citing *Vieth v. Pennsylvania*, 241 F. Supp.2d 478, 480 (M.D. Pa. 2003), *aff'd sub nom. Vieth,* 541 U.S. at 267). However, if the General Assembly fails to enact a plan by the Court's deadline, Respondents Wolf, Torres, and Marks suggest that this Court should draft a plan upon consideration of the evidence submitted by the parties. *Id.* at 26 (citing *League of Women Voters of Florida v. Detzner*, 179 So.3d 258 (Fla. 2015)).

Respondent Stack agrees with the suggestion of Respondents Wolf, Torres, and Marks that this Court may, and indeed should, adopt a new redistricting plan if the General Assembly and the Governor cannot reach an agreement on a constitutionally valid map in time for the 2018 congressional primaries. Should this Court take that route, Respondent Stack cites favorably one of the maps developed by Dr. Chen – Chen Figure 1, Petitioners' Exhibit 3 (identified as Simulated Plan 1 above) – which he

maintains serves as a good guide, claiming that it meets or exceeds the 2011 Plan based on traditional redistricting criteria, and provides sufficient data to judge its compliance with traditional districting criteria, as well as federal Voting Rights Act requirements. Stack Brief at 10-15, 39. Respondent Stack offers that this Court should retain a special master, who could reference Dr. Chen's map as a guide in drawing a new map, should the legislature fail to produce a map in a timely fashion.

Amicus Common Cause, like Petitioners, contends that the 2011 Plan violates the Free and Equal Elections Clause of the Pennsylvania Constitution, asserting that this clause provides greater protections to the right to vote than the federal Equal Protection Clause.

Relying upon our seminal decision in *Edmunds*, *supra*,[57] which provides the framework for analyzing whether a right under the Pennsylvania Constitution is more expansive than its federal counterpart, Common Cause first argues that the text of the Free and Equal Elections Clause demonstrates that it should be viewed as independent from the Equal Protection Clause of the United States Constitution. Common Cause notes that, in contrast to the more general provisions of the Pennsylvania Constitution such as Article I, Sections I and 26, which implicate, but do not specifically address, the

[57] *Edmunds* instructs that an analysis of whether a right under the Pennsylvania Constitution affords greater protection than the United States Constitution encompasses the following four factors:

> 1) text of the Pennsylvania constitutional provision;
>
> 2) history of the provision, including Pennsylvania case-law;
>
> 3) related case-law from other states;
>
> 4) policy considerations, including unique issues of state and local concern, and applicability within modern Pennsylvania jurisprudence.

Edmunds, 586 A.2d at 895.

right to vote, Article I, Section 5's proclamation that "[e]lections shall be free and equal" and that "no power . . . shall at any time interfere to prevent the free exercise of the right of suffrage" is direct and specific, indicating that the clause should not be "subsumed into Sections 1 and 26, let alone federal jurisprudence." Common Cause Brief at 6-7.

Second, Common Cause argues that the history of the Free and Equal Elections Clause supports giving it independent effect. Specifically, Common Cause highlights that, since as early as 1776, Pennsylvania has recognized the importance of the right to vote, providing in Chapter I, Section VII of the Declaration of Rights 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, ch. I, § VII). Common Cause continues that, in 1790, Pennsylvania adopted the Free and Equal Elections Clause into its Constitution, but the federal Constitution was, and continued to be, largely silent regarding the right to free and equal elections, containing no comparable provision and leaving "the selection of representatives and senators largely to the states, subject to minimum age and eligibility requirements." *Id.* at 8-9. While the United States later adopted the Equal Protection Clause of the Fourteenth Amendment to the United States Constitution, Common Cause stresses that it did not do so until 1868 — many decades after Pennsylvania had declared free and equal elections a fundamental right. Thus, in light of the temporal differences between the two provisions and the fact that the federal Equal Protection Clause does not specifically address elections, Common Cause maintains that the Free and Equal Elections Clause and the federal Equal Protection Clause should not be viewed as coterminous.

Common Cause also suggests that Pennsylvania case law supports giving the Free and Equal Elections Clause independent effect, noting that this Court has

interpreted the clause since as early as the 1860s, when the Court explained that elections are made equal by "laws which shall arrange all the qualified electors into suitable districts, and make their votes equally potent in the election; so that some shall not have more votes than others, and that all shall have an equal share in filling the offices of the Commonwealth." *Id.* at 11 (quoting *Patterson v. Barlow*, 60 Pa. 54, 75 (Pa. 1869)). This Court further provided, with respect to the concept of legislative deference under the Free and Equal Elections Clause, that, although the General Assembly enjoys discretion in creating laws to ensure that elections are equal, the legislature's actions in this regard may be reviewed "in a case of plain, palpable, and clear abuse of the power which actually infringes on the rights of the electors." *Id.* (quoting *Patterson*, 60 Pa. at 75). Common Cause additionally highlights that our case law historically has recognized that the creation of "suitable districts" in accordance with the Free and Equal Elections Clause relies heavily on "the guiding principles respecting compactness, contiguity, and respect for the integrity of political subdivisions." *Id.* at 13 (quoting *Holt I*, 38 A.3d at 745). Given the significant amount of time between the passage of the Free and Equal Elections Clause and the Fourteenth Amendment to the United States Constitution, as well as the separate attention that our Court has given to the Free and Equal Elections Clause, Common Cause suggests that "[i]t is incoherent to assume that Pennsylvania's jurisprudence under the [Free and Equal Elections Clause] disappeared into the Fourteenth Amendment." *Id.* at 11.

Third, Common Cause argues that the relative dearth of case law from other jurisdictions regarding free and equal elections illustrates that Pennsylvania was a "trailblazer in guaranteeing the right to vote," noting that, of the original 13 states, only the Pennsylvania, Delaware, and Massachusetts Constitutions contained a clause guaranteeing free and equal elections. *Id.* at 14. While Common Cause offers that at

least one other state — Alaska — has found that its state constitution provides greater protection against gerrymandering than the federal Constitution, *see Kenai Peninsula Borough v. State*, 743 P.2d 1352, 1371 (Alaska 1987), Common Cause suggests that the general lack of comparable provisions in other state constitutions indicates that, "[a]s in 1776, Pennsylvania should lead the states in declaring the right to free and fair elections, this time by stamping out gerrymandering." Common Cause Brief at 14.

Lastly, Common Cause asserts that the Pennsylvania Constitution defeats traditional policy arguments made in support of the practice of gerrymandering, such as the purported difficulty in identifying a workable standard to assess constitutional violations and the notion of legislative deference in drawing congressional districts. More specifically, with respect to the difficulty of identifying a standard, Common Cause submits that the three criteria long used for drawing voting districts in Pennsylvania — compactness, contiguity, and integrity of political subdivisions — provide a sufficient standard by which to assess whether an electoral map violates the Free and Equal Elections Clause. Common Cause stresses that, because these criteria are specifically written into the Pennsylvania Constitution, *see* Pa Const. art. II, § 16 ("representative districts . . . shall be composed of compact and continuous territory as nearly equal in population as practicable . . . . Unless absolutely necessary no county, city, incorporated town, borough, township or ward shall be divided in forming either a senatorial or representative district"), and have provided the basis for invalidating state legislative district maps in the past, *see Holt I*, *supra*, they are sufficiently precise as to present a feasible standard for evaluating the constitutionality of a congressional district map under the Free and Equal Elections Clause. Additionally, regarding the principle of legislative deference, Common Cause argues that legislative deference does not give the General Assembly unfettered discretion to engage in partisan gerrymandering

without judicial interference, noting that, unlike the federal Constitution, Pennsylvania's Constitution specifically requires the Court to review challenges to state legislative district maps. *See* Pa. Const. art. II, § 17(d). While Common Cause concedes that the legislature typically enjoys substantial deference in redistricting matters, it maintains that such deference is not warranted in circumstances, such as in the instant case, where the "faction in control of the legislature" used its authority to create political advantage, rather than to create a map which reflects the "true will of the people." Common Cause Brief at 17.

Asserting that the four *Edmunds* factors support giving the Free and Equal Elections Clause independent effect, Common Cause concludes that the 2011 Plan violates that provision because, as exhibited by Petitioners' evidence, it is not compact or contiguous, nor does it respect political subdivision boundaries. Moreover, Common Cause asserts that the secretive manner in which the Plan was created strongly suggests that the legislature drew the congressional districts with the improper, highly partisan motive of benefitting the Republican Party, rather than doing so with the will of the people in mind. Under these circumstances, Common Cause argues that this Court should uphold the democratic principles of the Pennsylvania Constitution and strike down the gerrymandered Plan pursuant to the Free and Equal Elections Clause.

Amicus Brennan Center for Justice ("Brennan Center") likewise argues on behalf of Petitioners that this Court can, and indeed should, strike down the 2011 Plan as unconstitutional. In so asserting, Brennan Center emphasizes that, although some degree of good faith political "give-and-take" is bound to occur with the redistricting process, this case presents a particularly extreme, unconstitutional form of partisan gerrymander which must be remedied by this Court. While the Commonwealth Court below highlighted the difficulty with identifying a workable standard to assess when,

precisely, partisan gerrymandering becomes unconstitutional, Brennan Center maintains that "judicial action to stamp out extreme gerrymanders can be focused and limited," Brennan Center Brief at 6, explaining that cases of extreme, unconstitutional gerrymandering are relatively rare and are easily detectable based upon two, objective indicia: single-party control of the redistricting process and a recent history of competitive statewide elections. *Id.* at 7. Brennan Center observes that these factors have been present in every state in the past decade which had a congressional districting map showing extreme partisan bias, including Pennsylvania during the creation of the 2011 Plan. Brennan Center further offers that other accepted quantitative metrics, such as the efficiency gap, the seats-to-votes curve, and the mean-median vote share, can measure the level of partisan bias in a state and assist in identifying extreme gerrymandering, noting that the 2011 Plan performed poorly under each of these metrics.

While Brennan Center acknowledges that federal courts have been hesitant to exercise jurisdiction over partisan gerrymandering claims because of concerns over federalism and excessive burdens on the federal docket, Brennan Center suggests that this Court is not subject to the same constraints. Moreover, Brennan Center highlights that the political question doctrine, which has also hamstrung federal courts in partisan gerrymandering cases, does not restrict this Court from acting in such cases, as this Court held that the political question doctrine renders a case non-justiciable only when the Pennsylvania Constitution "explicitly or implicitly" demonstrates "the clear intent to entrust the legislature with the sole prerogative to assess the adequacy of its own effort[s]," *id.* at 19 (quoting *William Penn Sch. Dist. v. Pa. Dep't of Educ.*, 170 A.3d 414, 439 (Pa. 2017)), and the Pennsylvania Constitution contains no such limitation with regard to interpreting the constitutionality of partisan congressional redistricting.

Finally, Brennan Center contends that extreme partisan gerrymandering, such as in the instant case, is "contrary to fundamental constitutional and democratic values," undermining both legislative accountability to the people and legislative representativeness. *Id.* at 15. Brennan Center asserts that finding the Plan unconstitutional in this case will "enhance the legitimacy of Pennsylvania's democracy" and restore confidence among Pennsylvanians in the political process. *Id.* at 23.

Similar to the points raised by Petitioners, as *amicus*, the AFL-CIO argues that the 2011 Plan is unconstitutional under Article I, Sections 7 and 20 and Article I, Section 5 of the Pennsylvania Constitution, which it asserts provides an independent basis for relief. The AFL-CIO further suggests that Article I, Section 1 of the Pennsylvania Constitution, which ensures equality under the law, and Article I, Section 26 of the Pennsylvania Constitution, which protects Pennsylvanians against the denial or discrimination of their civil rights, provide additional bases for relief under state law and support reviewing the Plan under strict scrutiny.

Analyzing each of these provisions pursuant to the *Edmunds* factors, the AFL-CIO highlights the rich history of the Pennsylvania Constitution, including, most notably, that the Pennsylvania Constitution was at the forefront of ensuring robust rights associated with representational democracy, such as the right to freedom of speech and association, the right to equality under the law, and the right to vote in free and equal elections, which the AFL-CIO notes Pennsylvania extended, quite remarkably, to those individuals who did not own property. Moreover, with respect to the Free and Equal Elections Clause, the AFL-CIO emphasizes that this Court has specifically stated that elections are free and equal:

> when they are public and open to all qualified electors alike: when every voter has the same right as any other voter; when each voter under the law has the right to cast his ballot and have it honestly counted; when the regulation of the

> right to exercise the franchise does not deny the franchise itself, or make it so difficult as to amount to a denial; and when no constitutional right of the qualified elector is subverted or denied him.

AFL-CIO Brief at 20-21 (quoting *Winston v. Moore*, 91 A. 520 at 523 (Pa. 1914)). The AFL-CIO maintains that the unique history of these provisions demonstrates that they "provide heightened protections beyond any analogous provisions in the federal constitution," and, thus, provide a separate legal basis for finding the 2011 Plan unconstitutional. *Id.* at 4.

Amici Bernard Grofman, professor of political science at the University of California, and Keith Gaddie, professor of political science at the University of Oklahoma, echo the call of Petitioners, Executive Respondents, and other *amici* for this Court to act and provide a check on extreme partisan gerrymandering, highlighting its pernicious nature. Grofman and Gaddie also provide a suggested standard for assessing partisan gerrymandering cases, proposing that a partisan gerrymander is unconstitutional if each of the following three elements is shown: (1) partisan asymmetry, meaning the districting map had a "disparate impact on voters based on political affiliation," as measured by degree of partisan bias and mean-median gap, Grofman Gaddie Brief at 14; (2) lack of responsiveness of electoral outcomes to voters' decisions, meaning representation does not change despite a change in voter preference from one political party to another; and (3) causation, meaning intentional discrimination, rather than other, neutral causes, led to the asymmetry and lack of responsiveness. Grofman and Gaddie maintain that their standard is judicially manageable, as it can be applied by courts "coherently and consistently" across cases, and they urge this Court to adopt it. *Id.* at 36.

Also, as *amicus*, the American Civil Liberties Union ("ACLU") argues in support of Petitioners that the 2011 Plan violates the free expression and association clauses of

the Pennsylvania Constitution, asserting, consistent with Petitioners' position, that the Pennsylvania Constitution provides greater protections for these rights than does the First Amendment to the United States Constitution. The ACLU also notes the unique nature of the Pennsylvania Constitution's Free and Equal Elections Clause, which, it suggests, grants more robust protections for the right to vote than the federal Constitution. Further, as a matter of policy, the ACLU suggests that greater protections for speech, associational, and voting rights are consistent with the "marketplace of ideas" concept developed by Justice Oliver Wendell Holmes, which, the ACLU notes, highlights the importance of government viewpoint neutrality in maintaining the free exchange of ideas critical to our democracy, particularly where the electoral process is at stake. ACLU Brief at 6-9.

Similar to Petitioners, the ACLU maintains that extreme partisan gerrymandering is unconstitutional, explaining that unconstitutional partisan gerrymandering is "distinct from the inevitable incidental political considerations and partisan effects that may occur," *id.* at 22, and, instead, occurs when a state acts with an intent to "entrench" by drawing district "lines for the purpose of locking in partisan advantage regardless of the voters' likely choices." *Id.* at 22-23 (citing *Arizona State Legislature*, 135 S. Ct. at 2658). The ACLU suggests that such political entrenchment was present in the instant case, and it maintains that the General Assembly's deliberate effort to discriminate against minority-party voters triggers strict scrutiny, which the ACLU notes the Legislative Respondents have made no effort to satisfy. Thus, the ACLU argues that this Court should find the Plan violates the Pennsylvania Constitution.

Additionally, Political Science Professors,[58] the Pittsburgh Foundation,[59] and Campaign Legal Center have each filed *amicus curiae* briefs in support of Petitioners. These *amici* focus largely on the increasing prevalence of partisan gerrymandering occurring across the United States, which they attribute to sophisticated, ever-evolving technology which makes it more feasible than ever to gather specific data about voters and to utilize that data to "tailor durably biased maps." Political Science Professors' Brief at 12. These *amici* warn that instances of extreme partisan gerrymandering will only worsen as this technology continues to develop.

Turning to the 2011 Plan, these *amici* all agree that it represents a particularly egregious form of partisan gerrymandering. They suggest that the challenge to the Plan is justiciable under the Pennsylvania Constitution, and they assert that judicially manageable standards exist by which to assess the constitutionality of the Plan. More specifically, the Pittsburgh Foundation offers that a congressional redistricting plan is unconstitutional if it: "(1) was intentionally designed predominantly to attain a partisan result; (2) largely disregards traditional and accepted districting criteria; and (3) has been demonstrated (or is reliably predicted) to have an actual disparate and unfair impact on a substantial number of Pennsylvania voters." Pittsburgh Foundation Brief at

[58] Political Science Professors identify themselves as "nationally recognized university research scholars and political scientists from some of the foremost academic institutions in Pennsylvania and from across the country whose collective studies on electoral behavior, voter identity, and redistricting in the United States have been published in leading scholarly journals and books." Political Science Professors' Brief at 1.

[59] The Pittsburgh Foundation is a non-profit organization which "works to improve the quality of life in the Pittsburgh region by evaluating and addressing community issues, promoting responsible philanthropy, and connecting donors to the critical needs of the community." The Pittsburgh Foundation, http://pittsburghfoundation.org (last visited Jan. 29, 2018).

13. Political Science Professors submit that courts should use computer simulations, as well as objective, social science measures, to assess a districting map's partisan bias, such as the efficiency gap and the mean-median difference. Lastly, Campaign Legal Center argues that this Court should adopt Petitioners' proposed standard.[60]

B. Legislative Respondents

We now turn to the arguments of the Legislative Respondents. They contend that districting legislation, such as the 2011 Plan at issue, does not implicate, let alone violate, free speech or associational rights because it "is not directed to voter speech or conduct." Legislative Respondents' Brief at 23. Rather, according to Legislative Respondents, the Plan creates "18 equipopulous districts," giving Petitioners' votes the same weight as other Pennsylvania voters and fully allowing Petitioners to participate in the political process by voting for the candidate of their choice and associating with any political party or candidate they so choose. *Id.*

Regarding Petitioners' reliance on cases involving laws which made speech less effective, Legislative Respondents suggest those decisions are inapplicable to the case at bar because they concern laws which actually restricted speech, whereas the Plan in the instant case allows Democrats to communicate as desired through such means as voting for their preferred candidates, joining the Democratic Party, contacting their representatives, and financially supporting causes they care about. Although Legislative Respondents concede that the Plan might make it more difficult for Petitioners to "persuade a majority of the other 705,000+ voters in their districts to agree with them on the candidate they prefer," *id.* at 25, they emphasize that Petitioners have no free speech or associational right to "an agreeable or more persuadable audience,"

[60] The application to file an amicus brief *nunc pro tunc*, filed by Concerned Citizens for Democracy, is granted.

id. at 26, citing a variety of federal cases holding that the redistricting plans challenged therein did not violate voters' First Amendment rights. *Id.* (citing, *e.g.*, *League of Women Voters v. Quinn*, No. 1:11-CV-5569, 2011 WL 5143044, *12-13 (N.D. Ill. Oct. 28, 2011); *Comm. for a Fair and Balanced Map v. Ill. State Bd. of Elections*, 835 F. Supp.2d 563, 575 (N.D. Ill. 2011)).

Moreover, relying on this Court's decision in *Holt v. 2011 Reapportionment Commission*, 67 A.3d 1211 (Pa. 2013) ("*Holt II*"), Legislative Respondents highlight the "inherently political" nature of redistricting, which, they note, this Court found constitutionally permissible. Legislative Respondents' Brief at 27 (quoting *Holt II,* 67 A.3d at 1234). Further, to the extent that Petitioners distinguish in their argument between permissible "political considerations" and what they deem impermissible "partisan intent," Respondents maintain that "the two concepts are inextricably intertwined," as "political parties are comprised of constituencies, which in part includes 'communities of interest' — what Petitioners argue is the 'good' side of 'political.'" *Id.* at 28. As such, Legislative Respondents contend that Petitioners' argument that no partisan considerations should be permitted during the redistricting process runs afoul of *Holt II* and necessarily must fail. They suggest that, to find otherwise, would allow any Pennsylvania voter to challenge, and potentially invalidate, a plan designed to protect an incumbent or to protect "communities of interest" — a "sweeping rule" that Respondents contend is not justified by the law, the facts, or public policy. *Id.* at 29-30.

Next, Respondents assert that Petitioners cannot satisfy the requirements of a retaliation claim. Relying upon the *Uniontown Newspapers* test, Legislative Respondents first argue that Petitioners fail to provide record evidence establishing that the 2011 Plan was enacted with a retaliatory motive to coerce Democratic voters into voting differently than they would otherwise vote. To the contrary, Respondents

maintain that no legislature would reasonably believe that gerrymandering would coerce voters to vote differently, and they further submit that the record demonstrates that the Plan was passed with bipartisan support, indicating the Plan was not drawn with a "dastardly motive." *Id.* at 31. Respondents also contend that Petitioners failed to prove that the Plan "chilled" a person from continuing to participate in the political process, as the evidence of record did not show a decrease in voter turnout or civil participation following the Plan's enactment. Lastly, Legislative Respondents highlight the fact that political gerrymandering is not typically the type of government conduct associated with a case of retaliation; rather, Respondents note that retaliation claims typically involve overt actions intended to invoke fear in the target, such as police intimidation tactics or organized harassment campaigns.

Next, Legislative Respondents assert that Petitioners failed to prove that the 2011 Plan violated the equal protection and Free and Equal Elections clauses of the Pennsylvania Constitution. Relying upon *Erfer*, Respondents contend that Petitioners produced no evidence that the Plan was designed to intentionally discriminate against Democratic voters, emphasizing the bipartisan manner in which the Plan was adopted, and claiming that Petitioners' statistical data does not account for the various non-partisan factors considered in drawing the Plan, such as preserving the core of existing districts, preserving communities of interest, and protecting incumbents. Respondents also suggest that Democratic voters do not constitute an "identifiable political group" because they encompass a wide range of people beyond those who belong to the Democratic Party, and because Pennsylvania voters frequently split their tickets between Democratic and Republican candidates, making it difficult to clearly identify a voter as solely "Democratic."

With respect to the second *Erfer* prong, Respondents maintain that Petitioners failed to establish that the Plan had a discriminatory effect on Democratic voters and, more specifically, failed to prove that the Plan resulted in a lack of political power which effectively shut out Democrats from the political process. Respondents argue that, contrary to Petitioners' assertions, this Court specifically found that merely voting for a political candidate who loses an election does not shut out a voter from the political process*, see Erfer*, 794 A.2d at 333, and they submit that, in any event, the five "safe" Democratic seats in the congressional delegation demonstrate that Democrats are not shut out. Respondents further observe that, although Petitioners suggest, due to congressional polarization, that Democrats' interests are not adequately represented by their congressmen, they fail to provide evidence substantiating this claim and fail to identify the interests of Democratic voters which allegedly are not represented in congress, particularly those Democrats who are "split ticket" voters.

Moreover, to the extent that Petitioners suggest that the second element of the *Erfer* test should be eliminated as unworkable, Respondents maintain that we should deny their request, claiming that Petitioners seek to eliminate that element because they are simply unable to meet it. Respondents further argue that, in advocating for the removal of the second element, Petitioners essentially are seeking a state constitutional right to proportional representation, which the United States Supreme Court expressly rejected in *Bandemer*. *See Bandemer*, 478 U.S. at 139. In any event, Respondents emphasize that Petitioners have not met their burden of establishing that this Court should depart from *Erfer* and the federal precedent upon which it relies, as the equal protection guarantees under the United States and Pennsylvania Constitutions are coterminous, and Petitioners do not suggest otherwise.

Respondents further assert that, even if this Court were to abandon the standard articulated in *Erfer*, Petitioners' claim would nevertheless fail because, pursuant to recent United States Supreme Court precedent, there is no judicially manageable standard by which to evaluate claims involving equal protection violations due to partisan gerrymandering. *See Vieth*, 541 U.S. at 292. Respondents observe that Petitioners do not attempt to offer a judicially manageable standard to apply in place of the *Erfer* standard, and they note that the standards proposed by *amici* are similarly unavailing, as they each are incompatible with each other.

Additionally, Legislative Respondents contend that policy considerations weigh heavily against this Court creating a new standard for evaluating partisan gerrymandering claims under Pennsylvania's equal protection clause, as they claim the legislature is uniquely competent to engage in redistricting, and judicial oversight in this area implicates separation-of-powers concerns. Respondents further suggest that there are a variety of positive elements to using political considerations in redistricting, including preserving "core constituencies" and incumbency, as well as the states' right to establish their districts in the manner they so choose. Moreover, Legislative Respondents highlight various checks on the state redistricting process, such as the "Make or Alter" provision of the federal Elections Clause of the United States Constitution,[61] the threat of political retaliation when the political tides turn, and, as in Pennsylvania, legislation which establishes a bi-partisan commission to draw district lines. Nevertheless, should this Court decide to select a new standard, Legislative Respondents submit that they should receive a new trial.

[61] See supra p. 5.

Legislative Respondents conclude by cautioning that this Court should not adopt legal criteria for redistricting beyond those in Pennsylvania's Constitution, claiming that doing so would infringe on the legislative function and run afoul of the federal Elections Clause. Accordingly, Respondents ask our Court to affirm the Commonwealth Court's decision and find that Petitioners did not demonstrate that the 2011 Plan clearly, plainly, and palpably violates the Constitution.

C. Intervenors

Intervenors — Republican voters, candidates for office, committee chairpersons, and other active members of the Republican Party — stress that they have invested substantial time, money, and effort in preparing for the upcoming election deadlines based upon the 2011 Plan, and they suggest that this Court should not require a new congressional map before the 2018 primaries, as it would be a "monumental task" to educate voters about changes in the congressional districts in time for the election. Intervenors' Brief at 17. Intervenors also highlight potential problems with overall voter confusion, as well as various challenges congressional candidates would face as a result of changes to the 2011 Plan during this election cycle, including potentially having to circulate new nomination petitions and having to direct their campaign activities to potentially new voters and demographics. While Executive Respondents maintain that the date of the primary could be extended, Intervenors contend that an extension imposed this late in the election cycle would "result in significant logistical challenges for county election administrators," as well as substantially increase the costs borne by state and county governments. *Id.* at 29. According to Intervenors, the above-described challenges would be particularly pronounced with respect to the special election for the 18th Congressional District, scheduled for March 13 of this year.

While Intervenors would find, based upon *Vieth*, that Petitioners have not shown that their partisan gerrymandering claims are justiciable, should this Court nevertheless find the claims justiciable and the 2011 Plan unconstitutional, they argue that we must give the legislature the first opportunity to correct the Plan, as ordering new districts without giving the legislature the chance to rectify any constitutional violations would raise separation-of-powers concerns. In doing so, Intervenors assert that our Court should follow the standard for relief that this Court endorsed in *Butcher v. Bloom*, 203 A.2d 556 (Pa. 1964), wherein, after finding that the state redistricting plan violated *Reynolds*, *supra*, our Court declined to order immediate redistricting in light of the "[s]erious disruption of orderly state election processes and basic governmental functions" that would result from the Court's immediate action. Intervenors' Brief at 17 (quoting *Butcher*, 203 A.2d at 568). Instead, Intervenors note this Court opted to leave the plan in place until after the upcoming election so as to allow the legislature to have a "reasonable opportunity to enact new reapportionment legislation," giving the legislature almost a full year to do so. *Id.* at 23 (quoting *Butcher*, 203 A.2d at 569).

Claiming that the same concerns in *Butcher* are present in the instant case, Intervenors submit that we should likewise give the legislature a reasonable and adequate time in which to correct the Plan, which they suggest could be in place for the 2020 elections. Further counseling against the immediate remedying of the 2011 Plan's constitutional deficiencies, Intervenors highlight the fact that Petitioners, without explanation, waited three election cycles (almost seven years) to bring their claims, indicating that any constitutional issues are not pressing. Intervenors also cite the United States Supreme Court's pending decision in *Gill*, which they note may impact the resolution of this case.

V. Analysis

We begin our analysis of the challenge to the 2011 Plan with the presumption that the General Assembly did not intend to violate the Pennsylvania Constitution, "in part because there exists a judicial presumption that our sister branches take seriously their constitutional oaths." *Stilp v. Commonwealth*, 905 A.2d 918, 938-39 (Pa. 2006); *see also* 1 Pa.C.S. § 1922(3). Accordingly, a statute is presumed to be valid, and will be declared unconstitutional only if the challenging parties carry the heavy burden of proof that the enactment "clearly, palpably, and plainly violates the Constitution." *See West Mifflin Area School District v. Zahorchak,* 4 A.3d 1042, 1048 (Pa. 2010).

Upon review,[62] and for the following reasons, we are persuaded by Petitioners and the other presentations before us that the 2011 Plan clearly, plainly, and palpably violates the Free and Equal Elections Clause of our Constitution.[63]

A. Free and Equal Elections Clause

Pennsylvania's Constitution, when adopted in 1776, was widely viewed as "the most radically democratic of all the early state constitutions." Ken Gormley, "Overview of Pennsylvania Constitutional Law," as appearing in Ken Gormley, ed., *The Pennsylvania Constitution A Treatise on Rights and Liberties*, 3 (2004). Indeed, our Constitution, which was adopted over a full decade before the United States Constitution, served as the foundation — the template — for the federal charter. *Id*. Our autonomous state Constitution, rather than a "reaction" to federal constitutional

[62] Given that this case is before us following our grant of extraordinary jurisdiction, our standard of review is *de novo*. Further, although the findings of fact made by Judge Brobson are not binding on this Court, "we will afford them due consideration, as the jurist who presided over the hearings was in the best position to determine the facts." *Annenberg v. Commonwealth*, 757 A.2d 338, 343 (Pa. 2000) (citations omitted).

[63] Given that we base our decision on the Free and Equal Elections Clause, we need not address the free expression or equal protection arguments advanced by Petitioners.

jurisprudence, stands as a self-contained and self-governing body of constitutional law, and acts as a wholly independent protector of the rights of the citizens of our Commonwealth.

The touchstone of interpretation of a constitutional provision is the actual language of the Constitution itself. *Ieropoli v. AC & S Corp.*, 842 A.2d 919, 925 (Pa. 2004). "[T]he Constitution's language controls and must be interpreted in its popular sense, as understood by the people when they voted on its adoption." *Id.* In doing so, reading the provisions of the Constitution in any "strained or technical manner" is to be avoided. *Jubelirer v. Rendell*, 953 A.2d 514, 528 (Pa. 2008). Consistent therewith, "we must favor a natural reading which avoids contradictions and difficulties in implementation, which completely conforms to the intent of the framers and which reflects the views of the ratifying voter." *Commonwealth ex rel. Paulinski v. Isaac*, 397 A.2d 760, 766 (Pa. 1979).

Further, if, in the process of undertaking explication of a provision of the Pennsylvania Constitution, any ambiguity becomes apparent in the plain language of the provision, we follow the rules of interpretation similar to those generally applicable when construing statutes. *See, e.g., Robinson Township v. Commonwealth*, 83 A.3d 901, 945 (Pa. 2013); *Commonwealth v. Omar*, 981 A.2d 179, 185 (Pa. 2009). If the constitutional language is clear and explicit, we will not "delimit the meaning of the words used by reference to a supposed intent." *Robinson Township*, 83 A.3d at 945 (quoting *Commonwealth ex rel. MacCallum v. Acker*, 162 A. 159, 160 (Pa. 1932)). If the words of a constitutional provision are not explicit, we may resort to considerations other than the plain language to discern intent, including, in this context, the occasion and necessity for the provision; the circumstances under which the amendment was ratified; the mischief to be remedied; the object to be attained; and the contemporaneous

legislative history. 1 Pa.C.S. §§ 1921, 1922; *accord* Robert F. Williams, *The Brennan Lecture: Interpreting State Constitutions as Unique Legal Documents*, 27 Okla. City U. L. Rev. 189, 195 & 200 (2002) (state constitutions, ratified by electorate, are characterized as "voice of the people," which invites inquiry into "common understanding" of provision; relevant considerations include constitutional convention debates that reflect collective intent of body, circumstances leading to adoption of provision, and purpose sought to be accomplished).

Moreover, the Free and Equal Elections Clause has no federal counterpart, and, thus, our seminal comparative review standard described in *Commonwealth v. Edmunds*, *supra*, is not directly applicable.[64] Nonetheless, certain of the *Edmunds* factors obviously may assist us in our analysis. *Jubelirer*, 953 A.2d at 524-25; *Edmunds*, 586 A.2d at 895. Indeed, we have recently employed certain of these factors when analyzing the Environmental Rights Amendment. *See Robinson Township* 83 A.3d at 944 ("The Environmental Rights Amendment has no counterpart in the federal charter and, as a result, the seminal, comparative review standard described in [*Edmunds*] is not strictly applicable here. Nonetheless, some of the *Edmunds* factors obviously are helpful in our analysis."). Thus, in addition to our analysis of the plain language, we may consider, as necessary, any relevant decisional law and policy considerations argued by the parties, and any extra-jurisdictional case law from states that have identical or similar provisions, which may be helpful and persuasive. *See Jubelirer,* 953 A.2d at 525 n.12.

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[64] As noted above, our landmark decision in *Edmunds,* our Court set forth a four-part test which we routinely follow in examining and interpreting a provision of our Commonwealth's organic charter. This test examines (1) the relevant text of the provision of Pennsylvania Constitution; (2) the history of the provision, including Pennsylvania case law; (3) relevant case law from other jurisdictions interpreting similar provisions of that jurisdiction's constitution; and (4) policy considerations.

Finally, we emphasize that Article I is the Commonwealth's Declaration of Rights, which spells out the social contract between government and the people which is of such "general, great and essential" quality as to be ensconced as "inviolate." Pa. Const. art. I, Preamble & § 25; *see also* Pa. Const. art. I, § 2 ("All power is inherent in the people, and all free governments are founded on their authority and instituted for their peace, safety and happiness."). Although plenary, the General Assembly's police power is not absolute, as legislative power is subject to restrictions enumerated in the Constitution and to limitations inherent in the form of government chosen by the people of this Commonwealth. *See* Pa. Const. art. III, §§ 28-32 (enumerating restrictions). Specifically, under our Constitution, the people have delegated general power to the General Assembly, with the express exception of certain fundamental rights reserved to the people in Article I of our Constitution. *See* Pa. Const. art. I, § 25 ("[t]o guard against transgressions of the high powers which we have delegated, we declare that everything in this article is excepted out of the general powers of government and shall forever remain inviolate."); *see generally Robinson Township*, 83 A.3d at 946-48.

Thus, with this context in hand, we begin with the actual language of Article I, Section 5.

1. Language

Article I, Section 5 of the Pennsylvania Constitution, entitled "Elections," is contained within the Pennsylvania Constitution's "Declaration of Rights," which, as noted above, is an enumeration of the fundamental individual human rights possessed by the people of this Commonwealth that are specifically exempted from the powers of Commonwealth government to diminish.[65] As noted above, this section provides:

[65] *See* Pa. Const. art. I, § 25 ("To guard against transgressions of the high powers which we have delegated, we declare that everything in this article is excepted out of the general powers of government and shall forever remain inviolate.").

> 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. This clause first appeared, albeit in different form, in our Commonwealth's first organic charter of governance adopted in 1776, 11 years before the United States Constitution was adopted. By contrast, the United States Constitution – which furnishes no explicit protections for an individual's electoral rights, nor sets any minimum standards for a state's conduct of the electoral process – does not contain, nor has it ever contained, an analogous provision. *See* Joshua A. Douglas, *The Right to Vote Under State Constitutions*, 67 Vand. L. Rev. 89, 100 (2014) (observing that "the U.S. Constitution does not grant the right to vote. It instead defines the right through a negative gloss, detailing the various reasons states cannot limit the franchise.").

The broad text of the first clause of this provision mandates clearly and unambiguously, and in the broadest possible terms, that *all* elections conducted in this Commonwealth must be "free and equal." In accordance with the plain and expansive sweep of the words "free and equal," we view them as indicative of the framers' intent that all aspects of the electoral process, to the greatest degree possible, be kept open and unrestricted to the voters of our Commonwealth, and, also, conducted in a manner which guarantees, to the greatest degree possible, a voter's right to equal participation in the electoral process for the selection of his or her representatives in government. Thus, Article I, Section 5 guarantees our citizens an equal right, on par with every other citizen, to elect their representatives. Stated another way, the actual and plain language of Section 5 mandates that all voters have an equal opportunity to translate their votes into representation. This interpretation is consistent with both the historical reasons for the inclusion of this provision in our Commonwealth's Constitution and the meaning we have ascribed to it through our case law.

2. History

Our Commonwealth's centuries-old and unique history has influenced the evolution of the text of the Free and Equal Elections Clause, as well as our Court's interpretation of that provision. Although the general character of our Commonwealth during the colonial era was reflective of the fundamental desire of Pennsylvania's founder, William Penn, that it be a haven of tolerance and non-discrimination for adherents of various religious beliefs, the manner in which the colony was governed from its inception nevertheless excluded certain groups from participation in its official government. Roman Catholics, for example, could not hold office in the colony from 1693 to 1776, due to the requirement in the Charter of Privileges, a precursor to our Constitution in which Penn set forth the manner of governance for the colony,[66] that every candidate for office was required to swear "that he did not believe in the doctrine of transubstantiation, that he regarded the invocation of the Virgin Mary and the saints as superstitious and the Popish Mass as idolatrous." J. Paul Selsam, *The Pennsylvania Constitution of 1776*, 179 (1971). Thus, although successive waves of European immigrants were attracted to the Pennsylvania colony after its founding by the promise of religious tolerance, not every group which settled in Pennsylvania was afforded the equal legal right to participate in its governance. Related thereto, the colony became divided over time by the geographical areas in which these immigrants settled, as well as their religious beliefs.

English and Quaker immigrants fleeing persecution in England were the first to arrive and settled in the eastern part of the colony in and around the City of Philadelphia and in Chester and Bucks Counties. German immigrants arrived thereafter in sizable

[66] *William Penn Sch. Dist.,* 170 A.3d at 418–19.

numbers and settled primarily in the central and northeastern part of the colony, and finally came a large influx of Scots-Irish Presbyterians who lived primarily in the interior and frontier regions of the colony: first in Lancaster, York and Cumberland Counties, and then expanding westward to the areas beyond the Allegheny mountains, congregating in and near the settlement which became modern day Pittsburgh. *Id*. at 4-5.

These groups were divided along economic and religious lines. The English and Quakers who engaged in extensive commerce and banking became the most wealthy and aristocratic elements in the colony. *Id.* at 6. German immigrants reaped a comfortable living from farming the fertile lands of their settlement. Rosalind Branning, *Pennsylvania Constitutional Development*, 10 (1960). The Scots-Irish, who occupied the frontier regions, eked out an existence through hunting, trapping, and subsistence farming; however, they also became skilled tradesmen, highly proficient in construction, masonry, and ironworking, and began to be described as "the leather aprons," which, although intended as a pejorative by members of the colony's aristocracy, they proudly adopted as a badge of honor reflective of their considerable skills and abilities in their chosen professions. Robert Brunhouse, *The Counter-Revolution in Pennsylvania* 1776-1790, 16 (1942).

These various groups began to align themselves into nascent political factions which, by the 1760s, exerted varying degrees of control over the colonial government. The eastern Presbyterian adherents formed a group known as "the Proprietary Party," so named because of their faithfulness to the tenets of William Penn's religious and political philosophy, and they were joined by the Anglicans who had also settled in the Philadelphia region. The Quakers, disillusioned by Penn's embrace of the Anglican faith, united with German pietistic religious sects to form a party known as the Quaker or

"Anti-Proprietary Party." Selsam at 6-7; Branning, at 10. The Scots-Irish, who were angry at having their pleas for assistance during the French and Indian War ignored by the colonial assembly, which was dominated by the Proprietary Party, aligned with the Anti-Proprietary party as a means of achieving their goal of fair representation in the assembly. Branning at 10.

Although these political alliances remained intact until the early 1770s, they began to unravel with the tensions occasioned by the general colonial revulsion at the heavy-handed tactics of the British Crown — *e.g.*, the imposition of the Stamp Act and the use of writs of assistance to enforce the Revenue Act — which ultimately culminated in the Revolutionary War. The Quakers and the Anglicans remained loyal to the British Crown as these tensions rose. However, the Scots-Irish in the western region, who dominated the Anti-Proprietary Party, were strongly supportive of the cause of the opponents of the crown, and they began to demand reforms be made by the colonial assembly, controlled by the Proprietary Party, including reapportionment of representation to the west. *Id.* at 11. They were joined in this effort by a large segment of the working-class population of the City of Philadelphia, disenfranchised by the requirement of the Charter of Privileges that imposed a property ownership requirement for the right to vote. This, coupled with the Charter's restriction of representation in the assembly to counties, resulted in the underrepresentation of the City of Philadelphia in colonial affairs, as well as the denial of representation to the western region due to the assembly's deliberately slow pace in recognizing new counties in that area. *Id.* Thus, by the early 1700s, colonial government remained dominated by the counties of Philadelphia, Chester, and Bucks, even though they had been eclipsed in population by the western regions of the colony and the City of Philadelphia. Selsam at 31-33. Although, in an effort to placate these groups, the assembly granted a concession by

giving the west 28 seats in the assembly, while retaining 30 for the east, this did little to mollify the fervor of these groups for further reform. Branning at 11.

The opportunity for such reform arose with the formal adoption of the Declaration of Independence by the Continental Congress in 1776. This same Congress also adopted a resolution suggesting that the colonies adopt constitutions in the event that they had "no government sufficient to the exigencies of their affairs." *Id.* at 12. For the Pennsylvania colony, this was the catalyst which enabled the reformers from the western regions and the City of Philadelphia, who were now known as "the radicals," to achieve the calling of a constitutional convention. This convention, which was presided over by Benjamin Franklin, who also was serving at the same time in the Continental Congress, adopted our Commonwealth's Constitution of 1776, which, for its time, was considered very forward thinking. *Id.* at 13. Many of its provisions reflected the prevailing sentiment of the radical delegates from the frontier and the City of Philadelphia for a devolution of centralized political power from the hands of a very few, in order to form a government more directly responsive to the needs of the people. Thus, it adopted a unicameral legislature on the belief that bicameral legislatures with one house dominated by elites who were elected on the basis of monetary or property qualifications would thwart the will of the people, as expressed through their representatives in the lower chamber, whose members were elected by those whose right of suffrage was not similarly constrained. Joseph S. Foster, *The Politics of Ideology: The Pennsylvania Constitutional Convention of 1789-1790*, 123 Pennsylvania J. of History, Vol. 59, No. 2 (April 1992). Even though concerned with foundational matters such as the structure of government, the delegates, in response to their experience of being excluded from participation in the colonial government, included

two explicit provisions to establish protections of the right of the people to fair and equal representation in the governance of their affairs.

The first requirement was that representation be proportional to population and that reapportionment of legislative seats be done every seven years. *See* Pa. Const. of 1776, art. I, § IV. As noted by one commentator, this was the direct product of the personal history of the majority of the delegates, and the requirement of equal representation was, thus, intended to protect future individuals against the exclusion from the legislative process "by persons who gained power and intended to keep it." John L. Gedid, "*History of the Pennsylvania Constitution"* as appearing in Ken Gormley, ed., "*The Pennsylvania Constitution A Treatise on Rights and Liberties*, 48 (2004).

Concomitant with this requirement, the delegates also deliberately incorporated into that Constitution the Declaration of Rights – which they considered to be an integral part of its framework – and therein the first version of Article I, Section 5, which declared 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." Pa. Const. of 1776, art. I, § VII.

This section reflected the delegates' desire to secure access to the election process by all people with an interest in the communities in which they lived — universal suffrage — by prohibiting exclusion from the election process of those without property or financial means. It, thus, established a critical "leveling" protection in an effort to establish the uniform right of the people of this Commonwealth to select their representatives in government. It sought to ensure that this right of the people would forever remain equal no matter their financial situation or social class. Gedid, at 51; *see also* Selsam, at 190 ("The long struggle by the people for the control of their affairs was finally rewarded.").

Opposition to the new Constitution arose almost immediately, driven chiefly by the Quakers, Episcopalians, and Germans who had not fought in the Revolution, and the commercial interests in the City of Philadelphia. Branning at 17. These groups felt excluded from participation in the new government just as the factions who had written the 1776 Constitution previously did. Moreover, significant resentment grew over the increasing political power and attainment of elected office by those of lower socioeconomic status in the period after 1776. The social and commercial aristocracy of the Commonwealth resented the acquisition of political control of state government by the "leather aprons." Brunhouse at 16. Further, the exclusion of some of the population through the requirement of "test oaths" in the 1776 Constitution, which required all voters, candidates for office, and office holders to swear allegiance to uphold the new frame of government, further alienated those groups, chiefly from the eastern part of the state, for whom such oaths violated their religious beliefs. *Id.* These groups united and became known as the "Anti-Constitutionalists," and later by the designation Republicans and, later still, Federalists.[67] Supporters of the new charter of governance were allied into a political faction known as the Constitutionalists.

The strife between these two groups, and deficiencies in the structure of the new government — *i.e*., the lack of a strong executive and an ill-defined role for a putative executive body created by the 1776 Constitution and given power over the legislature, the Council of Censors — rapidly intensified, such that the Commonwealth's government became paralyzed by dysfunction, so much so that the Continental Congress threatened to take it over. Gedid, at 52. These two factions vied for control

[67] As utilized in this history, this designation referred only to their views on the proper structure of governance, and does not refer to the modern Republican Party which came into being 60 years later. Gedid, at 52.

of the Council of Censors and the General Assembly throughout the late 1770s and 1780s. The Republicans, though well represented on the Council of Censors, could not garner the necessary votes to call a constitutional convention under its rules. However, popular dissatisfaction with the chaotic state of the Commonwealth's governance grew to such a degree that the Republicans gained control of the General Assembly in 1788, and, in November 1789, they passed legislation to call a constitutional convention. Branning, at 19.

Although there was some opposition to the calling of the convention by the Constitutionalists, given that the 1776 Constitution contained no explicit authorization for the assembly to do so, they, nevertheless, agreed to participate in the convention which began on November 24, 1789. Rather than continuing the internecine strife that had continually threatened the new Commonwealth's government, the leaders of the Constitutionalists, who were prominent political leaders with deep experience serving in the Commonwealth government, such as William Findley, forged what was regarded as an unexpected alliance with powerful members of the leadership of the Republicans, particularly James Wilson. Foster, at 128-29. The coalition of delegates shepherded by Findley and Wilson in producing a new Constitution was remarkable, given the regional and ideological strife which had preceded the convention. Its members represented 16 of the state's 21 counties, and they came from widely divergent geographic regions of the Commonwealth, ranging from Northampton County in the northeastern region of the state to Allegheny and Washington counties in the west. These delegates thus represented a wide spectrum of people with diverse political, ideological, and religious views. *Id*. at 131. Their work yielded a Constitution which, while making the structural reforms to the Commonwealth's government favored by the Republicans, such as the adoption of a bicameral legislature and the creation of the office of chief executive with

veto power over legislation, also preserved the principle cherished most by the Constitutionalists – namely, popular elections in which the people's right to elect their representatives in government would be equally available to all, and would, hereinafter, not be intentionally diminished by laws that discriminated against a voter based on his social or economic status, geography of his residence, or his religious and political beliefs. *Id*. at 137-38.

Consequently, popular election of representatives was maintained by the new Constitution, and applicable in all elections for both houses of the bicameral legislature. Importantly, consistent with the evident desire of the delegates to neutralize the factors which had formerly given rise to such rancorous division amongst the people in the selection of their representatives, the language of Article I, Section 5 was revised to remove all prior ambiguous qualifying language. In its place, the delegates adopted the present language of the first clause of Article I, Section 5, which has remained unchanged to this day by the people of this Commonwealth.[68] It states, simply and plainly, that "elections shall be free and equal."[69]

When viewed against the backdrop of the intense and seemingly unending regional, ideological, and sectarian strife detailed above, which bitterly divided the people of various regions of our state, this provision must be understood then as a salutary effort by the learned delegates to the 1790 convention to end, once and for all,

[68] The 1790 Constitution was never ratified by popular vote; however, all subsequent constitutions in which this language is included have been ratified by the people of the Commonwealth.

[69] Indeed, the majority of delegates expressly rejected a proposal to remove the "and equal" language from the revised amendment. Minutes of the Constitutional Convention of 1789 at 377. Ours, thus, became the first constitution to utilize this language, and other states such as Delaware, following our lead, adopted the same language into their constitution a mere two years later in 1792. Eleven other states since then have included a "free and equal" clause in their constitutions.

the primary cause of popular dissatisfaction which undermined the governance of Pennsylvania: namely, the dilution of the right of the people of this Commonwealth to select representatives to govern their affairs based on considerations of the region of the state in which they lived, and the religious and political beliefs to which they adhered. These historical motivations of the framers have undergirded our Court's interpretation of the Free and Equal Elections Clause throughout the years since its inclusion in our Constitution.

3. Pennsylvania Case Law

As one noted commentator on the Pennsylvania Constitution, Charles Buckalew, himself a delegate to the 1873 Constitutional Convention, opined, given the aforementioned history, the words "free and equal" as used in Article I, Section 5 have a broad and wide sweep:

> They strike not only at privacy and partiality in popular elections, but also at corruption, compulsion, and other undue influences by which elections may be assailed; at all regulations of law which shall impair the right of suffrage rather than facilitate or reasonably direct the manner of its exercise, and at all its limitations, unproclaimed by the Constitution, upon the eligibility of the electors for office. And they exclude not only all invidious discriminations between individual electors, or classes of electors, but also between different sections or places in the State.

Charles R. Buckalew, *An Examination of the Constitution of Pennsylvania. Exhibiting The Derivation and History of Its Several Provisions*, Article I at 10 (1883).

Our Court has ascribed the same expansive meaning to the terms "free and equal" in Article I, Section 5. Although our Court has infrequently relied on this provision to strike down acts of the legislature pertaining to the conduct of elections, the qualifications of voters to participate therein, or the creation of electoral districts, our view as to what constraints Article I, Section 5 places on the legislature in these areas

has been consistent over the years. Indeed, nearly 150 years ago, in considering a challenge to an act of the legislature establishing eligibility qualifications for electors to vote in all elections held in Philadelphia, and specifying the manner in which those elections are to be conducted, we recognized that, while our Constitution gives to the General Assembly the power to promulgate laws governing elections, those enactments are nonetheless subject to the requirements of the Free and Equal Elections Clause of our Constitution, and, hence, may be invalidated by our Court "in a case of plain, palpable and clear abuse of the power which actually infringes the rights of the electors." *Patterson*, 60 Pa. at 75.

In answering the question of how elections must be made equal, we stated: "Clearly by laws which shall arrange all the qualified electors into suitable districts, and make their votes equally potent in the election; so that some shall not have more votes than others, and that all shall have an equal share in filling the offices of the Commonwealth." *Id.* Thus, with this decision, our Court established that 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 Article I, Section 5. *See City of Bethlehem*, 515 A.2d at 1323-24 (recognizing that a legislative enactment which "dilutes the vote of any segment of the constituency" will violate Article I, Section 5). This interpretation is wholly consonant with the intent of the framers of the 1790 Constitution to ensure that each voter will have an equally effective power to select the representative of his or her choice, free from any discrimination on the basis of his or her particular beliefs or views.

In the nearly 150 years since *Patterson*, our Court has not retreated from this interpretation of the Free and Equal Elections Clause. In 1914, our Court, in the case of *Winston, supra*, considered a challenge under the Free and Equal Elections Clause to

an act of the legislature which set standards regulating the nominations and elections for judges and elective offices in the City of Philadelphia. Although our Court ultimately ruled that the act did not violate this clause, we again reaffirmed that the clause protected a voter's individual right to an equal, nondiscriminatory electoral process. In describing the minimum requirements for "free and fair" elections, we stated:

> [E]lections are free and equal within the meaning of the Constitution when they are public and open to all qualified electors alike; when every voter has the same right as every other voter; when each voter under the law has the right to cast his ballot and have it honestly counted; when the regulation of the right to exercise the franchise does not deny the franchise itself, or make it so difficult as to amount to a denial; and when no constitutional right of the qualified elector is subverted or denied him.

Winston, 91 A. at 523.

We relied on these principles in the case of *In re New Britain Borough School District*, 145 A. 597 (Pa. 1929), to strike down the legislative creation of voting districts for elective office which, although not overtly depriving electors therein of their right to choose candidates for office secured by the Free and Equal Elections Clause, nevertheless operated to impair that right. In that case, the legislature created a new borough from parts of two existing townships and created a school district which overlapped the boundaries of the new borough. The new district, thus, encompassed part of the school district in each of the townships from which it was created. Pursuant to other acts of the legislature then in force, the court of common pleas of the county in which the district was situated, upon petition of taxpayers and electors in the newly created borough, appointed a board of school directors. The creation of the new school district was ultimately not approved as required by other legislation mandating the assent of the state board of elections for the creation of the district, and, thus, technically the residents of the new borough remained within their old school districts.

Residents of each of the former townships challenged the constitutionality of the effect of the combination of their former respective school districts under the Free and Equal Elections Clause, arguing that they had been deprived of their right to select school directors. Our Court agreed, and found that the residents of the two former school districts were effectively denied their right to elect representatives of their choosing to represent them on a body which would decide how their tax monies were spent. We noted that the residents of the newly created school district could not lawfully vote for representatives on the school boards of their prior districts, given that they were no longer legally residents thereof, and they also could not lawfully vote for school directors in the newly created school district, given that the ballot for every voter was required to be the same, and, because the new school district had not been approved, the two groups of borough residents would each have to be given separate ballots for their former districts. In our discussion of the Free and Equal Elections Clause, our Court emphasized that the rights protected by this provision may not be taken away by an act of the legislature, and that that body is prohibited by this clause from interfering with the exercise of those rights, even if the interference occurs by inadvertence. *Id.* at 599.

While it is true that our Court has not heretofore held that a redistricting plan violates the Free and Equal Elections Clause – for example, because it is the product of politically-motivated gerrymandering – we have never precluded such a claim in our jurisprudence. Our Court considered a challenge under Article I, Section 5 rooted in alleged political gerrymandering in the creation of state legislative districts in *In re 1991 Pennsylvania Legislative Reapportionment Comm'n*, *supra*. In that case, we entertained and rejected a claim that political gerrymandering operated to deny a candidate's claimed right to run for state legislative office under this provision. We found that the

individual's constitutionally protected right to run for state legislative office was protected by the redistricting plan, but concluded that right did not extend so far as to require that a reapportionment plan be tailored to allow him to challenge the incumbent of his choice.

More saliently, in *Erfer*, our Court specifically held that challenges to the enactment of a congressional redistricting plan predicated on claims of impermissible political gerrymandering may be brought under Article I, Section 5. Therein, we rebuffed the argument that Article I, Section 5 was limited in its scope of application to only elections of Commonwealth officials, inasmuch as there was nothing in the plain text of this provision which would so limit it. Likewise, our own review of the historical circumstances surrounding its inclusion in the 1790 Constitution, discussed above, supports our interpretation.

Moreover, in *Erfer*, we rejected the argument, advanced by Legislative Respondents in their post-argument filing seeking a stay of our Court's order of January 22, 2018,[70] that, because Article I, Section 4 of the United States Constitution confers on state legislatures the power to enact congressional redistricting plans, such plans are not subject to the requirements of the Pennsylvania Constitution:

> It is true that the U.S. Constitution has granted our legislature the power to craft congressional reapportionment plans. Yet, we see no indication that such a grant of power simultaneously suspended the constitution of our Commonwealth *vis à vis* congressional reapportionment. Without clear support for the radical conclusion that our Commonwealth's Constitution is nullified in challenges to congressional reapportionment plans, it would be highly inappropriate for us to circumscribe the operation of the organic legal document of our Commonwealth.

[70] *See supra* note 8.

Id. at 331.

Ultimately, in *Erfer*, we did not opine on whether, under our prior decisions interpreting Article I, Section 5, a congressional redistricting plan would be violative of the Free and Equal Elections Clause because of political gerrymandering. Although the petitioners in that case alleged that the redistricting plan at issue therein violated Article I, Section 5, our Court determined that they had not provided sufficient reasons for us to interpret our constitutional provision as furnishing additional protections of the right to vote beyond those recognized by the United States Supreme Court as conferred by the Equal Protection Clause of the United States Constitution. *See id.* at 332 ("Petitioners provide us with no persuasive argument as to why we should, at this juncture, interpret our constitution in such a fashion that the right to vote is more expansive than the guarantee found in the federal constitution."). Thus, we adjudicated the Article I, Section 5 challenge in that case solely on federal equal protection grounds, and rejected it, based on the test for such claims articulated by the plurality of the United States Supreme Court in *Bandemer, supra*.

Importantly, however, our Court in *Erfer* did not foreclose future challenges under Article I, Section 5 resting solely on independent state grounds. Indeed, the unique historical reasons discussed above, which were the genesis of Article I, Section 5, and its straightforward directive that "elections shall be free and equal" suggests such a separate analysis is warranted. 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; by contrast, the Equal Protection Clause was added to the United States Constitution 78 years later with the ratification of the Fourteenth Amendment to address manifest legal inequities which were contributing causes of the

Civil War, and which persisted in its aftermath, and it contains no such unambiguous protections.

Moreover, and importantly, when properly presented with the argument, our Court entertains as distinct claims brought under the Free and Equal Elections Clause of our Constitution and the federal Equal Protection Clause, and we adjudicate them separately, utilizing the relevant Pennsylvania and federal standards. In *Shankey v. Staisey*, 257 A.2d 897 (Pa. 1969), a group of third-party voters challenged a Pennsylvania election statute which specified that, in order for an individual's vote for a third-party candidate for a particular office in the primary election to be counted, the total number of aggregate votes by third-party voters for that office had to equal or exceed the number of signatures required on a nominating petition to be listed on the ballot as a candidate for that office. The voters' challenge, which was brought under both the Free and Equal Elections Clause of the Pennsylvania Constitution and the Equal Protection Clause of the United States Constitution, alleged that these requirements wrongfully equated public petitions with ballots, thereby imposing a more stringent standard for their vote to be counted than that which voters casting ballots for major party candidates had to meet.

Our Court applied different constitutional standards in deciding these claims. In considering and rejecting the Article I, Section 5 claim – that the third-party candidates' right to vote was diminished because of these special requirements – our Court applied the interpretation of the Free and Equal Elections Clause set forth in *Winston*, *supra*, and ruled that, because the statute required major party candidates and third party candidates to demonstrate the same numerical level of voter support for their votes to be counted, the fact that this demonstration was made by ballot as opposed to by petition did not render the election process unequal. By contrast, in adjudicating the

equal protection claim, our Court utilized the test for an equal protection clause violation articulated by the United States Supreme Court and examined whether the statute served to impermissibly classify voters without a reasonable basis to do so.

Given the nature of the petitioners' argument in *Erfer*, which was founded on their apparent belief that the protections of Article I, Section 5 and Article 1, Section 26 were coextensive, our Court was not called upon, therein, to reassess the validity of the *Shankey* Court's use of a separate and distinct standard for adjudicating a claim that a particular legislative enactment involving the electoral process violates the Free and Equal Elections Clause, from that used to determine if the enactment violates the federal Equal Protection Clause. Thus, we reject Justice Mundy's assertion that *Erfer* requires us, under the principles of *stare decisis*, to utilize the same standard to adjudicate a claim of violation of the Free and Equal Elections Clause and the federal Equal Protection Clause. *See* Dissenting Opinion (Mundy, J.) at 2-3. To the extent that *Erfer* can be read for that proposition, we expressly disavow it, and presently reaffirm that, in accord with *Shankey* and the particular history of the Free and Equal Elections Clause, recounted above, the two distinct claims remain subject to entirely separate jurisprudential considerations.[71]

[71] Like Pennsylvania, a number of other states go further than merely recognizing the right to vote, and provide additional and independent protections through provisions in their constitutions guaranteeing that their elections shall be "free and equal." Pa. Const. art. I, § 5. More specifically, the constitutions of twelve additional states contain election clauses identical to our charter, requiring elections to be "free and equal." These twelve other states are: Arizona, Ariz. Const. art. II, § 21; Arkansas, Ark. Const. art. 3, § 2; Delaware, Del. Const. art. I, § 3; Illinois, Ill. Const. art. III, § 3; Indiana, Ind. Const. art. 2, § 1; Kentucky, Ky. Const. § 6; Oklahoma, Okla. Const. art. III, § 5; Oregon, Or. Const. art. II, § 1; South Dakota, S.D. Const. art. VI, § 19; Tennessee, Tenn. Const. art. I, § 5; Washington, Wash. Const. art. I, § 19; and Wyoming, Wy. Const. art. I, § 27. While few have faced reapportionment challenges, state courts have breathed meaning into these unique constitutional provisions, a few of which are set forth below by way of example. Specifically, last year, the Court of Chancery of Delaware, in an in-depth treatment of Delaware's Constitution, much like that engaged in by our Court today, considered a (continued…)

4. Other Considerations

In addition to the occasion for the adoption of the Free and Equal Elections Clause, the circumstances in which the provision was adopted, the mischief to be remedied, and the object to be obtained, as described above, the consequences of a particular interpretation are also relevant in our analysis. Specifically, partisan gerrymandering dilutes the votes of those who in prior elections voted for the party not

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(…continued)
challenge to family-focused events at polling places on election day which induced parents of students to vote, but which operated as impediments to voting by the elderly and disabled. In concluding such conduct violated the Delaware Constitution's Elections Clause, the court reasoned that an election which provided a targeted group specific incentives to vote was neither free nor equal, noting the historical concerns in Delaware regarding the integrity of the election process. *Young v. Red Clay Consolidated School*, 159 A.3d 713, 758, 763 (Del. Ch. 2017).

Even more apt, two states, Illinois and Kentucky, have long traditions regarding the application and interpretation of their elections clauses. In an early Illinois decision, the Illinois Supreme Court, considering a challenge to a congressional apportionment statute, cited to the Illinois Constitution and concluded: "[a]n election is free where the voters are exposed to no intimidation or improper influence and where each voter is allowed to cast his ballot as his own conscience dictates. Elections are equal when the vote of each voter is equal in its influence upon the result to the vote of every other elector—where each ballot is as effective as every other ballot." *Moran v. Bowley*, 179 N.E. 526, 531 (Ill. 1932). Similarly, in an early Kentucky decision involving the lack of printed ballots leaving numerous voters unable to exercise the franchise, that state's high court offered that "[t]he very purpose of elections is to obtain a full, fair, and free expression of the popular will upon the matter, whatever it may be, submitted to the people for their approval or rejection; and when any substantial number of legal voters are, from any cause, denied the right to vote, the election is not free and equal, in the meaning of the [Kentucky] Constitution." *Wallbrecht v. Ingram*, 175 S.W. 1022, 1026 (Ky. 1915).

Thus, other states with identical constitutional provisions have considered and applied their elections clauses to a variety of election challenges, providing important protections for their voters. While those states whose constitutions have identical "free and equal" language to that of the Pennsylvania Constitution have not addressed the identical issue before us today, they, and other states, have been willing to consider and invigorate their provisions similarly, providing an equal right to each citizen, on par with every other citizen, to elect their representatives.

in power to give the party in power a lasting electoral advantage. By placing voters preferring one party's candidates in districts where their votes are wasted on candidates likely to lose (cracking), or by placing such voters in districts where their votes are cast for candidates destined to win (packing), the non-favored party's votes are diluted. It is axiomatic that a diluted vote is not an equal vote, as all voters do not have an equal opportunity to translate their votes into representation. This is the antithesis of a healthy representative democracy. Indeed, for our form of government to operate as intended, each and every Pennsylvania voter must have the same free and equal *opportunity* to select his or her representatives. As our foregoing discussion has illustrated, our Commonwealth's commitment to neutralizing factors which unfairly impede or dilute individuals' rights to select their representatives was borne of our forebears' bitter personal experience suffering the pernicious effects resulting from previous electoral schemes that sanctioned such discrimination. Furthermore, adoption of a broad interpretation guards against the risk of unfairly rendering votes nugatory, artificially entrenching representative power, and discouraging voters from participating in the electoral process because they have come to believe that the power of their individual vote has been diminished to the point that it "does not count." A broad and robust interpretation of Article I, Section 5 serves as a bulwark against the adverse consequences of partisan gerrymandering.

5. Conclusion

The above analysis of the Free and Equal Elections Clause – its plain language, its history, the occasion for the provision and the circumstances in which it was adopted, the case law interpreting this clause, and consideration of the consequences of our interpretation – leads us to conclude the Clause should be given 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.

B. Measurement of Compliance with Article I, Section 5

We turn now to the question of what measures should be utilized to assess a dilution claim under the Free and Equal Elections Clause of the Pennsylvania Constitution. Neither Article 1, Section 5, nor any other provision of our Constitution, articulates explicit standards which are to be used in the creation of congressional districts. However, since the inclusion of the Free and Equal Elections Clause in our Constitution in 1790, certain neutral criteria have, as a general matter, been traditionally utilized to guide the formation of our Commonwealth's legislative districts in order to prevent the dilution of an individual's vote for a representative in the General Assembly. These 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, and accord equal weight to the votes of residents in each of the various districts in determining the ultimate composition of the state legislature.

Significantly, the framers of the 1790 constitution who authored the Free and Equal Elections Clause also included a mandatory requirement therein for the legislature's formation of state senatorial districts covering multiple counties, namely that the counties must adjoin one another. Also, the architects of that charter expressly prohibited the division of any county of the Commonwealth, or the City of Philadelphia, in the formation of such districts. Pa. Const. of 1776, § 7. Thus, as preventing the dilution of an individual's vote was of paramount concern to that august group, it is evident that they considered maintaining the geographical contiguity of political

subdivisions, and barring the splitting thereof in the process of creating legislative districts, to afford important safeguards against that pernicious prospect.

In the eight-plus decades after the 1790 Constitution became our Commonwealth's fundamental plan of governance, many problems arose from the corruption of the political process by well-heeled special interest groups who rendered our representative democracy deeply dysfunctional by weakening the power of an individual's vote through, *inter alia*, their selection, and financial backing in the electoral process, of representatives who exclusively served their narrow interests and not those of the people as a whole. Gedid, *supra*, at 61-63. One of the methods by which the electoral process was manipulated by these interest groups to attain those objectives was the practice of gerrymandering, popular revulsion of which became one of the driving factors behind the populace's demand for the calling of the 1873 Constitutional Convention.

As noted by an eminent authority on Pennsylvania constitutional law, by the time of that convention, gerrymandering was regarded as "one of the most flagrant evils and scandals of the time, involving notorious wrong to the people and open disgrace to republican institutions." Thomas Raeburn White, *Commentaries on the Constitution of Pennsylvania* 61 (1907). Although the delegates to that convention did not completely eliminate this practice through the charter of governance which they adopted, and which the voters subsequently approved, they nevertheless included significant protections against its occurrence through the explicit adoption of certain requirements which all state legislative districts were, thereafter, required to meet: (1) the population of such districts must be equal, to the extent possible; (2) the district that is created must be comprised of compact and contiguous geographical territory; and (3) the district respects the boundaries of existing political subdivisions contained therein, such that

the district divides as few of those subdivisions as possible. Pa. Const. of 1874, art. 2, § 16. Given the great concern of the delegates over the practice of gerrymandering occasioned by their recognition of the corrosive effects on our entire democratic process through the deliberate dilution of our citizenry's individual votes, the focus on these neutral factors must be viewed, then, as part of a broader effort by the delegates to that convention to establish "the best methods of representation to secure a just expression of the popular will." Branning at 59 (quoting Wayne Mac Veach, *Debates of the Convention to Amend the Constitution of Pennsylvania*, Volume I at 45 (1873)). Consequently, these factors have broader applicability beyond setting standards for the drawing of electoral districts for state legislative office.

The utility of these requirements to prevent vote dilution through gerrymandering retains continuing vitality, as evidenced by our present Constitution, adopted in 1968. In that charter, these basic requirements for the creation of senatorial districts were not only retained, but, indeed, were expanded by the voters to govern the establishment of election districts for the selection of their representatives in the state House of Representatives. Pa. Const., art. 2, § 16.

Because these factors are deeply rooted in the organic law of our Commonwealth, and continue to be the foundational requirements which state legislative districts must meet under the Pennsylvania Constitution, we 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. In our judgment, they are wholly consistent with the overarching intent of the framers of the 1790 Constitution that an individual's electoral power not be diminished through any law which discriminatorily dilutes the power of his

or her vote, and, thus, they are a measure by which to assess whether the guarantee to our citizenry of "free and equal" elections promised by Article, I Section 5 in the selection of their congressional representative has been violated. Because the character of these 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.

Moreover, rather than impermissibly lessening the power of an individual's vote based on the geographical area in which the individual resides – which, as explained above, Article I, Section 5 also prohibits – the use of compactness, contiguity, and the maintenance of the integrity of the boundaries of political subdivisions maintains the strength of an individual's vote in electing a congressional representative. 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. This approach inures to no political party's benefit or detriment. It simply achieves the constitutional goal of fair and equal elections for all of our Commonwealth's voters. Finally, these standards also comport with the minimum requirements for congressional districts guaranteed by the United States Constitution, as interpreted by the United States Supreme Court. *See Wesberry v. Sanders*, 376 U.S. 1, 18 (1964) (holding that the plain objective of the United States Constitution is to make "equal representation for equal numbers of people the fundamental goal for the House of Representatives.").

Consequently, for all of these reasons, and as expressly set forth in our Order of January 22, 2018, we adopt these measures as appropriate in determining whether a congressional redistricting plan violates the Free and Equal Elections Clause of the Pennsylvania Constitution. Therefore, 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.

Order, 1/22/19, at ¶ "Fourth."[72]

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. *See*, *e.g.*, *Holt I,* 38 A.3d at 1235. 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. 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.

When, however, it is demonstrated that, in the creation of congressional districts, 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 Article I, Section 5 of the Pennsylvania Constitution. We note that, consistent with our prior interpretation of Article I, Section 5,

[72] Nothing herein is intended to suggest that congressional district maps must not also comply with federal law, and, most specifically, the Voting Rights Act, 52 U.S.C. § 10301.

see In re New Britain Borough School District, *supra*, this standard does not require a showing that the creators of congressional districts intentionally subordinated these traditional criteria to other considerations in the creation of the district in order for it to violate Article I, Section 5; rather, it is sufficient to establish a violation of this section to show that these traditional criteria were subordinated to other factors.

However, this is not the exclusive means by which a violation of Article I, Section 5 may be established. As we have repeatedly emphasized throughout our discussion, 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 political 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.[73]

[73] In her dissenting opinion, Justice Mundy inexplicably contends that our allowance for the possibility that a *future* challenge to a *future* plan might show dilution even though the neutral redistricting criteria were adhered to "undermines the conclusion" that there is a violation *in this case*. Dissenting Opinion (Mundy, J.) at 3. However, as we state above, and as we discuss further below, assessment of those criteria fully, and solely, supports our conclusion in this case.

We are confident, however, that, technology can also be employed to aid in the expeditious development of districting maps, the boundaries of which are drawn to scrupulously adhere to neutral criteria. Indeed, as this Court highlighted in *Holt I*, "the development of computer technology appears to have substantially allayed the initial, extraordinary difficulties in" meeting such criteria. *Holt I*, 38 A.3d at 760; *see also id.* at 750 (noting that, since 1991, technology has provided tools allowing mapmakers to "achieve increasingly 'ideal' districts") (citing Gormley, Legislative Reapportionment, at 26–27, 45–47); *see also Larios v. Cox*, 305 F.Supp.2d. 1335, 1342 (N.D. Ga. 2004) ("given recent advances in computer technology, constitutional plans can be crafted in as short a period as one day"). As this Court views the record in this case, in the context of the computer technology of 2018, this thesis has clearly been proven.

C. Application to the 2011 Plan

Having established the means by which we measure a violation of Article I, Section 5, we now apply that measure to the 2011 Plan. Doing so, it is clear, plain, and palpable that the 2011 Plan subordinates the traditional redistricting criteria in the service of partisan advantage, and thereby deprives Petitioners of their state constitutional right to free and equal elections. *See West Mifflin Area School District,* 4 A.3d at 1048. Indeed, the compelling expert statistical evidence presented before the Commonwealth Court, in combination with and illustrated by an examination of the Plan itself and the remainder of the evidence presented below, demonstrates that the Plan cannot plausibly be directed at drawing equally populous, compact, and contiguous districts which divide political subdivisions only as necessary to ensure equal population.

Perhaps the most compelling evidence concerning the 2011 Plan derives from Dr. Chen's expert testimony. As detailed above, Dr. Chen created two sets of 500

computer-simulated Pennsylvania redistricting plans, the first of which – Simulated Set 1 – employed the traditional redistricting criteria of population equality, compactness, contiguousness, and political-subdivision integrity – *i.e.*, a simulation of the potential range of redistricting plans attempting to apply the traditional redistricting criteria. Dr. Chen's Simulated Set 1 plans 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. Further, his 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. In other words, all of Dr. Chen's Simulated Set 1 plans, which were, again, a simulation of the potential range of redistricting plans attempting to apply the traditional redistricting criteria, were more compact and split fewer political subdivisions than the 2011 Plan, establishing that a process satisfying these traditional criteria would not lead to the 2011 Plan's adoption. Thus, Dr. Chen unsurprisingly opined that the 2011 Plan subordinated the goals of compactness and political-subdivision integrity to other considerations.[74] Dr. Chen's testimony in this regard establishes that the 2011 Plan did not primarily consider, much less endeavor to satisfy, the traditional redistricting criteria.[75]

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[74] Dr. Chen also credibly rebutted the notion that the 2011 Plan's outlier status derived from a hypothetical attempt to protect congressional incumbents – which attempt still, in any event, subordinated the traditional redistricting factors to others – or an attempt to establish the 2011 Plan's majority African-American district.

[75] Indeed, the advent of advanced technology and increased computing power underlying Dr. Chen's compelling analysis shows such technology need not be employed, as the record shows herein, for illicit partisan gerrymandering. As discussed above, such tools will, just as powerfully, aid the legislature in performing its redistricting function in comportment with traditional redistricting factors and their constituents' (continued…)

Dr. Chen's testimony in this regard comports with a lay examination of the Plan, which reveals tortuously drawn districts that cause plainly unnecessary political-subdivision splits. In terms of compactness, a rudimentary review reveals a map comprised of 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. Significantly, these 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. As Dr. Kennedy explained below, the 7th Congressional District, pictured above, has been referred to as resembling "Goofy kicking Donald Duck," and is perhaps chief among a number of rivals in this regard, ambling from Philadelphia's suburbs in central Montgomery County, where it borders four other districts, south into Delaware County, where it abuts a fifth, then west into Chester County, where it abuts another district and travels northwest before jutting out in both northerly and southerly directions into Berks and Lancaster Counties. Indeed, it is difficult to imagine how a district as Rorschachian and sprawling, which is contiguous in two locations only by virtue of a medical facility and a seafood/steakhouse, respectively, might plausibly be referred to as "compact." Moreover, in terms of political subdivision splits, the 7th Congressional District splits each of the five counties in its path and some 26 separate political subdivisions between multiple congressional districts. In other words, the 7th Congressional District is itself responsible for 17% of the 2011 Plan's county splits and 38% of its municipality splits.

(…continued)
constitutional rights, as well as aiding courts in their evaluations of whether the legislature satisfied its obligations in this regard.

The 7th Congressional District, however, is merely the starkest example of the 2011 Plan's overall composition. As pictured above, and as discussed below, many of the 2011 Plan's congressional districts similarly sprawl through Pennsylvania's landscape, often contain "isthmuses" and "tentacles," and almost entirely ignore the integrity of political subdivisions in their trajectories.[76] Although the 2011 Plan's odd shapes and seemingly arbitrary political subdivision splits are not themselves sufficient to conclude it is not predicated on the traditional redistricting factors, Dr. Chen's cogent analysis confirms that these anomalous shapes are neither necessary to, nor within the ordinary range of, plans generated with solicitude toward, applying traditional redistricting considerations.

The fact that the 2011 Plan cannot, as a statistical matter, be a plan directed at complying with traditional redistricting requirements is sufficient to establish that it violates the Free and Equal Elections Clause. Nevertheless, we acknowledge the multitude of evidence introduced in the Commonwealth Court showing that its deviation from these traditional requirements was in service of, and effectively works to, the unfair partisan advantage of Republican candidates in future congressional elections and, conversely, dilutes Petitioners' power to vote for congressional representatives who represent their views. Dr. Chen explained that, while his simulated plans created a range of up to 10 safe Republican districts with a mean-median vote gap of 0 to 4%, the 2011 Plan creates 13 safe Republican districts with a mean-median vote gap of 5.9%.

[76] Indeed, the bulk of the 2011 Plan's districts make then-Massachusetts Governor Elbridge Gerry's eponymous 1812 partisan redistricting plan, criticized at the time for its salamander-like appearance – hence, "Gerry-mander" – and designed to dilute extant Federalist political power, appear relatively benign in comparison. *See generally* Jennifer Davis, "Elbridge Gerry and the Monstrous Gerrymander," https://blogs.loc.gov/law/2017/02/elbridge-gerry-and-the-monstrous-gerrymander (Feb. 10, 2017).

Dr. Chen also credibly rejected the notion that the 2011 Plan's outlier status in this regard was 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. Indeed, he explicitly concluded that the traditional redistricting criteria were jettisoned in favor of unfair partisan gain. Dr. Warshaw's testimony similarly detailed how the 2011 Plan not only preserves the modest natural advantage, or vote efficiency gap, in favor of Republican congressional candidates relative to Republicans' statewide vote share – which owes to the fact that historically Democratic voters tend to self-sort into metropolitan areas and which he testified, until the 2011 Plan, was "never far from zero" percent – but also creates districts that increase that advantage to between 15 to 24% relative to statewide vote share. In other words, in its disregard of the traditional redistricting factors, the 2011 Plan consistently works toward and accomplishes the concentration of the power of historically-Republican voters and, conversely, the corresponding dilution of Petitioners' power to elect their chosen representatives.

Indeed, these statistical analyses are illustrated to some degree by Dr. Kennedy's discussion of the 2011 Plan's particulars. Dr. Kennedy, for example, explained that, at the district-by-district level, the 2011 Plan's geospatial oddities and divisions of political subdivisions and their wards effectively serve to establish a few overwhelmingly Democratic districts and a large majority of less strong, but nevertheless likely Republican districts. For example, the 1st Congressional District, beginning in Northeast Philadelphia and largely tracking the Delaware River, occasionally reaches "tentacles" inland, incorporating Chester, Swarthmore, and other

historically Democratic regions.[77] Contrariwise, although the 3rd Congressional District formerly contained traditionally-Democratic Erie County in its entirety, the 2011 Plan's 3rd and 5th Congressional Districts now divide that constituency, making both districts likely to elect Republican candidates.[78] Additionally, it is notable that the 2011 Plan's accommodation for Pennsylvania's loss of one congressional seat took the form of redrawing its 12th Congressional District, a 120-mile-long district that abuts four others and pitted two Democratic incumbent congressmen against one another in the next cycle's primary election, after which the victor of that contest lost to a Republican candidate who gleaned 51.2% of the general election vote. These geographic idiosyncrasies, the evidentiary record shows, served to strengthen the votes of voters inclined to vote for Republicans in congressional races and weaken those inclined to vote for Democrats.

In sum, we conclude that the evidence detailed above and the remaining evidence of the record as a whole demonstrates that Petitioners have established that the 2011 Plan subordinates the traditional redistricting criteria in service of achieving unfair partisan advantage, and, thus, violates the Free and Equal Elections Clause of the Pennsylvania Constitution. Such 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.

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[77] Notably, in the last three congressional elections, voters in the 1st Congressional District elected a Democratic candidate with 84.9%, 82.8%, and 82.2% of the vote, respectively.

[78] In the 2012 and 2014 congressional elections, voters in the 3rd Congressional District elected a Republican candidate with 57.1% and 60.6% of the vote, respectively, and, by 2016, the Republican candidate ran unopposed.

An election corrupted by extensive, sophisticated gerrymandering and partisan dilution of votes is not "free and equal." In such circumstances, a "power, civil or military," to wit, the General Assembly, has in fact "interfere[d] to prevent the free exercise of the right of suffrage." Pa. Const. art. 1, § 5.

VI. Remedy

Having set forth why the 2011 Plan is constitutionally infirm, we turn to our January 22, 2018 Order which directed a remedy for the illegal plan. Therein, our Court initially invited our sister branches – the legislative and executive branches – to take action, through the enactment of a remedial congressional districting plan; however, recognizing the possibility that the legislature and executive would be unwilling or unable to act, we indicated in our Order that, in that eventuality, we would fashion a judicial remedial plan:

> Second, should the Pennsylvania General Assembly choose to submit a congressional districting plan that satisfies the requirements of the Pennsylvania Constitution, it shall submit such plan for consideration by the Governor on or before **February 9, 2018**. If the Governor accepts the General Assembly's congressional districting plan, it shall be submitted to this Court on or before **February 15, 2018**.
>
> Third, should the General Assembly not submit a congressional districting plan on or before **February 9, 2018**, or should the Governor not approve the General Assembly's plan on or before **February 15, 2018**, this Court shall proceed expeditiously to adopt a plan based on the evidentiary record developed in the Commonwealth Court. In anticipation of that eventuality, the parties shall have the opportunity to be heard; to wit, all parties and intervenors may submit to the Court proposed remedial districting plans on or before **February 15, 2018**.

Order, 1/22/18, at ¶¶ "Second" and "Third."

As to the initial and preferred path of legislative and executive action, we note that the primary responsibility and authority for drawing federal congressional legislative districts rests squarely with the state legislature. *See* U.S. Const. art. I, § 4; *Butcher,* 216 A.2d at 458 ("[W]e considered it appropriate that the Legislature, the organ of government with the primary responsibility for the task of reapportionment, be afforded an additional opportunity to enact a constitutional reapportionment plan."); *Growe v. Emison*, 507 U.S. 25, 34 (1993) (stating that "the Constitution leaves with the States primary responsibility for apportionment of their federal congressional and state legislative districts"); *Wise v. Lipscomb*, 437 U.S. 535, 539 (1978); *Reynolds*, 377 U.S. at 586. Thus, in recognizing this foundational tenet, but also considering both the constitutionally infirm districting plan and the imminent approaching primary elections for 2018, we requested that these sister branches enact legislation regarding a new districting plan, providing a deadline to do so approximately three weeks from the date of our Order. Indeed, if the legislature and executive timely enact a remedial plan and submit it to our Court, our role in this matter concludes, unless and until the constitutionality of the new plan is challenged.

When, however, the legislature is unable or chooses not to act, it becomes the judiciary's role to determine the appropriate redistricting plan. Specifically, while statutes are cloaked with the presumption of constitutionality, it is the duty of this Court, as a co-equal branch of government, to declare, when appropriate, certain acts unconstitutional. Indeed, matters concerning the proper interpretation and application of our Commonwealth's organic charter are at the end of the day for this Court — and only this Court. *Pap's II*, 812 A.2d at 611 (noting Supreme Court has final word on meaning of Pennsylvania Constitution). Further, our Court possesses broad authority to craft

meaningful remedies when required. Pa. Const. art. V, §§ 1, 2, 10; 42 Pa.C.S. § 726 (granting power to "enter a final order or otherwise cause right and justice to be done").

Thus, as an alternative to the preferable legislative route for creating a remedial redistricting plan, in our Order, we considered the possibility that the legislature and Governor would not agree upon legislation providing for a remedial plan, and, thus, we allowed for the prospect of a judicially-imposed remedial plan. Our narrowly crafted contingency, which afforded all parties and Intervenors a full and fair opportunity to submit proposed remedial plans for our consideration, was well within our judicial authority, and supported by not only our Constitution and statutes as noted above, but by Commonwealth and federal precedent, as well as similar remedies provided by the high courts of other states acting when their sister branches fail to remedy an unconstitutional plan.

Perhaps the clearest balancing of the legislature's primary role in districting against the court's ultimate obligation to ensure a constitutional plan was set forth in our decision in *Butcher*. In that matter, our Court, after concluding a constitutionally infirm redistricting of both houses of the General Assembly resulted in an impairment of our citizens' right to vote, found it prudent to allow the legislature an additional opportunity to enact a legal remedial plan. *Butcher*, 216 A.2d at 457-58. Yet, we also made clear that a failure to act by the General Assembly by a date certain would result in judicial action "to ensure that the individual voters of this Commonwealth are afforded their constitutional right to cast an equally weighted vote." *Id*. at 458-59. After the deadline passed without enactment of the required statute, we fashioned affirmative relief, after the submission of proposals by the parties. *Id*. at 459. Our Order in this matter, cited above, is entirely consistent with our remedy in *Butcher*. *See also Mellow v. Mitchell*, 607 A.2d 204, 205-06 (Pa. 1992) (designating master in wake of legislative failure to

remedy redistricting of seats for the Pennsylvania House of Representatives which was held to be unconstitutional).

Our approach is also buttressed by, and entirely consistent with, the United States Supreme Court's landmark ruling in *Baker v. Carr*, 369 U.S. 186 (1962), and more recent decisions from the United States Supreme Court which make concrete the state judiciary's ability to formulate a redistricting plan, when necessary. *See, e.g., Growe*; *Scott v. Germano*, 381 U.S. 407 (1965) (*per curiam*). As described by the high Court in *Wise*, "Legislative bodies should not leave their reapportionment tasks to the federal courts; but when those with legislative responsibilities do not respond, or the imminence of a state election makes it impractical for them to do so, it becomes the 'unwelcome obligation,' *Conner v. Finch*, [431 U.S. 407, 415 (1977)], of the federal court to devise and impose a reapportionment plan pending later legislative action." *Wise,* 437 U.S. at 540. The same authority to act is inherent in the state judiciary.

Specifically, in *Growe*, the United States Supreme Court was faced with the issue of concurrent jurisdiction between a federal district court and the Minnesota judiciary regarding Minnesota's state legislative and federal congressional districts. The high Court, in a unanimous decision authored by Justice Scalia, specifically recognized the role of the state judiciary in crafting relief: "In the reapportionment context, the Court has required federal judges to defer [to] consideration of disputes involving redistricting where the State, through its legislative *or* judicial branch, has begun to address that highly political task itself." *Growe*, 507 U.S. at 33 (emphasis original). As an even more pointed endorsement of the state judiciary's ability to craft appropriate relief – indeed, encouraging action by the state judiciary – the *Growe* Court quoted its prior decision in *Scott*:

> 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.

Id. at 33 (quoting *Scott*, 381 U.S. at 409) (emphasis added).

Thus, the *Growe* Court made clear the important role of the state judiciary in ensuring valid reapportionment schemes, not only through an assessment of constitutionality, but also through the enactment of valid legislative redistricting plans. Pursuant to *Growe,* therefore, although the legislature has initial responsibility to act in redistricting matters, that responsibility can shift to the state judiciary if a state legislature is unable or unwilling to act, and then to the federal judiciary *only* once the state legislature or state judiciary have not undertaken to remedy a constitutionally infirm plan.

Finally, virtually every other state that has considered the issue looked, when necessary, to the state judiciary to exercise its power to craft an affirmative remedy and formulate a valid reapportionment plan. *See, e.g., People ex rel. Salazar v. Davidson*, 79 P.3d 1221, 1229 (Colo. 2003) (offering, in addressing the issue of how frequently the legislature can draw congressional districts, that United States Supreme Court is clear that states have the primary responsibility in congressional redistricting, and that federal courts must defer to the states, including state courts, especially in matters turning on state constitution); *Hippert v. Richie*, 813 N.W.2d 374, 378 (Minn. 2012) (explaining that, as legislature and Governor failed to enact a legislative redistricting plan by deadline, it was up to the state judiciary to prepare a valid legislative plan and order its adoption, citing *Growe* as "precisely the sort of state judicial supervision of redistricting" that the United States Supreme Court has encouraged); *Brown v. Butterworth*, 831 So.2d 683, 688-89 (D.C. App. Fla 2002) (emphasizing constitutional power of state judiciary to require valid reapportionment); *Stephenson v. Bartlett*, 562 S.E.2d 377, 384 (N.C. 2002) (noting that it is only the Supreme Court of North Carolina that can answer state

constitutional questions with finality, and that, "within the context of state redistricting and reapportionment disputes, it is well within the 'power of the judiciary of a State to require valid reapportionment or to formulate a valid redistricting plan'" (quoting *Germano*, 381 U.S. at 409)); *Wilson v. Fallin*, 262 P.3d 741, 745 (Okla. 2013) (holding that three decades after *Baker v. Carr*, the United States Supreme Court in *Growe* was clear that state courts may exercise jurisdiction over legislative redistricting and that federal courts should defer to state action over questions of state redistricting by state legislatures and state courts); *Alexander v. Taylor*, 51 P.3d 1204, 1208 (Okla. 2002) ("It is clear to us that [*Baker* and *Growe*], . . . stand for the proposition that Art. 1, § 4 does not prevent either federal or state courts from resolving redistricting disputes in a proper case."); *Boneshirt v. Hazeltine*, 700 N.W.2d 746, 755 (S.D. 2005) (Konenkamp, J., concurring) (opining that the Supreme Court recognized that "[t]he 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" and that both "[r]eason and experience argue that courts empowered to invalidate an apportionment statute which transgresses constitutional mandates cannot be left without the means to order appropriate relief."); *Jensen v. Wisconsin Board of Elections*, 639 N.W.2d 537, 542 (Wis. 2002) (*per curiam*) (noting deference of federal courts regarding "consideration of disputes involving redistricting where the State, through its legislative *or* judicial branch, has begun to address that highly political task itself" and that "any redistricting plan judicially 'enacted' by a state court (just like one enacted by a state legislature) would be entitled to presumptive full-faith-and-credit legal effect in federal court."); *but see Maudlin v. Branch*, 866 So.2d 429 (Miss. 2003) (finding, under Mississippi statute, no Mississippi court had jurisdiction to draw plans for congressional districting).

Thus, it is beyond peradventure that it is the legislature, in the first instance, that is primarily charged with the task of reapportionment. However, the Pennsylvania Constitution, statutory law, our Court's decisions, federal precedent, and case law from our sister states, all serve as a bedrock foundation on which stands the authority of the state judiciary to formulate a valid redistricting plan when necessary. Our prior Order, and this Opinion, are entirely consistent with such authority.[79]

VII. Conclusion

For all of these reasons, the Court entered its Order of January 22, 2018, striking as unconstitutional the Congressional Redistricting Act of 2011, and setting forth a process assuring that a remedial redistricting plan would be in place in time for the 2018 Primary Elections.

Justices Donohue, Dougherty and Wecht join the opinion.

Justice Baer files a concurring and dissenting opinion.

Chief Justice Saylor files a dissenting opinion in which Justice Mundy joins.

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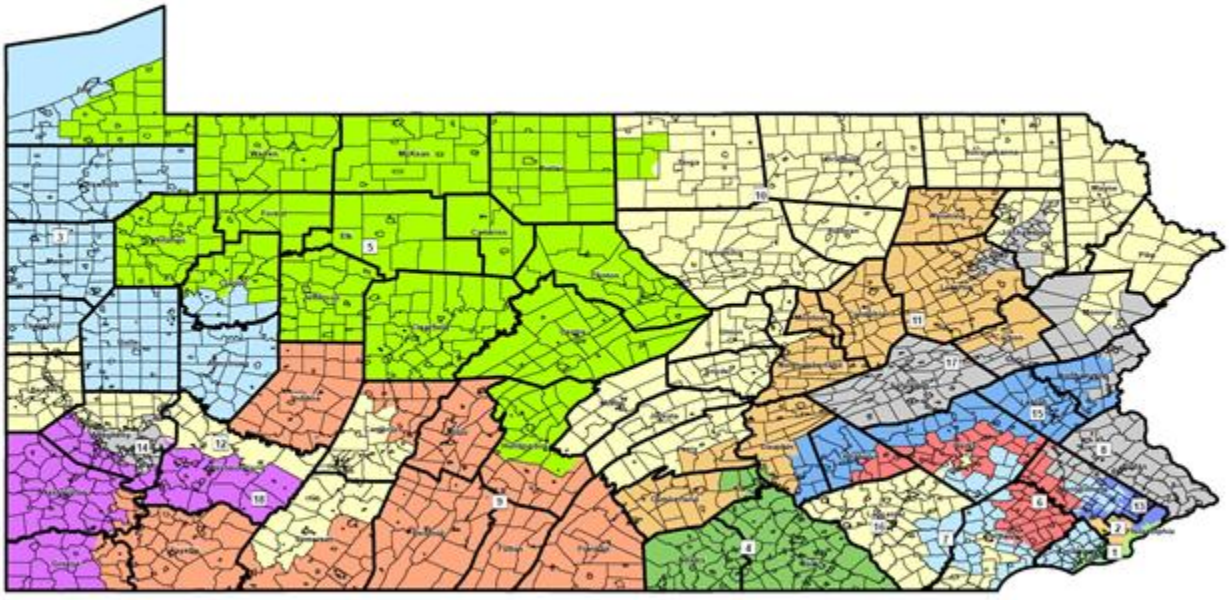
[79] Justice Mundy, in her dissent, seemingly reads the federal Elections Clause in a vacuum, and, to the extent that she suggests an inability, or severely circumscribed ability, of state courts generally, or of our Court *sub judice*, to act, this approach has not been embraced or suggested by the United States Supreme Court or the Pennsylvania Supreme Court for over a half century. Indeed, to read the federal Constitution in a way that limits our Court in its power to remedy violations of our Commonwealth's Constitution is misguided and directly contrary to bedrock notions of federalism embraced in our federal Constitution, and evinces a lack of respect for state rights. In sum, and as fully set forth above, in light of interpretations of the Elections Clause like that found in *Growe* – which encourage federal courts to defer to state redistricting efforts, including congressional redistricting, and expressly permit the judicial creation of redistricting maps when a legislature fails to act – as well as essential jurisprudential concepts of comity and federalism, it is beyond peradventure that state courts possess the authority to grant equitable remedies for constitutional violations, including the drawing of congressional maps (of course, subject to federal safeguards and, principally, the Voting Rights Act).

Justice Mundy files a dissenting opinion.

Appendix A

Pennsylvania Congressional Districts
Act 131 of 2011



SOURCE: http://www.redistricting.state.pa.us/Resources/GISData/Districts/Congressional/2011/PDF/2011-PA-Congressional-Map.pdf)

Exhibit E

[J-1-2018]
IN THE SUPREME COURT OF PENNSYLVANIA
MIDDLE DISTRICT

LEAGUE OF WOMEN VOTERS OF PENNSYLVANIA, CARMEN FEBO SAN MIGUEL, JAMES SOLOMON, JOHN GREINER, JOHN CAPOWSKI, GRETCHEN BRANDT, THOMAS RENTSCHLER, MARY ELIZABETH LAWN, LISA ISAACS, DON LANCASTER, JORDI COMAS, ROBERT SMITH, WILLIAM MARX, RICHARD MANTELL, PRISCILLA MCNULTY, THOMAS ULRICH, ROBERT MCKINSTRY, MARK LICHTY, LORRAINE PETROSKY, Petitioners v. THE COMMONWEALTH OF PENNSYLVANIA; THE PENNSYLVANIA GENERAL ASSEMBLY; THOMAS W. WOLF, IN HIS CAPACITY AS GOVERNOR OF PENNSYLVANIA; MICHAEL J. STACK III, IN HIS CAPACITY AS LIEUTENANT GOVERNOR OF PENNSYLVANIA AND PRESIDENT OF THE PENNSYLVANIA SENATE; MICHAEL C. TURZAI, IN HIS CAPACITY AS SPEAKER OF THE PENNSYLVANIA HOUSE OF REPRESENTATIVES; JOSEPH B. SCARNATI III, IN HIS CAPACITY AS PENNSYLVANIA SENATE PRESIDENT PRO TEMPORE; ROBERT TORRES, IN HIS CAPACITY AS ACTING SECRETARY OF THE COMMONWEALTH OF PENNSYLVANIA; JONATHAN M. MARKS, IN HIS CAPACITY AS COMMISSIONER OF THE BUREAU OF COMMISSIONS, ELECTIONS, AND LEGISLATION OF	:	No. 159 MM 2017

THE PENNSYLVANIA DEPARTMENT OF STATE, :
:
:
Respondents :

ORDER

PER CURIAM

AND NOW, this 27th day of February, 2018, the Application for Stay of Court's Orders of January 22, 2018 and February 19, 2018, filed by Respondents Michael C. Turzai, in his Official Capacity as Speaker of the Pennsylvania House of Representatives, and Joseph B. Scarnati III, in his Official Capacity as Pennsylvania Senate President Pro Tempore, is hereby **DENIED**.

Chief Justice Saylor and Justices Baer and Mundy dissent.