DATE FILED: October 08, 2021 11:40 AM SUPREME COURT, STATE OF COLORADO 2 East 14th Avenue, 4th Floor Denver, Colorado 80203 Original Proceeding Pursuant to Art. V, § 44.5 of the Colorado Constitution In re Colorado Independent Congressional ▲ COURT USE ONLY ▲ **Redistricting Commission** Attorneys for Colorado Independent Congressional Case No. 2021SA208 Redistricting Commission: Name: Frederick R. Yarger (#39479) Meghan Frei Berglind (#35574) Wheeler Trigg O'Donnell LLP Address: 370 Seventeenth Street, Suite 4500 Denver, CO 80202-5647 Telephone: 303.244.1800 Email: varger@wtotrial.com berglind@wtotrial.com Name: Jerome A. DeHerrera (#35893) Achieve Law Group 146 West 11th Avenue Address: Denver, CO 80204 Telephone: 303.465.1000 Email: jdh@achievelawgroup.com Name: Misha Tseytlin (pro hac vice pending) Troutman Pepper 227 W. Monroe Street, Suite 3900 Address: Chicago, IL 60606 Telephone: 312.759.1920 Email: misha@tseytlin@troutman.com

COLORADO INDEPENDENT CONGRESSIONAL REDISTRICTING COMMISSION'S BRIEF IN SUPPORT OF APPROVAL OF FINAL CONGRESSIONAL REDISTRICTING PLAN

CERTIFICATE OF COMPLIANCE

I certify that this brief complies with the requirements of C.A.R. 28 and C.A.R. 32, including all formatting requirements set forth in these rules. Additionally, I certify that:

This brief complies with the word limit set by the Court in its July 26, 2021 Order because it contains 9,479 words.

I acknowledge that this brief may be stricken if it fails to comply with the requirements of C.A.R. 28 and C.A.R. 32.

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INTRODUCTION

This year is a watershed for congressional redistricting in Colorado. Rather than rely on entrenched politicians (who have often been incapable of reaching agreement), or litigation in the courts (which are understandably loathe to draw maps), the voters chose to empower twelve of their own. By design, Commissioners are not political insiders, and they represent a diversity and range of viewpoints that aid them in making the complex policy choices that attend the redistricting process. Those choices are informed by robust public comment from voices in every part of the state, as well as extensive, transparent deliberations during months of meetings.

The redistricting process created by Amendment Y produces a map governed by settled federal law and long-accepted traditional redistricting criteria. Amendment Y does not radically upend the redistricting process—it simply takes that process away from politicians and places it in the hands of a diverse group of ordinary voters.

This year's Commissioners were deeply invested in considering the public's views and making Amendment Y work—reaching consensus on a map that, for the first time in Colorado, is not the product of politics or litigation, but of public input, open debate, and compromise. As the Commission's Chairwoman explained, "we were able to honor all the federal requirements and also our state mandated requirements," and "embraced" those requirements "in what the actual final map looked like." Final Plan, Ex. D at 24:1-6.

The Commissioners met dozens of times, listened to hours of public testimony, considered thousands of written comments (including 170 suggested maps), and debated 19 plans or plan amendments. They ultimately voted 11-to-1 to approve a Final Plan for this Court's review. For the reasons below, that plan complies with federal and state-law requirements and is within the discretion afforded the Commission under Amendment Y.

ISSUE FOR REVIEW

Whether the Court should approve the Final Plan adopted by the Colorado Independent Congressional Redistricting Commission

("Commission") on September 28, 2021, and submitted to the Court on October 1, 2021, because the plan complies with federal constitutional

and statutory law and because the Commission did not abuse its discretion in applying the criteria in section 44.3 of article V of the Colorado Constitution.

STATEMENT

A. Amendment Y creates a robust, transparent, and nonpartisan redistricting process.

When voters approved Amendment Y in November 2018, they ensured that, from now on, the responsibility to draw Colorado's congressional districts would fall to an "independent" and "politically balanced" Commission that engages in "an inclusive and meaningful congressional redistricting process." Colo. Const. Art. V, § 44(1)(b) & (f). Those goals are now central to every facet of redistricting in Colorado.

Amendment Y's reforms start with Commissioner selection. Only ordinary voters may serve—not politicians, political candidates, campaign staff, party officials, or lobbyists. *Id.* § 44.1(2). The eightphase selection process winnows qualified applicants, ultimately chosen either by lot or by a panel of retired justices or judges, to four Commissioners from Colorado's largest political party, four from the second-largest political party, and four who are unaffiliated. *Id.*

§ 44.1(3)-(10). In addition, the selection process ensures that, "[t]o the extent possible," Commissioners "reflect[] Colorado's racial, ethnic, gender, and geographic diversity," which includes the requirement that at least one and no more than two are registered to vote in each existing congressional district and at least one resides west of the Continental Divide. *Id.* § 44.1(10)(a)-(c).

Congressional redistricting in Colorado has historically been "tumultuous, politically fraught, and notoriously litigious." $In\ re$ Interrogatories on S.B. 21-247, 2021 CO 37, ¶ 1. Amendment Y turns the page on that era, emphasizing transparency and public engagement. Meetings are open to the public and subject to the Open Meetings Law, and Commission records are subject to the Open Records Act. Colo. Const. Art. V, § 44.2(4)(b)(I)(A) & (II). The Commission must hold multiple hearings across Colorado, including three in each existing district, to solicit public comment. Id. § 44.2(3)(b). And it must maintain a website through which the public can submit (and access) comments and proposed maps. Id. § 44.2(c) & (d).

Amendment Y creates a fair process for the Commission and Non-Partisan Staff to prepare maps for consideration and possible approval. Non-Partisan Staff starts by publishing a Preliminary Plan. After public comment on that plan, Staff creates and publishes three Staff Plans, any of which the Commission can approve with a supermajority of eight votes (including at least two unaffiliated Commissioners). *Id.* § 44.4(1)-(5). Commissioners may adopt "standards, guidelines, or methodologies" for proposed maps, and any Commissioner or group of Commissioners may request that Staff draw additional plans or plan amendments. *Id.* § 44.4(3)-(4) If the Commission does not approve a plan, Non-Partisan Staff submits the unamended Third Staff Plan to this Court. *Id.* § 44.4(6).

The final, adopted plan selected by this process must comply with a hierarchy of substantive criteria. The Commission must:

- "[m]ake a good-faith effort to achieve precise mathematical population equality between districts";
- comply with the Voting Rights Act of 1965, 52 U.S.C. § 10301 ("the VRA");
- "as much as reasonably possible, ... preserve whole communities of interest and whole political subdivisions";

- create districts as "compact as is reasonably possible"; and
- finally, "to the extent possible, maximize the number of politically competitive districts."

Id. § 44.3(1)-(3). Amendment Y prohibits the Commission from approving a plan if it (a) was drawn to protect an incumbent, candidate, or political party or (b) was "drawn for the purpose of or results in the denial or abridgement of the right of any citizen to vote" on account of race or membership in a language minority group, including by "diluting the impact of that ... group's electoral influence." Id. § 44.3(4).

B. In carrying out its duties, this year's Commission solicited extensive public participation and complied with Amendment Y's requirements.

The Commission's formation and work this year has fulfilled both the letter and spirit of the redistricting process approved by Colorado's voters. The Commission's twelve members come from across the state and reflect the diversity and qualifications contemplated by Amendment Y. Colo. Const. Art. V, § 44.1(8)(a), 10(a)-(c). The Commissioners, seven of whom are women, bring a range of skills and experiences to the table—they have careers or degrees in areas including community service, education, geography and mapping,

biology, agriculture, public health, law, public policy, law enforcement, military service, economics, government budgets, and data analysis. Final Plan, Ex. B.¹ The Commission also embodies racial and ethnic diversity, with African American, Hispanic,² and Native American members.

The Commissioners held 50 meetings over the past 7 months, and Commission subcommittees held dozens more. The Commissioners received expert guidance on a variety of subjects, including political science, demographics, and the U.S. Census. A record of the Commission's meetings is available on both the Commission's website and a public "Box" page. *See* https://tinyurl.com/2ya6yd4f (meeting summaries); https://tinyurl.com/3phz8hat (Box page); https://tinyurl.com/3vzrjwe7 (audio archive).

In addition, the Commission solicited extensive public comment.

After Non-Partisan Staff published the Preliminary Plan using non-

¹ Attachments to the Final Plan filed with this Court on October 1, 2021, are titled Exhibit A through Exhibit I. Attachments to this brief are titled Addendum 1 through Addendum 6.

² This brief uses "Hispanic" because that term is used in the Census.

final census data, the Commission held 36 hearings—15 more than the number required by Amendment Y. Those hearings took place across the state, in rural locations like Sterling, Durango, Craig, and Lamar, as well as in larger cities like Denver. At some hearings, over 70 individuals testified. Final Plan, Ex. C. Once the First Staff Plan—based on final census data—was released, the Commission held four more hearings. *Id.* The Commission received and considered over 5,000 public comments and 170 proposed maps. Final Plan, pp. 2-3.

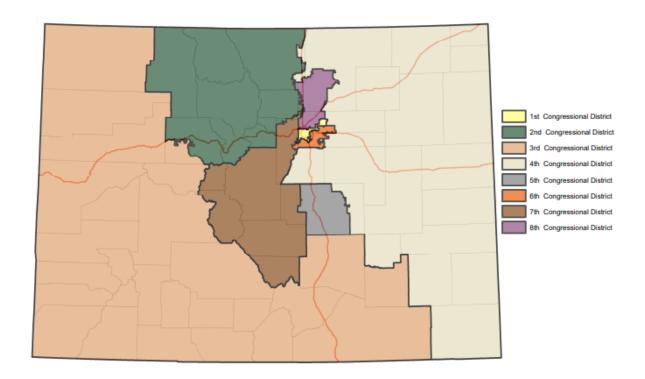
Non-Partisan Staff released the Preliminary Plan on June 23, the First Staff Plan on September 5, the Second Staff Plan on September 15, and the Third Staff Plan on September 23.

https://tinyurl.com/jtkx8xdz. In addition to these required plans, Staff, at the request of Commissioners, prepared seven more plans and eight amendments. https://tinyurl.com/jtkx8xdz.

C. The Commission's work culminated in the Final Plan, approved by an 11-to-1 vote of the Commission.

On September 28, after months of deliberation and public hearings, and after considering and debating the Preliminary Plan, the three Staff Plans, seven Commissioner-requested plans, and eight plan amendments, the Commission voted 11-to-1 to approve the Final Plan. All four unaffiliated Commissioners, all four Republicans, and three of four Democrats voted in favor. As Commissioners explained after casting their votes, the Final Plan "represents [an] iterative process of consideration among all of the Commissioners from across the state in taking into consideration everything that we have heard from the public"; it represents "compromise," rather than giving any particular Commissioner "everything I wanted"; and it was drawn to meet "every aspect of our constitutional requirements" at "each step along the way of our process." Final Plan, Ex. D at 5-8, 7:5-8, 23:14-16.

The Final Plan divides Colorado into eight districts:



On October 1, 2021, Non-Partisan Staff, as well as counsel to the Commission, submitted the Final Plan to this Court for review under section 44.5 of Amendment Y. That submission includes detailed descriptions of each district. It is accompanied by supporting materials, including district maps; a population summary report with demographics; reports explaining which counties and municipalities were required to be split and the reasons for doing so; a report on district compactness; and a report on political competitiveness.

SUMMARY OF ARGUMENT

I. The Final Plan satisfies all federal constitutional and statutory requirements. First, it delivers precise mathematical equality as required by Article 1, Section 2 of the U.S. Constitution by coming as close as possible to equal population across districts. Second, the Final Plan adheres to the Equal Protection Clause. Race was not a predominant factor in the Commission's decision to draw any district line. Third, the Final Plan complies with Section 2 of the VRA. The Commission, after receiving guidance from Non-Partisan Staff, reasonably concluded that it is impossible to draw a majority-minority Congressional district that also satisfies other requirements of Section 2.

II. The Commission did not abuse its discretion in applying the affirmative redistricting criteria of Amendment Y. First, the Plan keeps communities of interest and political subdivisions intact as much as reasonably possible. The Commission split communities of interest, counties, and municipalities only when other redistricting criteria required doing so. Second, the districts are as compact as reasonably

possible. In fact, the Final Plan's eight districts are, on average, more compact than the seven districts adopted in the last redistricting cycle. Third, after considering other redistricting criteria, the Commission maximized the number of competitive districts. Based on both an "ensemble" analysis and a comparison of the Final Plan to the existing congressional map, and in light of both current and historical voting patterns, the Final Plan is more competitive than most other hypothetical plans and significantly more competitive than the existing map.

The Final Plan also does not violate the negative prohibitions of Amendment Y. First, neither the Commission nor Non-Partisan Staff drew the Plan for the benefit of any incumbent, candidate, or political party. Second, the Plan was not drawn for the purpose of, and did not result in, the denial or abridgement of the right of any citizen to vote because of that person's race or membership in a language minority group. This prohibition adopts into Colorado law protections against minority vote dilution as the U.S. Supreme Court understood and articulated that concept at the time voters approved Amendment Y. The

Final Plan complies with that understanding of the VRA. Alternatively, the Final Plan complies with this Court's previous jurisprudence concerning vote dilution.

STANDARD OF REVIEW

Amendment Y requires the Court to approve the Commission's Final Plan "unless it finds the [C]ommission ... abused its discretion in applying or failing to apply the criteria listed in section 44.3." Colo. Const. Art. V, § 44.5(2). Under this standard, the Court defers to the Commission unless it "applie[d] an erroneous legal standard" or there is "no competent evidence in the record [that] supports its ultimate decision." Langer v. Bd. of Comm'rs of Larimer Cty., 2020 CO 31, ¶ 13. Because the Commission must make "policy judgment[s]" in light of a range of alternative "submissions" through which "interested persons ... submit[ted] data, views, or arguments," this Court should approve the Final Plan if a "rational basis" exists for it. Cf. Regular Route Common Carrier Conference v. Pub. Utils. Comm'n, 761 P.2d 737, 743 (Colo. 1988) (explaining the standard of review for deliberative policy judgments by government agencies).

Deferring to the Commission is particularly important in light of Amendment Y's text and purposes. The Commissioners were chosen to "promote consensus" and "reflect[] Colorado's racial, ethnic, gender, and geographic diversity." Colo. Const. Art. V, § 44.1(8)(a), 10(a)-(c). "[T]o the maximum extent practicable," the Commission was required to "provide opportunities for Colorado residents to present testimony at hearings held throughout the state." Id. § 44.2(3) Redistricting is an "incredibly complex and difficult process," "fraught with political ramifications and high emotions." *Hall v. Moreno*, 2012 CO 14, ¶ 1. The "apolitical judiciary" is ill-suited for this "inherently political undertaking." *Id.* ¶ 5. Yet in three of the four last redistricting cycles, the courts were forced to redistrict because the General Assembly could not agree on a map. Hall, 2012 CO 14; Beauprez v. Avalos, 42 P.3d 642, 645-46 (Colo. 2002); Carstens v. Lamm, 543 F. Supp. 68, 71-72 (D. Colo. 1982).

Voters created the non-partisan Commission—which is "independent" and "politically balanced" and "provides representation to [unaffiliated] voters"—to make the complex policy judgments inherent

in the redistricting process. Colo. Const. Art. V, § 44(1). For the Commissioners, redistricting is not "an 'unwelcome obligation." Hall, 2012 CO 14, ¶ 2 (citation omitted). It is a constitutional duty and an opportunity to serve Colorado. As one Commissioner explained, service on the Commission "represented such an important idea and ... unique opportunity for Colorado." Final Plan, Ex. D at 9:16-17. Another expressed the hope that "[t]ogether we have changed the course of congressional redistricting in Colorado and provided an example for the rest of the country." Id. at 15:4-6. Even the only Commissioner to vote no on the Final Plan described the Commission as part of the reason "Colorado [has] become[] the envy of the U.S. in terms of how collaborative we can be." Id. at 15:21-22. "I voted no," he explained, "but that does not ... take away from the work that the Commission does." *Id.* 17:9-10.

The abuse of discretion standard gives Commissioners the freedom they need to fulfill their complex and often difficult duty. The standard also limits the extent to which this Court, and the lower courts, are forced to "reallocate political power." *Rucho v. Common*

Cause, 139 S. Ct. 2484, 2507-08 (2019) (finding the problem of partisan gerrymandering nonjusticiable but observing that nonpartisan commissions were one method for states to address the problem and to ensure the Court was not "condemn[ing] complaints about districting to echo into a void"). By prescribing an abuse-of-discretion standard, Amendment Y ensures that "the choice among alternative plans, each consistent with constitutional requirements, is for the Commission and not the Court." In re Reapportionment of the Colo. Gen. Assembly, 828 P.2d 185, 189 (Colo. 1992) (1992 Reapportionment).

The Commission faced the daunting task of adopting one Final Plan from a theoretical universe of thousands,³ and the Commissioners in fact reviewed more than a hundred potential plans submitted by the public. Whatever choice the Commission made, no plan would, or could, please everyone. Final Plan, Ex. D at 12:20-23 ("No plan itself is perfect, but I believe this plan reflects the will of the people of the state of

³ Two Harvard University graduate students used an algorithm to generate 3,000 hypothetical redistricting plans for Colorado that had equal population, were contiguous and compact, followed county lines as much as possible, and gave no preferences for incumbency. *See* Christopher T. Kenny & Cory McCartan, *The Colorado Preliminary Congressional Map Is Fair*, available at https://tinyurl.com/2se3sjcz.

Colorado and it complies with all the criterial laid out in the state constitution."). "[N]o matter how the lines are drawn," the Commission would "necessarily ... disappoint[some] citizens and interest groups." Hall, 2012 CO 14, ¶ 16. But because the Commission did not abuse its discretion, and because the Final Plan "reasonably balances the ... factors in a manner that will promote 'fair and efficient representation for all citizens," this Court should approve it. Id. ¶ 56 (quoting Reynolds v. Sims, 377 U.S. 533, 565 (1964)).

ARGUMENT

This Court must measure the Final Plan against "applicable federal and Colorado standards." In re Reapportionment of Colo. Gen.

Assembly, 45 P.3d 1237, 1247 (Colo. 2002) ("2002 Reapportionment");

see also In re Reapportionment of Colo. Gen. Assembly, 332 P.3d 108,

110 (Colo. 2011) ("2011 Reapportionment") (evaluating legislative redistricting plan against federal and state requirements). By reviewing federal requirements alongside state law standards, the Court "engage[s] in the most thorough review of this case possible." Beauprez, 42 P.3d at 650.

The Court's review follows a "clear hierarchy" of federal and state redistricting criteria. 2011 Reapportionment, 332 P.3d at 110. That hierarchy is as follows: (1) requirements of federal constitutional and statutory law (one-person-one-vote, Equal Protection, and Section 2 of the VRA); and (2) Colorado constitutional criteria. See id. This brief follows that same hierarchy.

- I. The Final Plan complies with federal law, including the U.S. Constitution and the Voting Rights Act.
 - A. The map achieves precise mathematical population equality as required by Article 1, Section 2 of the U.S. Constitution.

Article 1, Section 2 of the U.S. Constitution requires that

"Representatives ... shall be apportioned among the several States ...

according to their respective Numbers." U.S. Const. Art. 1, § 2, cl. 3.

This language requires "population equality" between congressional districts "as nearly as is practicable." *Karcher v. Daggett*, 462 U.S. 725, 730 (1983) (quoting *Wesberry v. Sanders*, 376 U.S. 1, 7-8 (1983)). The Commission's Final Plan complies with the "as nearly as is practicable" requirement. Dividing Colorado's population equally between its eight Congressional districts leads to an ideal district size of 721,714. Six of

the new districts meet that number exactly, while the final two exceed it by only one. Final Plan, Ex. E.

B. The Final Plan complies with the Equal Protection Clause of the Fourteenth Amendment because the Commission did not draw any district with predominant racial intent.

The Equal Protection Clause of the Fourteenth Amendment prohibits any state from "deny[ing] to any person within its jurisdiction the equal protection of the laws." U.S. Const. Amend. 14, § 1. In the redistricting context, the United States Supreme Court interprets the clause to put strict limitations on when and how a state can consider race when drawing district lines. Without those limitations, the Court worries that putting individuals within a particular district, based on "the color of their skin," reinforces "impermissible racial stereotypes," including the perception that "members of the same racial group," despite their diversity, "think alike" and "share the same political interests." Shaw v. Reno, 509 U.S. 630, 647 (1993). "When a district obviously is created solely to effectuate the perceived common interests of one racial group," the Court has explained, "elected officials are more likely to believe that their primary obligation is to represent only the

members of that group, rather than their constituency as a whole." *Id.* at 648.

To enforce these principles, the Supreme Court has held that "racial gerrymandering" is unconstitutional. *Id.* at 657-58. Accordingly, race cannot be a "predominant factor motivating [a state's] decision to place a significant number of voters within or without a particular district"—thereby subordinating traditional redistricting criteria unless the state can satisfy strict scrutiny. Cooper v. Harris, 137 S. Ct. 1455, 1463-64 (2017) (quoting Miller v. Johnson, 515 U.S. 900, 916 (1995)). So far, only mandatory compliance with "operative provisions of the Voting Rights Act of 1965" has met the Court's standards as a compelling-enough interest to justify "race-based sorting" in redistricting. Cooper, 137 S. Ct. at 1464. Yet at the same time, the Court has held that a state can constitutionally consider communities of interest that include racial minorities, so long as it avoids focusing on race-qua-race by looking to "actual shared interests," such as "political, social, and economic" ties, rather than "racial considerations." Miller, 515 U.S. at 916, 919-20.

The Supreme Court's latest application of the racial gerrymandering doctrine, in Cooper v. Harris, 137 S. Ct. 1455 (2017), is instructive. Cooper shows that the Court continues to hold that this constitutional limitation applies whether the map-drawer is seeking to increase or decrease the influence of minority voters. *Id.*; accord Shaw, 509 U.S. at 650-51. Writing for the majority, Justice Kagan explained that the state acted unconstitutionally when it drew North Carolina's First Congressional District to be a majority-minority district. Although that district satisfied the first of the three "preconditions" for a mandatory majority-minority district under Section 2 of the VRA, North Carolina had not adequately considered whether the district satisfied the VRA's two other "preconditions." Cooper, 137 S. Ct. at 1468-72; see *infra* Part II.C. (explaining and discussing three Section 2 prerequisites). The Cooper Court concluded that the State's actions violated Equal Protection because the State did not have "good reasons'

⁴ Justice Thomas issued a short opinion concurring. Justice Alito, joined by the Chief Justice and Justice Kennedy, concurred that the First Congressional District was unconstitutional, while dissenting with regard to the Twelfth Congressional District based on issues not directly relevant here. *Id.* at 1486.

for thinking that the" VRA required creation of the district. *Id.* at 1469-72.

Here, the Final Plan complies with the Equal Protection Clause of the Fourteenth Amendment because the Plan does not involve "racial gerrymandering." Shaw, 509 U.S. at 657-58. The Commission did not draw any district line with race as the "predominant factor motivating the [Commission's] decision to place a significant number of voters within or without a particular district." Cooper, 137 S. Ct. at 1463-64 (quoting *Miller*, 515 U.S. at 916). As described below in part II, the Commission instead drew each district line by considering the affirmative factors set out in Amendment Y, in order: equal population, compliance with the Voting Rights Act, contiguity, preservation of communities of interest and political subdivisions, compactness, and competitiveness. Colo. Const. Art. V, § 44.3; see generally Final Plan, Ex. D. And to the extent the Commission did take communities of interest that include racial and language minorities into account in drawing the Final Plan, it looked at the "actual shared interests" of the members of those communities, such as "political, social, and economic"

ties, and did not subordinate those to "racial considerations." *Miller*, 515 U.S. at 916, 919-20; *see infra* Part II.B.

C. The Commission's plan complies with Section 2 of the VRA.

Section 2 of the VRA provides that "[n]o voting qualification or prerequisite to voting or standard, practice, or procedure shall be imposed or applied by any State or political subdivision in a manner which results in a denial or abridgement of the right of any citizen of the United States to vote on account of race or color." 52 U.S.C. § 10301(a). The Supreme Court has held that this provision, when applied in the redistricting context, prohibits minority "vote dilution" through the "dispersal of a group's members into districts in which they constitute an ineffective minority of voters." Cooper, 137 S. Ct. at 1464 (quoting *Thornburg v. Gingles*, 478 U.S. 30, 46 n.11 (1986)) (alteration omitted). The Supreme Court has defined and articulated "three threshold conditions for proving vote dilution under Section 2 of the VRA": (1) the "minority group" is numerous enough to form a majority "in some reasonably configured legislative district"; (2) "the minority group must be 'politically cohesive"; and (3) "a district's white majority

must vote sufficiently as a bloc to usually defeat the minority's preferred candidate." *Cooper*, 137 S. Ct. at 1464 at 1470 (quoting *Gingles*, 478 U.S. at 50-51) (alterations omitted). Even if those preconditions are met, there is no violation of Section 2 unless the "totality of circumstances" shows vote dilution. 52 U.S.C. § 10301(b); *Johnson v. DeGrandy*, 512 U.S. 997, 1011-12 (1994) (explaining that the *Gingles* factors are "necessary to prove a § 2 claim," but not "sufficient in combination").

In two decisions in 2006 and 2009, the U.S. Supreme Court made clear that Section 2's prohibition against minority vote dilution did not cover situations in which there is an insufficient voting-age minority population to draw a reasonably compact majority-minority district.

First, in *League of United Latin American Citizens v. Perry (LULAC)*, 548 U.S. 399 (2006), Justice Kennedy wrote a controlling opinion holding that Section 2 of the VRA does not require a state to draw a district that allows minority voters, who cannot form a reasonably compact majority-minority district, to have "the ability to influence the outcome between some candidates." *Id.* at 445 (Kennedy, J.). Such an

interpretation, Justice Kennedy reasoned, "would unnecessarily infuse race into virtually every redistricting, raising serious constitutional questions." *Id.* at 446 (Kennedy, J.).

Then, in Bartlett v. Strickland, 556 U.S. 1 (2009), Justice Kennedy again wrote the Court's controlling opinion and concluded that Section 2 does not require state officials to draw "crossover" districts. Id. at 12-17. Such a district would "allow a racial minority to join with other voters to elect the minority's candidate of choice, even where the racial minority is less than 50 percent of the voting-age population in the district to be drawn." Id. at 6. Reading the VRA to require crossover districts, Justice Kennedy explained, raised the same "serious constitutional concerns under the Equal Protection Clause" as discussed in LULAC. Id. at 22. He added that "[d]isregarding the majorityminority rule and relying on a combination of race and party to presume an effective majority would involve the law and courts in a perilous enterprise." *Id.* He also explained that *Bartlett's* holding "does not consider the permissibility of such districts as a matter of legislative choice or discretion," meaning that the issue remained open for future decision. *Id.* at 23.

The Commission, consistent with the recommendations of the Non-Partisan Staff, concluded that Colorado contains an insufficient voting-age minority population to draw a reasonably compact majority-minority district that also satisfies the other two prerequisites for minority vote dilution under Section 2 of the VRA, including that "a district's white majority must vote sufficiently as a bloc to usually defeat the minority's preferred candidate." *Cooper*, 137 S. Ct. at 1460 (citations and alterations omitted); Final Plan pp. 10-11. The Commission received no public comments suggesting otherwise. *Id.* p. 11. As a result, the Commission's Final Plan complies with Section 2 of the VRA.

II. The Commission did not abuse its discretion in applying the substantive criteria of section 44.3 of Amendment Y.

Amendment Y sets out the criteria the Commission must satisfy in approving a redistricting plan. Some of these factors repeat or incorporate parts of federal law. Others add additional redistricting principles the Commission must balance. In all cases, the application of Amendment Y's redistricting criteria is committed to the Commission's discretion. Colo. Const. Art. V, § 44.5(2).

A. To the extent section 44.3's requirements mirror federal law, the Final Plan meets those requirements.

Amendment Y repeats some federal law requirements, including that districts have equal population and that the Commission comply with Section 2 of the Voting Rights Act. Colo. Const. Art. V, § 44.3. Even before Amendment Y, Colorado law incorporated these federal requirements as redistricting criteria. *Hall*, 2012 CO 14, ¶¶ 36-39 (noting that the General Assembly "explicitly codified" these "constitutional mandates … to ensure that any adopted redistricting scheme will be constitutional").

As explained above in part I, the Commission's Final Plan complies with these mandates. The plan's eight districts vary in population by no more than one person and therefore meet the requirement of "precise mathematical population equality between districts." Colo. Const. Art. V, § 44.3(1)(a).⁵ And the Commission—

⁵ That provision also requires districts "be composed of contiguous geographic areas." Colo. Const. Art. V, § 44.3(1)(a). As is clear from an

consistent with the conclusions of Non-Partisan Staff—correctly concluded that Colorado contains an insufficient voting-age minority population to draw a reasonably compact majority-minority district that also satisfies the other two prerequisites for minority vote dilution under Section 2 of the VRA. *See id.* § 44.3(1)(a), (b).

B. The Commission's plan preserves whole communities of interest and whole political subdivisions as much as reasonably possible.

Communities of interest. Communities of interest are reasonably proximate groups whose members share "one or more substantial interests that may be the subject of federal legislative action ... and thus should be considered for inclusion within a single district for purposes of ensuring its fair and effective representation." Colo. Const. Art. V, § 44(3)(b)(I). These interests "include but are not limited to matters reflecting" geographic, economic, cultural, and public policy ties, as well as other "issues of demonstrable regional significance." *Id.* § 44(3)(b)(II) & (III); *see also Miller*, 515 U.S. at 916 (recognizing that redistricting may be based on "communities defined by

inspection of the district maps, the Final Plan satisfies this requirement. Final Plan, Ex. A.

actual shared interests"). As one Commissioner put it, there is "a web of connections, links that cross the whole of our state." Final Plan, Ex. D at 18:18-25. The Commission appropriately considered these connected and competing interests and, in light of other mandatory factors, combined and preserved communities of interest within districts to ensure fair and effective representation.

Communities of interest can be defined in "myriad ways" and "regularly evolve." *Hall*, 2012 CO 14, ¶ 48. Older communities may fade, and new ones may emerge, as "the state's demographics continue to shift and change." *Id.* Because communities of interest constantly evolve, they are "not necessarily internally consistent and will often conflict." *Id.* ¶ 53. Thus, it is impossible to create a redistricting plan that does not separate at least some communities of interest or combine different communities of interest in single districts. Drawing a line to encompass one community will "require alteration to another part of the map to balance population, which might then trigger even further alterations" and have a "ripple effect" on other mandatory redistricting factors. *Id.* The abuse-of-discretion standard allows the Commission to

make the necessary policy choices in this area: identifying communities of interest, determining which must be kept whole within a single district and which should be combined into one district, and, ultimately, ensuring that each community of interest receives "fair and effective representation." Colo. Const. Art. V, § 44(1)(b)(I).

To inform this decision-making, the Commission heard testimony at 40 public hearings (for a total of over 100 hours) and received over 5,000 written public comments. Much of this input related to communities of interest. The members of the public spoke with diverse voices about the communities of interest important to them. One commenter may have felt that a neighborhood, city, county, or region was characterized by certain communities of interest, while a neighbor might have felt that different and conflicting communities of interest should be prioritized.

When the Denver District Court drew 2011's congressional map, it relied heavily on testimony from a single source: existing representatives from each district. *See, e.g., Moreno v. Gessler*, Nos. 11CV3461 & 11CV3463, 2011 WL 8614878 (Colo. Dist. Ct. (Denver Cty.)

Nov. 10, 2011). Consistent with Amendment Y, the Commission's deliberations were informed by a much wider range of viewpoints, from thousands of ordinary Coloradans. Consequently, while every Commissioner heeded communities of interest in voting for the Final Plan, see Final Plan, Ex. D, no listing of communities of interest can convey the breadth of information received or the complexity (and sometimes the amorphous nature) of Colorado's many communities of interest.

The Commissioners made clear that preservation of communities with shared interests that may be the subject of federal legislation was integral to their support for the Final Plan. *E.g.*, Final Plan, Ex. D at 3:4-19, 4:22-5:1, 6:5-13, 8:3-10, 10:6-11:1, 12:13-18, 18:7-19:4 & 19:21-20:15, 21:13-25, 23:11-18. The table attached as Addendum 1 describes communities of interest in each of the districts of the Final Plan as identified by the public and the Commission.

Political Subdivisions. Political subdivisions are "relatively static," Hall, 2012 CO 14, ¶ 48, so keeping them whole (when reasonably possible) can be less complicated than defining and then

balancing communities of interest. Still, in some instances, other constitutional requirements required splitting political subdivisions. The Final Plan splits only 11 counties, and does so only to achieve equal populations across districts or to keep a municipality or a community of interest whole. The Commission also worked to keep municipalities together, and the Final Plan splits only 14 across the state. These splits were necessary for reasons such as keeping communities of interest intact or ensuring equal population across districts. Descriptions of all county and city splits and the reasons for them are set forth in the table attached as Addendum 2. That table shows that the Commission has preserved "whole political subdivisions" as much as is reasonably possible." Colo. Const. Art. V, § 44.3(2)(a).

C. The Commission's plan creates districts that are as compact as reasonably possible.

Amendment Y requires districts that are "as compact as ... reasonably possible." *Id.* § 44.3(1)(a) & (2)(b). A district is compact when it is a "geographic area whose boundaries are as nearly equidistant as

⁶ One of those splits—Broomfield County—includes only uninhabited areas in District 2, while the rest of the County remains in District 7. Final Plan Exs. A and F; Addendum 2.

possible from the geographic center of the area." *Acker v. Lowe*, 496 P.2d 75, 76 (Colo. 1972). As a matter of geometry, the most compact district—a perfect circle—is impossible to draw in the real world. Accordingly, compactness scores account for "variances caused by population density and distribution, census enumeration districts, and reasonable variations necessitated by natural boundaries and by county lines." *Id*.

Compactness helps promote "fair and effective representation" because, when a district is compact, "the easier it is to travel across and to physically engage with the district." Hall, 2012 CO 14, ¶ 51 (quoting Carstens, 543 F. Supp. at 87). But because of differences in population density around the state—with many parts of the Front Range densely populated, and areas to the south, east, and west sparsely populated—Colorado's "districts will never be of comparable physical size." Hall, 2012 CO 14, ¶ 51.

The Final Plan keeps districts "as compact as ... reasonably possible." Colo. Const. Art. 5, § 44.3(1)(a) & 2(b). The Non-Partisan Staff has provided compactness scores using several different accepted scales.

Final Plan, Ex. H. These scores "are most useful to show *relative* compactness, by comparing one district to alternative or benchmark versions of that district." *Covington v. North Carolina*, 316 F.R.D. 117, 140 (M.D.N.C. 2016).

The compactness scores show that the Final Plan is an improvement over the existing seven-district map. Compare Final Plan, Ex. H with Addendum 3 (2011 Compactness Ratings). While four districts have become slightly less compact on most measures (Districts 1, 3, 4, and 6), three others have become *more* compact, in some cases significantly so (Districts 2, 5, 7). Final Plan, Ex. H; Addendum 4 (Compactness Comparison Chart). The newest district (District 8) is near the middle in relative compactness. Final Plan, Ex. H. Importantly, no matter what scale is used, the average district in the Final Plan is *more compact* than the average district in the existing 2011 map. Addendum 4. Given Colorado's large size and variable population density, these districts are "as compact as reasonably possible," when other redistricting criteria and the Commission's

constitutionally prescribed discretion are taken into account. Colo. Const. Art. V, § 44.3(2)(b).

The policies animating compactness are not just an issue of district size. For example, Districts 1 and 6 (the two smallest districts by area) are the least compact. In contrast, Districts 3 and 4 (the two largest districts) score better on various compactness scales. The fact that Districts 1 and 6 are relatively less "compact" is largely attributable to the irregular boundary lines and shape of the cities of Denver and Aurora. And because of their small size, Districts 1 and 6 do not implicate the concerns raised in *Hall*. Indeed, these districts are "the easi[est] ... to travel across and to physically engage with." Hall, 2012 CO 14, ¶ 51. Because other constitutional factors, including keeping political subdivisions and communities of interest whole,⁷ guided the Commission, Districts 1 and 6's relative compactness does not suggest an abuse of discretion. It instead suggests the opposite—

 $^{^7}$ The City of Denver and City of Aurora have long been recognized as communities of interest as well as political subdivisions. *See Hall*, 2012 CO 14, ¶ 59 & ¶ 92.

that the districts drawn by the Final Plan are as compact as reasonably possible, in light of other constitutional redistricting criteria.

D. After addressing the preceding factors, the Commission's plan maximizes the number of politically competitive districts to the extent possible.

Once the Commission has considered other redistricting criteria, Amendment Y directs the Commission to "thereafter" "maximize" the number of politically competitive districts "to the extent possible." Colo. Const. Art. V, § 44.3(3)(a). Competitiveness is defined as "a reasonable potential for the party affiliation of the district's representative to change at least once between federal decennial censuses." *Id.* § 44.3(3)(d). The Commission has discretion to determine the manner in which to measure competitiveness and may consider metrics such as past election results, party registration, and other evidence-based analyses. *Id.*

The Commission selected the first method for measuring competitiveness and directed the staff to analyze the results from eight

state-wide elections.⁸ Final Plan, Ex. I. Using that data, the Commission was able to analyze which districts were competitive with a small partisan differential, e.g., 5% or less, and districts that are still competitive but with a higher differential between 5% and 10%. Applying those cut-offs, the Final Plan creates one competitive district (District 8) and two semi-competitive districts (Districts 3 and 7). Final Plan, Ex. I. Given the need to comply with other mandatory redistricting criteria, this result was well within the Commission's discretion.

Indeed, the Final Plan is more competitive than most other hypothetical maps. An "ensemble analysis" presented to the Commission after the First Staff Plan confirms this conclusion. Jeanne Clelland et al., Ensemble Analysis for 2021 Congressional Redistricting in Colorado at 8 (Sep. 10, 2021), attached as Addendum 5. That analysis considered an "ensemble" of randomly generated, hypothetical

⁸ Those eight past elections were the races for the 2016 U.S. Senate, 2016 President, 2018 Attorney General, 2018 Governor, 2018 Treasurer, 2018 Secretary of State, 2018 CU Regent-at-Large, and 2020 U.S. Senate. Final Plan, Ex. I.

redistricting plans. *Id.* at 2. This ensemble provides a statistical range of various redistricting criteria, including competitiveness. *Id.*

Based on that analysis (and considering an approach that attempts to keep counties whole, as Amendment Y requires), the study authors found that, if competitiveness is defined as a "vote band" of 8.5% in either party's favor, over half of the theoretical ensemble plans generated only one competitive district. *Id.* at 9. If competitiveness is defined as a 10% vote band, meanwhile, the most common result among theoretical plans is two competitive districts. *Id.* The Final Plan exceeds both measures and is more competitive than most randomly generated plans. Using the average of eight statewide elections, two of the districts (Districts 7 and 8) have voting differentials under 8.5% (which also means they fall within the 8.5% vote band), and three of the districts (Districts 3, 7, and 8) have voting differentials under 10% (which also means they fall within the 10% vote band). See Final Plan, Ex. I; Addendum 6.

Additionally, the Final Plan creates as many competitive or semicompetitive districts as existed when the 2011 redistricting plan was adopted (based on 2010 data), and two of the new districts are more competitive than the most competitive previous district. Addendum 6. Moreover, the competitiveness that once existed in the current districts has been all but lost due to political and demographic changes. Only one of the existing districts remains competitive based on 2020 data. The Final Plan restores and improves on the competitiveness that existed in 2011. *Id.* Finally, the percentage of unaffiliated voters exceeds 40% in every new district. Even putting aside the above competitiveness metrics, this suggests that as voters' political preferences change, so could the outcome of elections in any new district.

Thus, comparisons of the Final Plan to both an ensemble analysis and the existing 2011 map confirm that, after addressing other constitutional factors, the Commission "maximize[d] the number of politically competitive districts" "to the extent possible." Colo. Const. Art. V, § 44.3(3)(a).

E. The Commission's plan was not drawn to protect any incumbents, declared candidates, or political parties.

In addition to setting out certain prescriptions—requirements the Commission must follow—Amendment Y includes two prohibitions. The

first prohibits districts drawn "for the purpose of protecting" any incumbent, candidate, or party. Colo. Const. Art. V, § 44.3(4)(a).

The Final Plan was not drawn for these purposes. The Commission's Non-Partisan Staff did not consider incumbency or party in preparing any of the Staff Plans. And Commission members affirmed in their final statements that they had not taken incumbency or party into account. *See* Final Plan, Ex. D at 4:8-10, 5:9-10, 11:18-19, 20:18-20.

As a structural matter, Amendment Y also insulates the Commission from partisan influence. Commissioners are ordinary voters—they cannot be current or former politicians, political candidates, campaign staff, or party officials. Colo. Const. Art. V, § 44.1(2)(c). Additionally, Amendment Y requires lobbyists to register with the Secretary of State and identify the person or entity who hired them to appear before the Commission. *Id.* § 44.2(4)(b)(III). During the Commission's work this year, after a complaint was filed alleging lobbyists had not registered, the Commission released a statement repeating this disclosure requirement and warning that the Commission would take the failure of a lobbyist to register into account

when considering the content or product of the undisclosed lobbying.

Available at https://tinyurl.com/2b4y7vj6. The Commission took

appropriate steps to insulate itself from partisan influence and did not take party or candidacy into account in approving the Final Plan.

F. The Commission's plan was not drawn for the purpose of and will not result in the denial or abridgement of the right of any citizen to vote on account of their race or membership in a language minority group, including diluting the impact of that racial or language minority group's electoral influence.

Amendment Y prohibits the Commission from approving districts "drawn for the purpose of or [that] result[] in the denial or abridgement of the right of any citizen to vote on account of that person's race or membership in a language minority group, including diluting the impact of that racial or language minority group's electoral influence." Colo. Const. Art. V, § 44.3(4)(b). This provision—as its text makes clear—incorporates into state law protections against minority vote dilution, as the U.S. Supreme Court understood and articulated that concept at the time voters adopted Amendment Y in November 2018. Both the voters' intent (gleaned from the 2018 Blue Book) and the

canon of constitutional avoidance support this interpretation. The Final Plan complies with those vote-dilution protections.

If this Court disagrees with this interpretation of Amendment Y, however, it should still uphold the Final Plan, consistent with this Court's pre-*LULAC/Bartlett/Cooper* analysis of minority vote dilution in *Beauprez v. Avalos*, 42 P.3d 642, 650-51 (Colo. 2002).

1. Amendment Y's prohibition against minority vote dilution adopts into state law the prohibition against minority vote dilution as articulated by the U.S. Supreme Court at the time of Amendment Y's adoption, and the Final Plan complies with that correct interpretation.

Section 44.3(4)(b) prohibits the Commission from approving a map that "has been drawn for the purpose of or results in the denial or abridgement of the right of any citizen to vote on account of that person's race or membership in a language minority group, including diluting the impact of that racial or language minority group's electoral influence." *Id.* This command forbids minority vote dilution, as that concept was understood and explained by the United State Supreme Court when the people approved Amendment Y in 2018.

This conclusion follows from the constitutional text. Section 44.3(4)(b) uses language identical to Section 2's prohibition of action that "results in a denial or abridgement of the right of any citizen of the United States to vote on account of race." Compare 52 U.S.C. § 10301(a) with Colo. Const. Art. V, § 44.3(4)(b). Both Amendment Y and the VRA then extend these precise protections to language minority groups. 52 U.S.C. §§ 10301(a) & 10303(f)(2); Colo. Const. Art. V, § 44.3(4)(b). By using "identical language" to the VRA, Amendment Y transports the VRA's meaning into Colorado law, ensuring its protections cannot be eroded by further federal legislative or judicial developments. Colo. Ethics Watch v. Senate Majority Fund, LLC, 269 P.3d 1248, 1256 (Colo. 2012) (explaining that this Court presumes "the electorate knew the existing law," including complex federal constitutional principles, when voting for an amendment, and holding that the electorate incorporated existing federal law into state law when approving an amendment).

Section 44.3(4)(b)'s use of the phrase "including diluting the impact of that racial or language minority group's electoral influence" supports this interpretation. "Vote dilution" is a term of art under

Section 2 of the VRA with a settled meaning. As interpreted by the U.S. Supreme Court, for a minority group's votes to have been "diluted," all three of the VRA preconditions must be met. E.g., Cooper, 137 S. Ct. at 1464; Bartlett, 556 U.S. at 11. Justice Kennedy explained in LULAC why the Supreme Court has taken this approach: adopting a broader understanding of minority vote dilution and minority vote "influence" would "infuse race into virtually every redistricting, raising serious constitutional questions." 548 U.S. at 405 (controlling opinion of Kennedy, J.). Section 44.3(4)(b)'s use of the phrase, "including diluting the impact of that racial or language minority group's electoral influence," thus indicates that Colorado law also includes the same understanding of minority vote dilution and minority vote influence that the U.S. Supreme Court had articulated as of the time of Amendment Y's approval.

If any doubt exists about Section 44.3(4)(b)'s meaning in light of its plain text, the 2018 Blue Book, which explained to voters the meaning and content of 2018 ballot proposals including Amendment Y, dispels that doubt. As this Court explained in *Davidson v. Sandstrom*,

83 P.3d 648 (Colo. 2004), this Court must "give effect to the electorate's intent," and if constitutional language is ambiguous, the Court consults the Blue Book to discern that intent. *Id.* at 654-55; *accord In re Interrogatories on S.B. 21-247*, 2021 CO 37, ¶ 44 (relying on the Blue Book to interpret Amendment Y).

Here, immediately after the Blue Book explains that the VRA "requires that a minority group's voting strength not be diluted under a redistricting map," it further explains that "Amendment Y incorporates principles of the Voting Rights Act into state law and prohibits the approval of a map that violates these principles."

Colo. Legislative Council, Research Pub. No. 702-2, 2018 State Ballot Information Booklet ("Blue Book"), at 9 (emphasis added). The Blue Book then discusses the remaining districting criteria in Amendment Y, without again mentioning minority vote dilution. Id. By far the most straightforward conclusion that a Colorado voter would draw from this discussion is that the way Amendment Y ensures "a minority group's voting strength not be diluted" is by "incorporat[ing] principles of the

Voting Rights Act into state law and prohibit[ing] the approval of a map that violates these principles." *Id*.

The Blue Book's explanation also shows why Section 44.3(4)(b) serves an additional function beyond Section 44.3(1)(b), which requires the Commission to comply with Section 2 of the VRA. Section 44.3(1)(b) has no independent operative impact, given that the U.S. Constitution's Supremacy Clause already requires the Commission and this Court to apply, and comply with, Section 2. See U.S. Const. Art. VI, cl. 2. Section 44.3(4)(b), on the other hand, promotes important policy ends by "incorporat[ing] principles of the Voting Rights Act into state law." Blue Book at 9 (emphasis added). Thus, if Congress repealed or weakened Section 2 of the VRA, or if the Supreme Court invalidated or narrowed that provision, Section 44.3(4)(b) would ensure Colorado law will continue to protect against minority vote dilution, as the U.S. Supreme Court had articulated that concept in 2018. Cf. Shelby Cty. v. Holder, 570 U.S. 529 (2013) (invalidating coverage formula of Section 4 of the VRA).

There is another powerful reason for this Court to adopt the interpretation of Section 44.3(4)(b) the Commission urges: the "duty to interpret" Amendment Y "in a constitutional manner." See People v. Montour, 157 P.3d 489, 504 (Colo. 2007). As explained above in Part I.B., Equal Protection requires a state to satisfy strict scrutiny—the most demanding level of constitutional review—if the state subordinates race-neutral redistricting criteria to race. The Supreme Court has so far held that *only* compliance with the VRA overcomes this weighty burden. Cooper, 137 S. Ct. at 1463-64. Thus, if this Court holds that Section 44.3(4)(b) requires the Commission to draw districting lines based on racial considerations beyond the anti-votedilution requirements of the VRA, that holding places Colorado law on a collision course with the Equal Protection Clause. That could lead to dire consequences, including potential federal court invalidation of any Commission map drawn under such principles, invalidation of Section 44.3(4)(b), or, even worse, invalidation of Amendment Y as a whole. Nothing indicates the voters intended that result or wished to gamble

Colorado's new redistricting system on the outcome of a future federal lawsuit.

The interpretation urged by certain commenters before the Commission illustrates the constitutional risk that adopting an alternative understanding of Section 44.3(4)(b) would entail. Those commenters argue that Section 44.3(4)(b)'s prohibition against "diluting the impact of that racial or language minority group's electoral influence" requires the Commission to, among other things, (1) engage in a race-focused inquiry for any area with a "sizable" number of minorities; (2) determine whether those racial minorities will likely align with white voters who support the same political party or the same candidates in primary or general elections, based on political "predictive tools"; and (3) draw congressional lines based on these racial considerations. See https://tinyurl.com/2kj7r4xs.

The Commission is deeply concerned that a reviewing federal court would conclude this race-focused interpretation of Section 44.3(4)(b) violates Equal Protection. The Supreme Court in *LULAC* and *Bartlett* did not decide under what conditions States could

permissibly draw so-called minority influence districts or minority crossover districts (indeed, *Bartlett* left the issue open for crossover districts). *Bartlett*, 556 U.S. at 23. Yet language in those opinions strongly indicates the Supreme Court would likely invalidate a state law requiring such districts because, in the Court's view, such a requirement "unnecessarily infuses race into virtually every redistricting" and "rais[es] serious constitutional questions." *LULAC*, 548 U.S. at 446 (Kennedy, J.). The Supreme Court has also strongly indicated that "relying on a combination of race and party to presume an effective majority," impermissibly risks "involv[ing] the law and courts in a perilous enterprise." *Bartlett*, 556 U.S. at 22 (Kennedy, J.).

The Commission is also concerned by the implications of the Supreme Court's latest case in this area, *Cooper v. Harris*, 137 S. Ct. 1455 (2017), which also predated adoption of Amendment Y. *Cooper* unanimously held that North Carolina violated Equal Protection when it created a majority-minority district that it mistakenly believed was required by the VRA. This was true whether the state drew that district to *benefit* minorities *or to harm* minorities. *Cooper*, 137 S. Ct. at

1468–69. It is therefore extremely doubtful the Court would permit Colorado to adopt the race-focused approach some commentators believe Section 44.3(4)(b) requires.

As discussed above in Part I.C., the Commission properly concluded that Colorado contains an insufficient voting-age minority population to draw a reasonably compact majority-minority district that also satisfies the U.S. Supreme Court's understanding of minority vote dilution. Since Section 44.3(4)(b) adopted that same understanding, the Commission's Final Plan complies with Section 44.3(4)(b).

2. If this Court disagrees with the Commission's reading of Amendment Y, it should still uphold the Final Plan under this Court's decision in Beauprez.

If this Court disagrees with the Commission's interpretation of Section 44.3(4)(b), it should still uphold the Final Plan because the plan does not dilute "the impact of [a] racial or language minority group's electoral influence," as this Court understood that concept in *Beauprez* v. Avalos, 42 P.3d 642 (Colo. 2002).

This Court decided *Beauprez* in 2002—before the U.S. Supreme Court's decisions in *LULAC*, *Bartlett*, and *Cooper*—and in so doing,

articulated a more modest approach to the concept of minority vote dilution that is inconsistent with the more aggressive approach suggested by some commenters. In considering whether new congressional districts diluted "minority voting strength," Beauprez pointed to the district court's analysis, and then held that, given that the new congressional map "increased the percentage of the Hispanic population in three districts" and "c[ame] close to creating a minority 'influence district' in the new district," "the approximately 3% drop in the Hispanic population of District 1 ... d[id] not give rise to a finding of unconstitutional vote dilution." Id. at 650-51. Beauprez also cited with approval Carstens v. Lamm, 543 F. Supp. 68 (D. Colo. 1982), explaining that Carstens held a "3-4% decrease in Hispanic population was not constitutionally significant in Colorado given the fact that Hispanics cannot reach the 60 to 65% population in a given district necessary to exercise political control of that district." Beauprez, 42 P.3d at 651.

Under the *Beauprez* approach, a redistricting plan does not result in minority vote dilution if it draws districts that—all things considered—do not obviously alter the racial balance of the new

districts to significantly disadvantage minority voters, particularly if a majority-minority district cannot be drawn.

To be clear, because LULAC and Bartlett post-date Beauprez, the best reading of Section 44.3(4)(b) is that the people of Colorado adopted into state law the U.S. Supreme Court's 2018 understanding of minority vote dilution. See supra Part II.F.1. Notably, when this Court confronted an issue related to minority vote dilution in 2011, it cited Bartlett, not the outdated Beauprez, indicating that the U.S. Supreme Court's more recent opinions should control over Beauprez. 2011 Reapportionment, 332 P.3d at 111-12. That said, Beauprez's light-touch, holistic approach is preferable to the one urged by some commenters. It poses less (although still significant) constitutional threat to Section 44.3(4)(b) and Amendment Y under the Supreme Court's Equal Protection Clause doctrine. As noted above, the commenters' approach would force the Commission to adopt an intensively racially focused inquiry whenever it draws districts lines involving any significant minority population. This approach creates a very substantial constitutional risk. Given that Beauprez's inquiry provides a far lighter

touch in terms of its focus on race, the constitutional risk from adopting that approach would be commensurately reduced, although not eliminated.

Applying *Beauprez*'s inquiry of comparing overall minority composition of the prior and new districts, in light of all circumstances, shows that the Commission's Final Plan does not involve dilution of "minority voting strength." 42 P.3d at 651.

District	Hispanic Population in Prior Map (2010 Census Data)	Hispanic Population in Prior Map (2020 Census Data)	Hispanic Population in Final Plan
1	30.7%	26.0%	27.8%
2	20.3%	11.6%	14.2%
3	24.2%	24.7%	25.7%
4	20.2%	22.5%	13.6%
5	15.0%	16.8%	17.9%
6	9.9%	22.1%	22.1%
7	27.3%	29.9%	15.1%
8	-	-	38.5%

While the Commission did not consider this racial data and did not subordinate any redistricting criteria to considerations of race, it is notable under *Beauprez* that, when using 2020 Census data, the Hispanic population increases in Districts 1, 2, 3, and 5, and stays the same in District 6. While the Hispanic population declines in Districts 4 and 7, that is only because Colorado gained a new congressional seat, which contains a 38.5% Hispanic population under the Commission's Final Plan. That is a significantly higher Hispanic population than in any district under the prior map, using both 2020 and 2010 Census data. "Given these facts" and the deferential standard of review, the Commission's Final Plan would be lawful under the *Beauprez* approach, if the Court adopts that approach as the meaning of Section 44.3(4)(b). 42 P.3d at 651.

CONCLUSION

The Commission respectfully requests that the Court approve the Final Plan and order that it be filed with the Secretary of State.

STATEMENT REGARDING ORAL ARGUMENT

Counsel for the Commission wishes to participate in the oral argument scheduled for 1 p.m. on October 12, 2021.

Dated: October 8, 2021 Respectfully submitted,

s/Frederick R. Yarger

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CERTIFICATE OF SERVICE

I certify that on October 8, 2021, a true and correct copy of this COLORADO INDEPENDENT CONGRESSIONAL REDISTRICTING COMMISSION'S BRIEF IN SUPPORT OF APPROVAL OF THE FINAL CONGRESSIONAL REDISTRICTING PLAN was filed with the Court via Colorado Courts E-Filing System, with e-service to the following:

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Colorado Independent Congressional Redistricting
Commission's Brief in Support of Approval of Final
Congressional Redistricting Plan

Addendum 1

Communities of Interest Chart

In re Congressional Redistricting Commission—Case No. 2021SA208 Communities of Interest Considered in Final Plan

Congressional District 1

Communities of Interest	Source	
As the capital and largest city in Colorado, Denver is its own community of interest. Its downtown is home to the offices and headquarters for many of Colorado's largest companies. Denver is home to many of Colorado's most prominent cultural attractions including museums, the Denver Zoo, the Denver Center for Performing Arts, and numerous sports and entertainment facilities.	 See Hall v. Moreno, 2012 CO 14, ¶ 59 7/14/21 Denver Hearing,¹ Testimony of Garnett, Alec 	
CD1 contains many internal communities of interest such as historic Hispanic/Latino and African-American Denver neighborhoods, business centers, and cultural areas.	 7/14/21 Denver Hearing, Testimony of Cobell, Alex 7/14/21 Denver Hearing, Testimony of Gaytan, Xochitl 7/14/21 Denver Hearing, Testimony of Johnson, Sue 7/14/21 Denver Hearing, Testimony of City Council member Torres, Jamie 7/14/21 Denver Hearing, Testimony of Atencio, 	

 $^{^{\}rm 1}$ All hearing and meeting summaries are available at https://redistricting.colorado.gov/content/meeting-summaries.

	•	7/27/21 Denver Hearing, Testimony of Haynes, AnnaJo
		7/27/21 Denver Hearing, Testimony of Espinoza, Cecelia
		7/27/21 Denver Hearing, Testimony of Webb, Wellington
	•	7/27/21 Denver Hearing, Testimony of Scott-Haynes, Victoria
	•	7/14/21 Denver Hearing, Testimony of Garnett, Alec
The Denver International Airport, the third busiest airport in the United States, is also located in CD1.	•	7/27/21 Denver Hearing, Testimony of Maj, Chris
	•	7/28/21 Aurora Hearing, Testimony of Tipton, Gail

Congressional District 2

Communities of Interest	Source
CD2 contains all or portions of eleven counties that have shared interests regarding the use and preservation of federally owned lands (a national park and lands managed by the Bureau of Land Management and the U.S. Forest Service); the use and conservation of water resources that are governed by an interstate compact (the upper Colorado River headwaters); and the fostering of outdoor recreation (camping, skiing, hiking, fishing, hunting, mountain	7/17/21 Fort Collins Hearing, Testimony of Shadduck-McNally, Jody, Larimer County Commissioner

biking, and river rafting). CD2 keeps together eleven of Colorado's ski resorts (Vail, Steamboat, Beaver Creek, Copper, Keystone, Breckenridge, Arapahoe Basin, Loveland, Granby Ranch, Winter Park, and Eldora). Because the communities in this district rely heavily on public lands and outdoor recreation, they have a significant interest in environmental protection and protecting public lands from forest fires and other threats.

- 7/23/21 Steamboat Springs Hearing, Testimony of Lukens, Shannon
- 7/23/21 Steamboat Springs Hearing, Testimony of Delaney, Linda
- 7/23/21 Steamboat Springs Hearing, Testimony of Corrigan, Tim
- 7/23/21 Steamboat Springs
 Hearing, Testimony of
 Hewitt, Cole, representing
 Yampa Valley Housing
 Authority
- 7/23/21 Steamboat Springs Hearing, Testimony of Carson, Catherine
- 7/23/21 Steamboat Springs Hearing, Testimony of Brower, Diane
- 7/23/21 Steamboat Springs Hearing, Testimony of Baroumos, Anne
- 7/23/21 Steamboat Springs Hearing, Testimony of Macy, Sonya, city council member

7/23/21 Steamboat Springs Hearing, Testimony of Schmidt, Max 7/31/21 Frisco Hearing, Testimony of Newcomer, Dr. Susan 7/31/21 Frisco Hearing, Testimony of the Honorable Elisabeth Lawrence representing Summit County Government 7/31/21 Frisco Hearing, Testimony of Hyland, Ryan, representing the Town of Silverthorne 7/31/21 Frisco Hearing, Testimony of Hoover, Jessica, representing High Country Conservation Center 7/31/21 Frisco Hearing, Testimony of Mortensen, Hunter 7/31/21 Frisco Hearing, Testimony of Saade, Carol, representing the Town of Breckenridge

7/31/21 Frisco Hearing, Testimony of Henceroth, Alan, representing Arapahoe Basin Ski Area 7/31/21 Frisco Hearing, Testimony of McLaughlin, Patricia 7/31/21 Frisco Hearing, Testimony of Marlin, Commissioner George, representing Clear Creek County 8/3/21 Centennial Hearing, Testimony of Thomas-Dobersen, Deb 8/10/21 Longmont Hearing, Testimony of Utton, Beth 8/10/21 Longmont Hearing, Testimony of Neilson, Marty 8/11/21 Boulder Hearing, Testimony of Sevin, Cory 8/11/21 Boulder Hearing, Testimony of Vaughan, Bill 8/11/21 Boulder Hearing, Testimony of Friend, George 8/11/21 Boulder Hearing, Testimony of Allaire, Neil

- 9/24/2021 CICRC Meeting, Statements of C. Tafoya, 18:2-12, attached as Att. 1
- Carstens v. Lamm, 543 F.
 Supp. 68, 83 (D. Colo. 1982)
 ("Geographically speaking,
 the state is divided into
 three principal regions: (1)
 eastern plains, (2) western
 slope and (3) Rocky
 Mountains and Continental
 Divide.")
- Carstens, 543 F. Supp. at 92 (explaining that the front range counties of Gilpin and Clear Creek have strong ties with Boulder)
- See Hall, 2012 CO 14, ¶ 61 (noting that the connection between the importance of the "I-70 transit corridor from the populous Front Range to the many recreational opportunities and resorts along the interstate")

- 8/10/21 Longmont Hearing, Testimony of Benham, Andrew 8/14/21 Greeley Hearing, Testimony of Stephens, Kristin
- See Hall, 2012 CO 14, ¶ 60 (noting that a community of interest exists "between the state's flagship public research universities")

Communities of Interest	Source
CD3 contains 26 whole counties and part of another county (Eagle County) that have communities with shared interests regarding: the use and preservation of federally owned lands; the use and conservation of water resources that are governed by interstate compacts (the Colorado River, the San Juan River, the Rio Grande River and the Arkansas River); the fostering of outdoor recreation and tourism taking place on federally owned lands (camping, hiking, fishing, hunting, mountain biking, river rafting, and skiing); the preservation and promotion of farming and agricultural production; and the preservation and promotion of natural resources and mining industries. These shared interests involve significant policy matters that are regulated by federal agencies within the Department of the Interior and the Department of Agriculture. These communities have shared policy interests that are subject to federal legislative action including the environment, water resources, employment, public health, and the use and preservation of public lands.	 7/9/21 Lamar Hearing, Testimony of Partin, Carole 7/9/21 Lamar Hearing, Testimony of Marquesen, Dr. Victoria 7/9/21 Lamar Hearing, Testimony of Singletary, John 7/24/21 Craig Hearing, Testimony of Beck, Ray 7/24/21 Craig Hearing, Testimony of Dickinson, T Wright, former Moffat County Commissioner

• 7/30/21 Montrose Hearing, Testimony of Chancellor, Dan
• 7/30/21 Montrose Hearing, Testimony of Dodd, Mary
• 7/30/21 Montrose Hearing, Testimony of Patterson, William
• 7/30/21 Grand Junction Hearing, Testimony of McCarney, Kevin
• 7/30/21 Grand Junction Hearing, Testimony of Miller, Mike
• 7/31/21 Carbondale Hearing, Testimony of Kury, Kelly McNicholas
• 7/31/21 Carbondale Hearing, Testimony of Poschman, Greg
• 7/31/21 Carbondale Hearing, Testimony of Stepp, Paula
• 8/6/2021 Alamosa Hearing, Testimony of Otero, Shirley Romero, the President of Land Rights Council

• 8/6/2021 Alamosa Hearing, Testimony of Miller, Jan Foster
• 8/6/2021 Alamosa Hearing, Testimony of Vigil, Jan, Alamosa City Councilman
• 8/6/2021 Alamosa Hearing, Testimony of Tidd, Charles, Chair of Saguache County Democratic Party
• 8/7/21 Durango Hearing, Testimony of Cure, Carol
• 8/7/21 Durango Hearing, Testimony of Zeller, Christi
• 8/7/21 Durango Hearing, Testimony of Bowman, Herbert
• 8/7/21 Durango Hearing, Testimony of Dodd, Mary
• 8/7/21 Durango Hearing, Testimony of Greenblatt, Debra
• 8/7/21 Durango Hearing, Testimony of Foster, Dr. George
• 8/7/21 Durango Hearing, Testimony of Godfrey, Dr. Laura

•	0/00/01 Duoble Hearing
	8/20/21 Pueblo Hearing, Testimony of Koncilja, Frances
•	8/20/21 Pueblo Hearing, Testimony of Henderson, James
•	8/20/21 Pueblo Hearing, Testimony of Currier, Carlyle representing Colorado Farm Bureau
•	8/20/21 Pueblo Hearing, Testimony of Eklund, James
•	8/20/21 Pueblo Hearing, Testimony of Van Cleave, Jayde
•	8/26/2021 CICRC Meeting, Presentation of Eklund, James, CEO of Eklund Hanlon LLC
•	Carstens, 543 F. Supp. at 83 (explaining that the Pueblo area is bisected by Arkansas River which has been a dominant force "in the development of this region" because the people in the area are dependent on the river "for their water supply
	•

	which is their economic base") • See Hall, 2012 CO 14, ¶ 72 (stating that an important feature of this region is that "75 percent of the Western Slope is owned and managed by the federal government" as well as containing many national parks)
CD3 keeps together the former Mexican land grants in Southern Colorado. This region includes the counties that make up the San Luis Valley (Conejos, Costilla, Alamosa, Saguache and Rio Grande) as well as Pueblo County, Huerfano County, Otero County and Las Animas County. Many families in these counties share cultural traditions and a preservation of the Spanish language that go back to the time when their ancestors settled and developed this region as part of the Spanish Empire and then Mexico prior to the Mexican-American War. Based on this region's history and the protections promised to the families who settled the area in the Treaty of Guadalupe Hidalgo, the Commission believes it is a community of interest with significant policy interests that are subject to federal legislative action.	 7/24/21 Craig Hearing, Testimony of Dickinson, T Wright, former Moffat County Commissioner 7/30/21 Montrose Hearing, Testimony of Nicholson, Robert 7/31/21 Carbondale Hearing, Testimony of Bradford, Caroline 7/31/21 Carbondale Hearing, Testimony of Martin, John, Garfield County Commissioner 8/6/21 Trinidad Hearing, Testimony of Trujillo, Theresa

8/6/21 Alamosa Hearing, Testimony of Otero, Shirley Romero, President of Land Rights Council 8/6/21 Alamosa Hearing, Testimony of Martinez, Matthew 8/6/21 Alamosa Hearing, Testimony of Coleman, Ty, Alamosa Mayor 8/6/21 Alamosa Hearing, Testimony of Spielman, Charles, President of the Monte Vista Economic Development Corp. 8/20/21 Pueblo Hearing, Testimony of Gaber, Mark representing the League of United Latin American Citizens (LULAC) & Colorado League of United Latin American Citizens 8/20/21 Pueblo Hearing, Testimony of Beascochea, Yesenia 9/7/21 Virtual Denver Hearing, Testimony of Trujillo, Theresa

	• See Beauprez v. Avalos, 42 P.3d 642, 652 (Colo. 2002) (identifying "the San Luis Valley and Huerfano, Pueblo, and Las Animas Counties, as well as a part of Otero County" as a community of interest that preserves "the historical Hispanic community of interest in that part of the state")
CD3 keeps together the Ute Mountain Ute and Southern Ute Reservations in the south-west corner of Colorado. As sovereign indigenous nations, the Ute Mountain Ute and Southern Ute have a direct relationship with the U.S. Government that is the subject of treaties and other federal legislative action. In addition, the Commission received public comments from a community leader within the Ute Mountain Ute nation about the historic and contemporary interconnections between the Utes and the Hispanic community in the San Luis Valley including shared policy interests and common cultural and historic traditions that go back to the period before the Treaty of Guadalupe Hidalgo.	 8/28/2021 Colorado Springs Joint Hearing, Testimony of House, Ernest 8/30/2021 CICRC Meeting, Statements of C. Tafoya, 22:5-13, attached as Att. 2 9/1/2021 CICRC Meeting, Statements of C. Leone, 21:15-22:6, attached as Att. 3 9/1/2021 CICRC Meeting, Statements of C. Tafoya, 35:7-16, 40:11-20, 42:4- 44:20, attached as Att. 4 9/7/21 Virtual Denver Hearing, Testimony of Trujillo, Theresa

Based on public comments about the high percentage of military veterans living in this area and the income and wealth disparities in Southern Colorado as compared to the other regions of Colorado, the Commission believes that the Southern Colorado Region shares a significant common interest in the need for economic development, educational resources, infrastructure development, and additional support services for veterans, all of which are the potential subject of federal legislative action.

- 8/20/21 Pueblo Hearing, Testimony of Martinez, Bill
- 9/1/2021 CICRC Meeting, Statements of C. Tafoya, 41:24-42:3, attached as Att. 5

Communities of Interest	Source
CD4 contains fifteen counties on the Eastern Plains that share common interests related to agricultural production, oil and gas development, and rural communities. These shared agricultural policy interests are primarily regulated by the Department of Agriculture and are subject to federal legislative action. The Commission believed that the common agricultural policy interests along with the other policy interests related to rural communities and oil and gas development required the inclusion of these Eastern Plains counties within a single congressional district to ensure fair and effective representation for their policy interests.	• 7/10/21 Sterling Hearing, Testimony of Engeharpt, Tony
	• 7/10/21 Sterling Hearing, Testimony of Sonnenberg, Jerry, State Senator
	• 7/10/21 Burlington Hearing, Testimony of Miller- Ramsey, Gena
	8/18/21 Highlands Ranch Hearing, Testimony of Martini, Shawn
	• Carstens, 543 F. Supp. at 83 (explaining that the eastern portion of the state is "bisected by two prominent river valleys, the Arkansas and South Platte, which

	have been dominant forces in the development of this region. The people in the area are dependent on these two rivers for their water supply which is their economic base.")
CD4 includes most of Douglas County as well as portions of several other counties that are adjacent to the Eastern Plains counties and whose populations were used to equalize the population in CD4 with other districts. Douglas County includes rural residential communities as well as suburban communities in the south Denver metropolitan area, including Highlands Ranch, Colorado's largest unincorporated community. These communities in Douglas County have shared interests in policy matters that are subject to federal legislative action including transportation, education, public health, and the environment.	 8/3/21 Centennial Hearing, Testimony of Huffman, Kurt 8/18/21 Highlands Ranch Hearing, Testimony of Copeland, Dr. Tom 9/1/2021 CICRC Meeting, Statements of C. Espinoza, 13:5-13, attached as Att. 6
Although the communities in Douglas County and the other adjoining counties do may not all share agricultural policy interests to the same extent as the counties in the Eastern Plains, the Commission believes that these areas could can be fairly and effectively represented in one district because they nevertheless share many common interests related to the in preserving rural residential communities found in all those counties. The combination of Douglas County with the counties on the Eastern Plain also enabled the Commission to keep Douglas County in a single district, with the exception of a portion of the City of Aurora located within the county that has been placed in CD6.	 8/18/21 Highlands Ranch Hearing, Testimony by You, Aleta 8/18/21 Highlands Ranch Hearing, Testimony by Rudolph, Meredith 8/18/21 Highlands Ranch Hearing, Testimony by Chandler, Kathleen 8/18/21 Highlands Ranch Hearing, Testimony by Martini, Shawn

•	8/28/21 Colorado Springs Hearing, Testimony of Snyder, Mike, representing El Paso County Farm Bureau
•	9/8/21 Virtual Limon/Fountain Hearing, Testimony of Maez, Allen
•	9/10/21 Virtual Aurora/Thornton Hearing, Testimony of Anderson, Renee

Communities of Interest	Source
CD5 is made up of nearly all of El Paso County. The Commission voted to keep the City of Colorado Springs whole and voted to keep the military institutions in El Paso County within a single district. Accordingly, Colorado Springs along with the surrounding parts of El Paso County, including all of the military institutions, were kept within District Five. This community of interest shares significant policy concerns that are the subject of federal legislation including transportation, employment, public health, the environment, the military and national defense.	 8/18/21 Highlands Ranch Hearing, Testimony of Lamborn, Doug, Congressman 8/28/21 Colorado Springs Hearing, Testimony of St. Denis, Cherish 8/28/21 Colorado Springs Hearing, Testimony of Shaddock, Pamela

8/28/21 Colorado Springs Hearing, Testimony of Rendleman, Kay
• 9/28/2021 CICRC Meeting, Statements of C. Wilkes, 20:8-15, attached as Att. 7
• See Hall, 2012 CO 14, ¶ 89 (recognizing that military bases in El Paso County constitute a community of interest)

Communities of Interest	Source
CD6 is made up of the whole city of Aurora along with the suburban cities in western Arapahoe County including Littleton, Sheridan, Englewood, Cherry Hills Village, Greenwood Village and Centennial. Aurora and the south suburban cities in Arapahoe County share many similar characteristics in that they are mature suburbs with distinctive neighborhoods, ethnic communities, and they are continuing to grow and are developing their own significant commercial centers. These mature suburbs share significant policy concerns that are the subject of federal legislative action including transportation, education, employment, public health, and the environment.	 7/21/21 Englewood Hearing, Testimony of Olson, Dr. Linda 7/21/21 Englewood Hearing, Testimony of Taheri, Suzanne, representing Arapahoe County GOP Chair 7/21/21 Englewood Hearing, Testimony of Zeck, John 7/28/21 Aurora Hearing, Testimony of Maghakyan,

Simon, representing the Armenian Community
• 7/28/21 Aurora Hearing, Testimony of Koenck, Cynthia
• 7/28/21 Aurora Hearing, Testimony of Schroeder, Douglas
• See Hall, 2012 CO 14, ¶ 91 (recognizing the difference in interest between older and newer suburbs)

Communities of Interest	Source
CD7 includes most of Jefferson County, all of the City and County of Broomfield, and all of six mountainous counties (Chaffee, Custer, Fremont, Lake, Park, and Teller). The six mountainous counties and the mountainous portion of Jefferson County are a community of interest with shared significant policy interests related to mountain communities, outdoor recreation, and the use and preservation of publicly owned lands.	8/20/21 Woodland Park Hearing, Testimony of Zuluaga, Robert
	• 8/21/21 Buena Vista Hearing, Testimony of Gray, Marjorie
	8/21/21 Buena Vista Hearing, Testimony of Stone, Trevor
	• 8/21/21 Cañon City Hearing, Testimony of Drogosz, Lynne

For the most part, mountainous communities in CD7 are linked with metropolitan areas along the front range where many of their day-trip tourists live, and where many of their residents go to work or shop for goods and services. Because of the significant connections between these mountain communities and the front range cities and the significant amount of travel between these areas, these communities have many shared policy interests including transportation infrastructure.	 7/13/21 Arvada Hearing, Testimony of Vernier, Helen Rae 7/20/21 Lakewood Hearing, Testimony of Shahrezaei, Jeslin 8/4/21 Golden Hearing, Testimony of Fellman, Ken
CD7 also includes the front-range metropolitan cities in Jefferson County (Lakewood, Wheatridge, Golden, and the portions of Arvada and Westminster in Jefferson County) and the City and County of Broomfield. These cities are mature suburbs along the western edge of Denver. Although they are mature suburbs, they continue to grow and are becoming denser. They have common interests in many significant federal policy areas including transportation, education, employment, public health, and the environment.	• 7/13/21 Arvada Hearing, Testimony of Welch, Timothy
	• 7/13/21 Arvada Hearing, Testimony of Moorman, Randy
	• 7/13/21 Arvada Hearing, Testimony of Kelley, Dr. Thomas
	• 7/13/21 Arvada Hearing, Testimony of Kupernik, Robin
	• 7/13/21 Arvada Hearing, Testimony of Kocian, Craig
	• 7/13/21 Arvada Hearing, Testimony of Tomsula, Elizabeth
	• 7/13/21 Arvada Hearing, Testimony of Burns, Harvey

	1
	• 7/20/21 Lakewood Hearing, Testimony of Spence, Lynne
	• 7/20/21 Lakewood Hearing, Testimony of Peabody, James
	• 7/20/21 Lakewood Hearing, Testimony of Cooper-Ribner, Dianna
The suburbs in Jefferson County also share a community of interest regarding the large number of federal employees who work in Lakewood at the Denver Federal Center (operated by the U.S. General Services Administration) and the federal funding that supports work at the National Renewable Energy Labs in Golden (sponsored by the Department of Energy) and Lockheed Martin's facility in unincorporated Jefferson County, where it serves as a defense and aerospace contractor to the Department of Defense, NASA, and the Department of Energy.	• 7/13/21 Arvada Hearing, Testimony of Geisleman, Elizabeth
	• 7/13/21 Arvada Hearing, Testimony of McCormick, Chris, representing PlanetiQ
	• 7/20/21 Lakewood Hearing, Testimony of Keefe, Dr. Tom
	• 9/24/2021 CICRC Meeting, Statements of C. Espinoza, 15:1-8, attached as Att. 8
	• 9/24/2021 CICRC Meeting, Statements of C. Tafoya, 16:10-15, attached as Att. 9
	• See Hall, 2012 CO 14, ¶ 98 (recognizing that "a key employer within the district" can shape a community of interest)

	Jefferson, Chaffee, and Fremont Counties contain correctional facilities
П	(operated by either the Colorado Department of Corrections or the U.S.
П	Bureau of Prisons). Accordingly, these counties share significant policy
П	interests related to correctional facilities that are the subject of federal
	legislative action.

9/28/2021 CICRC Meeting, Statements of C. Tafoya, 17:2-15, attached as Att. 10

Communities of Interest	Source
	8/10/21 Longmont Hearing, Testimony of Harkins, Jamie, Lafayette Mayor
The northern front range cities in CD8 share common policy concerns related to their rapid growth, their conversion of former agricultural and open lands to residential, commercial and industrial uses, and their connections to Denver and other metropolitan cities (where their residents commute to work or their businesses travel to sell goods and services). Much of the growth in these cities has been caused by housing demand driven by families who are looking for options that are more affordable than the Denver market. These shared characteristics translate into a shared interest in significant federal policy subjects including transportation, education, employment, public health and the environment.	 8/14/21 Greeley Hearing, Testimony of Butler, Tommy, Greeley City Council Member 8/14/21 Greeley Hearing, Testimony of Porras, Hector 8/14/21 Greeley Hearing, Testimony of Van Lone, Tom 8/14/21 Greeley Hearing, Testimony of Whinery, Barbara 8/14/21 Greeley Hearing,
	Testimony of Scott, Loretta

	• 8/14/21 Greeley Hearing, Testimony of Garcia, Elizabet
	• 8/14/21 Greeley Hearing, Testimony of King, Evelyn
	• 8/24/21 Commerce City Hearing, Testimony of Miya, Kate
	8/24/21 Commerce City Hearing, Testimony of Gonzalez, Maria, representing Adelante Community Development
	• 8/24/21 Commerce City Hearing, Testimony of Henson, Kathy
	• 8/25/21 Brighton Hearing, Testimony of Bouvier, Jackie
In addition, these cities and the surrounding unincorporated areas have a	8/11/21 Boulder Hearing, Testimony of Weise, Leslie
shared interest in finding the right balance that permits the energy and natural resources industry to continue developing while still protecting the environment and residential communities. This shared policy interest is a potential subject for federal legislative action regarding the environment, natural resources, and public health.	• 8/14/21 Greeley Hearing, Testimony of Karlin, Dale
	• 8/14/21 Greeley Hearing, Testimony of Trujillo, Wayne

September 24, 2021	
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1 balance -- do the balancing act that is very difficult. 2 Outside of that, if you don't mind zooming out again. Thank you. I think there's some changes here that I 3 4 could see in terms of a balancing in this map of pulling perhaps, you know, a Custer back into the 3rd and then 5 6 pulling -- and, you know, again, it sets off the exchange game here. I think that could happen within the, whatever, 7 8 called the ex-urban mountain communities of Denver so that 9 there is a stronger -- or there is a stronger connectivity, such as Summit County, Pitkin and Clear Creek where they 10 11 said that they have a stronger affinity to go (inaudible) from the Eisenhower tunnels into Denver to JeffCo. 12 13 So --MR. BARRY: 14 Thanks. 15 CHAIRWOMAN HARE: Thank you for your comments, 16 Commissioner Tafoya. 17 We'll go to Commissioner Wilkes. COMMISSIONER WILKES: Thank you, Madam Chair. 18 So the only thing I was going to point out with 19 20 this is -- and, of course, we all know that everything has a 21 ripple effect, but in the CD -- change of CD8, the -- it becomes more competitive, going down from 2.9 percent to 1.3 22 23 percent, which is great, and it's spread out, for the most 24 part. A lot of places, except for CD7 now, is competitive, 25 and this used to be 6 and now it's 7. And I know that in a

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needed to make El Paso County put in to three districts as opposed to just two, because they pulled off a -- you know, it's the sliver -- that extreme eastern portion into the purple district there.

So those are my comments. I think, generally speaking, there -- you know, there are Hispanic minority influenced districts here, and the communities of interest that I had highlighted in southern Colorado are much of what we heard in testimony, which is the river basins, the Hispanic community, the ties to the Native community, and of course the tribes themselves in terms of their relationship with the larger southern region and the New Mexico border, and yeah.

I mean, I'll -- those are my comments, and I -you know, I would ask staff, maybe, if possible, to make
those adjustments, but I'll also ask Commissioner Leone to
weigh in as well on his thoughts. Oh, I guess the other
only thing that I would mention before we do that is just in
terms of, like, a highlight as -- and again, I didn't
specify this in my request to staff, but, you know, the -what people's thoughts are on how Larimer County is treated
in this map, but I'll turn it to Commissioner Leone, if you
have any comments.

COMMISSIONER LEONE: Sure. Thanks, Commissioner Tafoya.

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districts that lean one way, and three districts that lean the other way is, to me, sort of the epitome of partisan gerrymandering, and that's trying to achieve a result, a partisan result that I don't think is part of our mandate. And if you told me that we could have a map that has three community of interest based districts that lean one way, three that lean another way, and two that are competitive, I'd feel like that's a very good proxy for the state's competitive orientation. So that's a good thing I think this map does.

Another good thing I think this map does is it takes a step in what I think is the right direction of unifying SLV and Pueblo, and some of the southern counties, which has always been my primary objective.

A couple of things this map could be criticized for: Number one, it looks like we leave the reservations -the Tribal Lands in the western district and not in the district with SLV and Pueblo. I worry about the voice of the tribes. I lived that as US Attorney and spent a lot of time on the reservations trying to address their needs from the federal perspective, and I worry about them being in a district with Vail and Aspen and Steamboat Springs, and, you know, very sort of elite, wealthy resort towns, and I worry about the -- their representative giving the Native American communities down there a fair amount of their mind-share. I

think those communities will be -- would be better

represented by a district that's more heavily focused on the

-- what I think are socioeconomic challenges of the southern

tier of the state. And I still believe that the southern

tier of the State has special socioeconomic concerns that

unite it and make it different.

Another, you know, criticism of this map could be the distance from, you know, Monte Vista to Greeley. It is a mammoth -- this is a gargantuan 4th Congressional District that would be hard to travel, and it's a gargantuan 3rd District. I mean, I can tell you in terms of travel, I'd much rather drive from Durango to Lamar than I would from Durango to Craig. I just don't know of an easy way to get north and south on that -- on the western part of the state compared to east to west.

So those are criticisms that you could make, but I just want to signal to everybody that I'm -- I understand that whatever map we draw is going to involve compromises of our -- sort of our wish lists, and I think when we started this process, I said I didn't have a litmus test, or -- and I wasn't dogmatic about a southern district. And so I would say that this map achieves some of the things that Commissioner Tafoya and I wanted to achieve with the southern district. It doesn't achieve them all, but it achieves some of them.

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considered a community of interest and should -- the staff 1 2 should follow as a guideline that they keep the community of interest as I will describe it. 3 4 And -- so okay, sorry, I'll start backwards. So the motion will be -- and I'm going to go into a little bit 5 6 of discussion if that is okay, Madam Chair. 7 So I move that based on the facts delivered 8 through public testimony from various experts in ag, water, 9 and Native American issues, that the regions -- the region made up of Pueblo, Otero, (inaudible), and Las Animas 10 County, and the six counties of the San Luis Valley, and the 11 two tribes, the Ute Mountain and Southern Ute Tribal Lands, 12 13 be identified as a community of interest based on their shared policy concerns that include, but are not limited to 14 water, agriculture, and other federal issues, shared history 15 16 and culture, and the linguistic traits and uniqueness. And so I'll just dive in a little bit in terms of 17 -- and I'll go briefly, again, because I know we've all been 18 19 at these meetings before. In water, for example, we heard from the former 20 21 director of the Colorado Water Conservation Board and identified southern basins as having --22 23 CHAIRWOMAN HARE: Commissioner Tafoya? COMMISSIONER TAFOYA: 24 Huh? 25 CHAIRWOMAN HARE: Commissioner, I'm so sorry.

with waiting for more than 50 years for fully funding of the Fryingpan-Arkansas Project for Safe Drinking Water.

So a few economically -- the majority of southern counties are economically disadvantaged, making them uniquely positioned to (inaudible) at the federal level for (inaudible) programs, such as Medicaid and federal food programs such as WIC, SNAP, free and reduced lunch, and also healthcare issues that are uniquely focused on issues -- or on socioeconomically depressed areas. This also extends to education issues.

At the federal level, this -- these programs all lead into a potential representative who could support them in the health, education, and labor and pension committee, the agriculture -- ag committees, the commerce committee, and the Bureau of Indian Affairs in the Department of Interior. Child poverty is concentrated in southern Colorado, with seven counties having more than 25 percent of children in poverty, leading to the importance of child -- excuse me, insurance programs are subsidized and offered by the federal government.

Senior citizen poverty is concentrated in the south, with Medicare, Social Security and other senior benefits that are critical to this region and these communities of interest. The higher -- the percent of disabled in these 10 counties is -- of 10 counties, of those

services, either going to Denver or Albuquerque, and that includes both from Trinidad going south into Albuquerque, or from the San Juan Basin going into Albuquerque.

In particular, the Ute Mountain Ute and the Southern Ute face disproportionate impacts as they are stewards -- or as the federal government is the stewards of Indian Land, so the Bureau of Indian Affairs.

The Forest Service is a key partner with the Southern Ute tribe, as they often work with New Mexico and south -- and the Forest Service in New Mexico to be able to access their mineral rights, and not just in Colorado.

Extraction in the southern part of the state,
which include the San Juan Basin for oil and gas, the Raton
Basin that also goes south into New Mexico shares -- shows
that there are shared interests in having a representative
work with their New Mexico counterpart.

Shared issues of underrepresentation and socioeconomic issues on the tribes also extend into these other parts of the state.

In terms of the historical connection between
Hispanics and those who lived in the land grant areas of
southern Colorado also share some of the similar concerns in
terms of treaty obligations that were once set by the Treaty
of Guadalupe Hidalgo and also treaty obligations that were
extended to the tribes in exchange for settlement on

reservation lines.

In terms of water for the Southern Ute and the Ute Mountain Ute, we've seen that the Animas and La Plata project which led to Lake Nighthorse, and we saw that the Dolores Project that led to the McPhee Reservoir were important elements in federal -- for federal interests, for a representative that could support the southern part of the State to be able to support water infrastructure.

And, of course, agriculture: The Natives -- you know, Native Americans do have agricultural interests in the south, with most of the agricultural farms for Native Americans being in the southwest part of the state, and the majority of those in the southern part of the state that are small farmers -- relatively small farmers, compared to those in the northeast part of the state, and focusing on speciality crops and small areas for ranching of cattle and other livestock.

Oh, and with sort of a historical reference to the region: As, you know, the area being former Ute/Comanche territory, along with several other tribes that have an aboriginal claim to this area, they're not a foreigner to the idea of a border crossing them. Of course, Spanish for many of these folks was either -- is still a second -- as I know, the second or first language spoken.

The land grant straddles Sangre de Cristo and San

Juan mountains with the Conejos, Sangre de Cristo, Baca, 1 land grants in the San Luis Valley, the Miranda, Beaubien, 2 Maxwell, Nolan, Vigil, St. Vrain from Pueblo to the border 3 4 with Trinidad, which often reflected owners that were both 5 of French ancestry and of American ancestry after the initial -- after the purchase of the Louisiana Purchase, and 6 7 the Tierra Amarilla land grant in Archuleta County. 8 This has long built a shared history and culture and language shared among the communities of southern 9 Colorado, in addition to the (inaudible) system and the 10 11 water rights -- the most senior water rights in Colorado, 12 which extend as an important part of agriculture in southern 13 Colorado. And we also heard in testimony from Ernest House, 14 who was the former director of the Colorado Commission on 15 16 Indian Affairs under both Republican and Democratic governors. That is -- there is a shared history, culture, 17 and the respect for language, and the issues that face the 18 19 communities along our southern border, as noted in my 20 motion. And with that, I'll turn it back to you, Madam 21 22 Chair. Thank you. 23 CHAIRWOMAN HARE: Thank you, Commissioner Tafoya. 24 There was a request, before we start the stack, 25 for -- because when you were reading it, you now need to

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INDEPENDENT CONGRESSIONAL REDISTRICTING COMMISSION

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that I mentioned, is greater than 20 percent in southern Colorado.

All of this data comes from the Department of Local Affairs from the State Demographer.

In terms of education, 13 counties reported greater than 10 percent of speaking a language other than English, with five counties reporting more than 20 percent speaking a language other than English. They all -- all of these -- most of these counties, if not all of them, have low education attaintment. 12 counties with more than 5 percent with no high school degree. This is relevant in federal -- and from an education standpoint from federal Head Start, college preparation, such as TRIO programs, which are not defined by race, but by socioeconomic issues, work force development, and other issues related to the funding of Title I and other programs that are focused for those who are socioeconomically disadvantaged.

From an infrastructure standpoint, we have shared highways: Highway 160, Highway 50. Essential air service that is subsidized by the federal government for commercial travel in Pueblo and Alamosa. Water infrastructure such as the Pine River Indian Irrigation Project, the Fryingpan-Arkansas Project, and broadband needs across the south.

We've heard that there are high concentrations of veterans and high -- and who have very limited to VA

services, either going to Denver or Albuquerque, and that includes both from Trinidad going south into Albuquerque, or from the San Juan Basin going into Albuquerque.

In particular, the Ute Mountain Ute and the Southern Ute face disproportionate impacts as they are stewards -- or as the federal government is the stewards of Indian Land, so the Bureau of Indian Affairs.

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Commissioner Espinoza. 1 2 COMMISSIONER ESPINOZA: Thank you, Madam Chair. I want to thank Danny too for the request of this 3 4 I think it's an interesting map. 5 And with regard to CD7 in Douglas County, as a 6 Douglas County resident, living in an area that has quickly changed over the last ten years from semi-rural horse 7 8 country to very much suburbia -- we're becoming another 9 Highlands Ranch -- I think that we cannot keep Douglas County whole, because the eastern part of Douglas County is 10 11 still quite rural, and I think it makes a lot of sense to have this western part of Douglas County part of the -- one 12 13 of the metro districts. 14 So I hope that helps answer some of Martha's 15 questions. And I can see here that the map pretty much kept 16 those original lines for the area around Castle Rock and 17 where I live, Roxborough Park, and that area. And I like that CD7 sounds like it's more 18 competitive, that it's actually a tossup with this map. 19 20 think that's a positive. 21 So thank you. 22 CHAIRWOMAN HARE: Thank you. 23 Commissioner Tafoya. 24 COMMISSIONER TAFOYA: Thank you. Can you zoom out 25 a little bit and stay in the metro? That's perfect, yeah.

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answer all needs and requests, but we've worked really hard to listen to as many people as possible and to make something that will work for as many communities as possible.

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So my thoughts about this plan: The plan respects and keeps together the following communities of interest that we heard from the public. I'll mostly talk about El Paso County because that's where I'm from.

Most of the El Paso County comments were to keep it as whole as possible, removing only the population that was necessary. City 5 in this map is entirely in El Paso County, keeping all incorporated municipalities within El Paso County whole, to include Green Mountain Falls, which settles the county line with Teller. This map complies with all guidelines set by the Commission and both of the strong recommendations.

Everybody else has already talked about competitiveness, so I don't need to repeat.

And not only was this plan not drawn to protect any incumbents, candidates or party members, it was also not drawn to persecute any of those people, and it was not drawn to dilute the electoral influence of voting rights of any language or racial minority group.

JEROME: Thank you, Commissioner.

Commissioner Brawner.

COMMISSIONER BRAWNER: I will keep this brief.

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down by Douglas County, I just want the Commission to know that that is the campus of Lockheed Martin, and just north of that is a little community called Trail Ridge, and then a little north and west of that is Deer Creek Canyon, if you're at all familiar with that area; but I think we will hear an amendment regarding this a little bit later, but I think it is important for that to be part of CD7, especially for the Lockheed Martin campus.

And then a couple of just corrections for the record -- or clarifications, I guess. I think at one point you said something about that Fort Carson -- that we had directed that Fort Carson include the population area, and I think we actually said we didn't have to include the population area. I don't know if someone can clarify that for me, but -- and then there is that little notch of Aurora that is in Douglas County that did not get included, and I think we should consider including that to keep Aurora whole.

And then Broomfield -- oh, at one point, Barry, you mentioned -- I think you accidentally misspoke, but Greeley was in CD7. I think you meant to say Broomfield in CD7.

But overall, I think the map looks, you know, pretty good balancing all of the requests that we had made, although of course, you know, my northern DougCo suburbs are

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not going to -- it doesn't look like there's any way that 1 2 they're going to get included, but I think, you know, the 3 tradeoffs overall are pretty good. 4 So thank you very much. CHAIRWOMAN HARE: Thank you, Commissioner 5 6 Espinoza. 7 We'll go to Commissioner Tafoya, followed by 8 Commissioner Wilkes. 9 COMMISSIONER TAFOYA: Thank you. If you could zoom into JeffCo. So yeah, I have 10 the same concern here as it relates to Lockheed Martin, and 11 especially because of two reasons: One, the loud remarks we 12 13 heard in order to keep JeffCo whole. Number two, that's an aerospace facility and largely connected to the aerospace 14 community that goes north. So that is one concern. 15 16 And if you go up to Broomfield. The community, 17 you'll have -- and you heard from them. They argued that they could go into 8. They have a connectivity to the 18 Boulder community and to the northern suburbs of JeffCo. 19 20 The challenge I have here -- and in this map, I 21 would prefer Broomfield go with either 8 or 2, because the way 7 was drawn in this map, if you want to zoom out, is it 22 23 goes largely into the mountains, that is (inaudible). You know, I would argue Broomfield doesn't have a lot in common 24

with Park County, much less any of the others in this

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1 nauseam. I know there are some issues that were addressed in 2 terms of keeping Jeffco whole and, you know, I still think 3 4 that there is some challenges as it relates to, you know, 5 Custer County. I got to a place where I could actually see 6 Fremont County as it relates to perhaps Jeffco, because as 7 any federal prison and a large federal -- federal employee base, but I still think there was a better solution and 8 9 ultimately that's why I -- I voted no; but that does not mean 10 that or take away from the work that the Commission does and 11 I'm still -- still appreciative of all the work that everybody has given. You know, I -- we had our (inaudible) 12 and we had our kumbaya moments and I think at the end of the 13 14 day we've all learned a lot through this experiment we call 15 democracy. So I appreciate everybody's effort and want to 16 17 thank everybody, and despite the fact that I did vote no, 18 doesn't necessarily take away from the work we've done. 19 So thank you very much. Thank you, Commissioner. 20 JEROME: 21 Commissioner Wilkes. 2.2 COMMISSIONER WILKES: That you can, Jerome.

insurmountable roadblock that we had to overcome. I used the

anticipates. The delays in the census data seemed like an

Okay, this whole journey was something that no one

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Colorado Independent Congressional Redistricting
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Addendum 2

Subdivision Split Chart

In re Congressional Redistricting Commission—Case No. 2021SA208 Description of Political Subdivision Splits

County Splits

County	District	Population in District	Explanation of Split		
	4	12,059	Eastern portions of Adams County have been placed in District 4 to equalize that district's population and in recognition of shared		
A 1	6	48,143	rural/agricultural communities of interest. The portion of Aurora that is in Adams County was placed in District 6 to keep Aurora		
Adams	7	2,892	whole. The portion of Arvada that is in Adams County has been placed in District 7 with other portions of Arvada. The remainder of		
	8	456,478	Adams County is in District 8.		
	1	7,296	The enclaves of Holly Hills and Glendale, which are wholly surrounded by the City and County of Denver, have been placed in		
Arapahoe	4	37,812	District 1 for contiguity. Eastern portions of Arapahoe County have been placed in District 4 to equalize that district's population and in		
	6	609,962	recognition of their shared rural/agricultural community of interest. The remainder of Arapahoe County is in District 6.		
D 11	2	330,741	A small portion of unincorporated Boulder County has been placed in District 7 to equalize population. The rest of Boulder County is in		
Boulder	7	17	District 2.		
Broomfield	2	0	An uninhabited portion of Broomfield County has been placed in District 2 to maintain contiguity. The rest of Broomfield County is		
	7	74,112	in District 7.		

	1	714,418	The City and County of Denver and the enclaves of Holly Hills and Glendale exceed the district population target. Some areas on the
Denver	6	1,104	eastern edge of Denver County have been placed in District 6 to equalize population.
Douglas	4	355,113	Portions of the City of Aurora that are located in Douglas County have been placed in District 6 to keep Aurora whole. The rest of
Douglas	6	2,865	Douglas County is in District 4.
	2	45,323	The Roaring Fork Valley has been placed in District 3 to keep that community of interest intact. In addition, some unincorporated
Eagle	3	10,408	areas and a non-contiguous part of the town of Gypsum are in District 3 to equalize population. The rest of Eagle County is in District 2.
	4	8,059	El Paso County's total population exceeds the target district size. The community of Green Mountain Falls has been placed in District
El Paso	5	721,714	7 to keep that community of whole. Areas on the eastern side of El Paso County have been placed in District 4.
	7	622	
	1	0	Two non-contiguous, unoccupied portions of Jefferson County have been placed in District 1, which fully surrounds them. The
Jefferson	2	1,853	community of Coal Creek, which straddles the Boulder County line, has been placed in District 2 to keep that community whole. Mature
	6	59,641	suburbs to the south of Denver, including Ken Caryl, Columbine, and the Jefferson-County-portion of Bow Mar are in District 6 with
	7	521,416	other mature suburbs with which they share interests. The remainder of Jefferson County is in District 7.

	2	234,599	Front range and mountain areas in Larimer County, including the cities of Estes Park, Fort Collins, and Timnath have been included
Larimer	4	107,329	in District 2, with which they share communities of interest, including in public lands, outdoor recreation, and higher education.
Larimer	8	17,138	Portions of Larimer County along the I-25 corridor have been included in District 8. The remainder of Larimer County is in District 4.
Weld	2	21,013	The portions of the Cities of Longmont and Erie that are in Weld County are placed in District 2 to keep those communities whole.
	4	59,870	Rural eastern Weld County is placed in District 4 which shares rural/agricultural communities of interest. A non-contiguous,
	7	0	unoccupied portion of Weld County is in District 7. The remainder of Weld County along the I-25 and US-85 corridors, including the
	8	248,098	Cities of Greeley, Evans, Frederick, Firestone, and Johnstown, is in District 8 with other northern front range growing cities with shared interests.

City Splits

City	District	County	Population in County	Explanation of Split
	4	Arapahoe	0	All populated portions of the City of Aurora are in District 6. Two unoccupied portions of Aurora are in
Aurora	4	Douglas	0	District 4.
	6	Adams	47,720	

		Arapahoe	336,035		
		Douglas	2,506		
	2	Jefferson	0	All of occupied Arvada is placed in District 7. A small, unoccupied parcel on the northwest corner of the city is in	
Arvada	7	Adams	2,892	District 2.	
	1	Jefferson	121,510		
Bennett	4	Adams	2,443	All occupied portions of Bennett are in District 4. An unoccupied parcel has been placed in District 6.	
		Arapahoe	419	unoccupieu parcei nas been piaceu in District 6.	
	6	Adams	0		
Brook Forest	2	Clear Creek	288	Census-designated-place Brook Forest has been divided at the county line, with the Clear Creek County portion in District 2, and the Jefferson County portion in District 7.	
rorest	7	Jefferson	334	Bistrict 2, and the correspon country portion in Bistrict 1.	
Broomfield	2	Broomfield	0	An uninhabited portion of Broomfield has been placed in District 2 to maintain contiguity. The rest of Broomfield	
proomileid	7	Broomfield	74,112	is in District 7.	
Centennial	4	Arapahoe	2,686	An area on the eastern edge of Centennial has been placed in District 4 to equalize population. The rest of	
	6	Arapahoe	105,732	Centennial is in District 6.	

	1	Denver	714,418	When combined with the wholly-enclosed enclaves of Holly Hills and Glendale, Denver exceeds the target	
Denver	6	Denver	1,104	population for a single congressional district. As a result, areas on the eastern border with Aurora have been placed in District 6.	
	2	Boulder	12,651	All populated portions of Erie are in District 2. One unpopulated parcel has been placed in District 7, and	
	2	Weld	17,387	another unpopulated parcel has been placed in District 8.	
Erie	7	Weld	0		
	8	Weld	0		
E (CIII	2	Larimer	169,810	All populated portions of Fort Collins are in District 2. One unpopulated parcel has been placed in District 4.	
Fort Collins	4	Larimer	0	one unpopulated parcel has been placed in District 4.	
Greeley	4	Weld	0	All populated portions of Greeley are in District 8. One unpopulated parcel has been placed in District 4.	
Greeley	8	Weld	108,795	ampopulation parcel has been placed in District 1.	
C	2	Eagle	8,005	A non-contiguous part of Gypsum has been placed in District 3 to equalize the population of that district. The	
Gypsum	3	Eagle	35	rest of Gypsum is in District 2.	
T :441.4	4	Douglas	640	Littleton has been split at the county line. The portion of Littleton in Douglas County is in District 4, while the	
Littleton	6	Arapahoe	42,702	- Interceoff in Douglas County is in District 4, while the	

		Jefferson	2,310	portions in Arapahoe and Jefferson Counties are in District 6.
Loveland	2	Larimer	7	Most of Loveland is in District 4. One parcel has been placed in District 2 to equalize population.
Loveland	4	Larimer	76,371	praced in Bistrict 2 to equalize population.
Superior	2	Boulder	13,094	Superior has been split at the county line. The portion in Boulder County is in District 2. The portion in Jefferson
	7	Jefferson	0	County, which is not occupied, is in District 7.
Westwington	7	Jefferson	45,077	Westminster has been split at the county line. The portion in Jefferson County has been placed in District 7.
Westminster	8	Adams	71,240	The portion in Adams County is in District 8.

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Addendum 3

2011 Compactness Ratings



District Compactness Report

Current (2011) Congressional Districts

District	Polygon Area (sq. mi)	Perimeter (mi)	Reock	Area/Convex Hull	Grofman	Schwartzberg	Polsby Popper
1	192.50	158.35	0.18	0.53	11.41	3.22	0.10
2	7,655.72	658.20	0.49	0.76	7.52	2.12	0.22
3	49,641.44	1,328.88	0.50	0.79	5.96	1.68	0.35
4	38,391.60	1,144.67	0.47	0.81	5.84	1.65	0.37
5	7,281.14	479.74	0.46	0.80	5.62	1.59	0.40
6	483.92	230.35	0.32	0.56	10.47	2.95	0.11
7	349.88	180.41	0.31	0.63	9.64	2.72	0.14

Source: Colorado Independent Redistricting Commissions Staff.

Prepared on September 28, 2021

Colorado Independent Congressional Redistricting
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Addendum 4

Compactness Comparison Chart

In re Congressional Redistricting Commission—Case No. 2021SA208 Comparison of 2011 and 2021 Compactness Ratings

District	Year	Polygon Area (sq. miles)	Peri- meter (miles)	Reock	Area/ Convex Hull	Grofman	Schwartz- berg	Polsby Popper
1	2011	192.5	158.35	0.18	0.53	11.41	3.22	0.10
	2021	155.73	148.02	0.18	0.49	11.86	3.35	0.09
2	2011	7655.72	658.20	0.49	0.76	7.52	2.12	0.22
4	2021	11,590.12	664.75	0.66	0.90	6.17	1.74	0.33
0	2011	49,641.44	1,328.88	0.50	0.79	5.96	1.68	0.35
3	2021	49,414.38	1,432.75	0.35	0.76	6.45	1.82	0.30
4	2011	38,391.60	1,144.67	0.47	0.81	5.84	1.65	0.37
	2021	32,637.51	1,187.31	0.41	0.83	6.57	1.85	0.29
-	2011	7,281.14	479.74	0.46	0.80	5.62	1.59	0.40
5	2021	1,475.99	182.26	0.55	0.91	4.74	1.34	0.56
6	2011	483.92	230.35	0.32	0.56	10.47	2.95	0.11
	2021	311.31	200.22	0.26	0.66	11.35	3.20	0.10
7	2011	349.88	180.41	0.31	0.63	9.64	2.72	0.14
	2021	7,190.54	606.07	0.40	0.80	7.15	2.02	0.25
8	2011							
	2021	1,036.66	250.43	0.40	0.74	7.78	2.19	0.21

	Reock (higher score is more compact)	Area/ Convex Hull (higher score is more compact)	Grofman (lower score is more compact)	Schwartzberg (lower score is more compact)	Polsby Popper (higher score is more compact)
2011 Existing Map—Average Compactness Scores for all Districts	0.39	0.70	8.07	2.28	0.24
2021 Final Plan— Average Compactness Scores for all Districts (more compact on every scale)	0.41	0.76	7.76	2.19	0.28

Colorado Independent Congressional Redistricting Commission's Brief in Support of Approval of Final Congressional Redistricting Plan

Addendum 5

Ensemble Analysis

Ensemble Analysis for 2021 Congressional Redistricting in Colorado

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September 10, 2021

Abstract

In this report, we apply techniques of ensemble analysis to establish a baseline context for Congressional redistricting in Colorado following the 2020 Census. We generate a large random sample of redistricting plans that meet the basic legal requirements established by Amendment Y. Using this sample, we establish "reasonable" ranges for what might be expected for county splits, minority population, competitive districts, and partisan seat share for plans generated without explicit consideration of these issues. We also explore how these various priorities interact; in particular, we explore how the constitutional imperative to keep counties whole as much as possible affects the ability to maximize the number of competitive districts and partisan seat share. Finally, we compare the First Staff Plan proposed by the Colorado Independent Congressional Redistricting Commission's nonpartisan staff to our ensemble and comment on its performance relative to the ensemble.

1 Introduction

In the years since the last decennial redistricting cycle, there has been much interest in—and litigation around—quantifying and identifying partisan bias in district plans. Unlike racial gerrymandering, which has historically been limited by the Voting Rights Act of 1965, partisan gerrymandering has largely been unchecked by the courts until fairly recently, primarily due to the difficulty of identifying a quantifiable standard for measuring it.

One recently developed strategy for quantifying partisan bias is the ideal of "ensemble analysis," in which a particular district plan is compared to a large collection of randomly generated, legally valid plans, referred to as an "ensemble" of plans. This idea has been gaining traction in redistricting litigation in the last few years. For instance, Jonathan Mattingly, et. al. performed detailed ensemble analyses of North Carolina's Congressional [9] and state [10] legislative district plans that played key roles in the court cases [3] and [2], and Moon Duchin's ensemble analysis [8] of

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Pennsylvania's Congressional Districts played a similar role in [1]. Similar work can be found in Wesley Pegden's expert reports for Pennsylvania [11] and North Carolina [12].

The primary aim of our work is to use ensemble analysis to establish a baseline context for Congressional redistricting in Colorado in 2021, in order to understand what might reasonably be expected for measures such as county splits, minority population, competitive districts, and partisan seat share, based on the state's unique political geography. This baseline may then be applied to evaluate proposed district plans under consideration by the Colorado Independent Congressional Redistricting Commission to ensure that they satisfy the requirements specified by Amendment Y to the Colorado Constitution.

Here and throughout this report, we wish to emphasize that **none of the plans in our ensembles** are intended for adoption. Redistricting is fundamentally a human endeavor, and there are many important considerations that are difficult or impossible to fully incorporate into a computer-generated ensemble. The ensembles that we will discuss here are intended **only** to provide context to which proposed plans may be compared with regard to specific quantitative measures.

2 Introduction to ensemble analysis

In this section we give a brief description of the main ideas and aims of ensemble analysis. For a more detailed treatment of our approach and methodology, please see our paper [5] and Appendix A.

The fundamental goal of ensemble analysis is to model the political geography of a region (in this case, the state of Colorado) in order to better understand what might be expected for a "typical" district plan for the state. Plans may be evaluated with regard to a variety of measures: partisan balance of election results, geographic compactness of districts, competitiveness of district elections, preservation of communities of interest, racial/ethnic population within districts, etc. The main idea is to create a large number of randomly generated, valid plans that satisfy all relevant legal constraints—an "ensemble" of plans. Measures of interest are then computed for each plan in the ensemble using real population and voting data. The result is a statistical range of possible outcomes for each measure, to which any proposed plan may be compared. If a proposed plan appears to be an extreme outlier compared to the ensemble, this may suggest that the plan was deliberately designed to achieve some specific goal, such as partisan gerrymandering.

For this type of analysis, it is natural to build districts from voting precincts, as these are the smallest geographic units for which voting data is readily available. This is one of many reasons why the plans in our ensemble are generally unsuitable for adoption; the final plans will almost certainly divide many precincts in order to achieve their aims—most notably, population equality between districts.

For Congressional districts in particular, it is not practical to require that computer-generated plans built from precincts achieve perfect population equality between districts; instead, we require that the population differential between the largest and smallest districts for any plan in our ensembles be less than 1% of the ideal district population. We have found that this level of flexibility strikes a good balance, allowing our algorithm to generate a wide variety of plans whose statistics remain very close to those of plans with perfect population equality.

Our construction of ensembles begins with a data-rich map of Colorado's voting precincts as of 2020. Details of our processes for data collection and construction of this map are described in Appendix A.1, and details of the algorithm used to build our ensembles are described in Appendix A.2. For this initial analysis, we constructed two ensembles of 200,000 random maps each, incorporating some of the most fundamental constitutional requirements:

- Contiguity: The algorithm used to generate district plans automatically guarantees district contiguity; see Appendix A.2 for more details.
- **Population equality:** As mentioned above, we have required that all plans in our district have a population deviation of 1% or less between the least- and most-populous districts.
- Compactness: The algorithm used to generate district plans is designed to preferentially sample from more compact plans, and a large body of experimental evidence indicates that it is generally very effective in this endeavor. (See, e.g., [6].) No specific metric for measuring compactness is prescribed by Amendment Y, and we did not explicitly track any quantitative measure of district compactness. However, we have included a few of our randomly generated maps in Appendix A.2 to illustrate that their districts are generally reasonably compact.
- Preservation of political subdivisions: Our first ensemble, which we shall refer to as "county-neutral," did not incorporate any information regarding political subdivisions such as cities or counties. Our second ensemble, which we shall refer to as "county-aware," added an algorithm described in Appendix A.2 to minimize the number of county splits. For future ensembles, we may refine this algorithm to attempt to minimize divisions of municipalities and other important communities of interest. We look forward to input from the Commission and its nonpartisan staff regarding which communities it most strongly prefers to keep wholly within districts so that we can incorporate this direction into future ensembles.

In Section 3, we will explore how our county-neutral and county-aware ensembles of plans typically perform on the measures of county splits, minority representation, competitive districts, and partisan seat share. For the latter two metrics, we will focus on the composite "election" obtained by averaging partisan outcomes for the 8 statewide elections between 2016 and 2020 that have been identified by the Commission, specifically:

- the elections for President and U.S. Senator in 2016;
- the elections for Attorney General, Governor, Regent At Large, Secretary of State, and Treasurer in 2018;
- the election for U.S. Senator in 2020.

3 Ensemble statistics

The goal of this section is to describe the main statistical properties of our county-neutral and county-aware ensembles in order to establish context for what might reasonably be expected for Congressional district plans in Colorado. In Section 4, we will provide a detailed comparison of the First Staff Plan to both ensembles.

3.1 County splits

The only difference between the algorithms for constructing our county-neutral and county-aware ensembles is that the latter includes a variation that attempts to minimize the number of county splits in each plan. We counted the number of county splits in each plan in two ways:

- 1. number of "counties split," which counts the number of counties divided between more than one district;
- 2. number of "total splits," which counts the number of times counties are split.

So, e.g., if a county is divided between three districts, this counts as one split towards the "counties split" measure and two splits for the "total splits" measure.

The histograms in Figure 1 describe what percentage of plans in each ensemble exhibited each value for the number of counties split and the number of total splits over the observed ranges. For the county-neutral ensemble, the mean number of counties split was 21.7 and the mean number of total splits was 38.3. For the county-aware ensemble, the mean number of counties split was 10.2 and the mean number of total splits was 15.2. We note that the means for the county-aware ensemble are very close to the values of 10 and 13, respectively, for counties split and total splits in the First Staff Plan. This suggests that this ensemble does a reasonable job of sampling from plans that prioritize keeping counties whole to a similar degree as typical human-drawn plans.

In the next several subsections, we will compare statistics for both ensembles with regard to minority representation, competitive districts, and partisan seat share. By computing statistics for both ensembles, we hope to better understand how the choice to preserve counties (and political subdivisions more generally) affects other priorities.

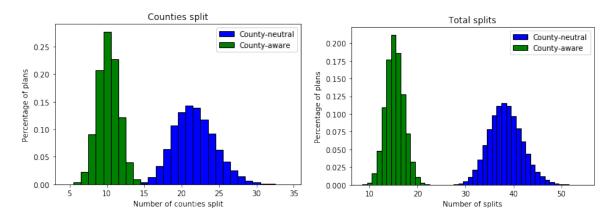


Figure 1: Counties split and total splits for county-neutral and county-aware ensembles

3.2 Minority representation

After contiguity, population equality, and the Voting Rights Act, the next highest priority specified by Amendment Y (co-equal with district compactness and preservation of political subdivisions) is the preservation of communities of interest. This is perhaps the most difficult criterion to model algorithmically, as communities of interest vary widely in nature and in geographic extent, and many different types of communities of interest overlap in complicated ways.

One very significant community of interest—and the only one that we will consider here—is the minority population of the state. Specifically, we will examine the proportions of (1) Hispanic voting age population, and (2) Non-White voting age population within each Congressional district. For context, we note that for the state as a whole, the Hispanic voting age population is approximately 19.2% of the total voting age population, and the Non-White voting age population is approximately 26.6% of the total voting age population. The Commission's nonpartisan staff "does not believe that there is sufficient voting age population to create a majority-minority congressional district within Colorado that complies with the requirements of the Colorado Constitution," but there is still general agreement that districts should be drawn so as to give these communities adequate representation.

For each plan in our ensembles, we compute the percentages of the Hispanic and Non-White voting age populations as a fraction of the total voting age population in each district and record the results. This data is displayed in Figures 2 and 3, organized as follows: For each plan, districts are sorted by Hispanic (resp. Non-White) voting age population percentage, from lowest to highest. The box plots show the ranges of these percentages for the sorted districts (in blue for the county-neutral ensemble and green for the county-aware ensemble)—so, e.g., the second pair of boxes from the left shows the range of Hispanic (resp., Non-White) voting age population percentage in the second-lowest district in each plan. The boxes show the middle 50% of the range, and the whiskers

extend from the 1st percentile through the 99th.

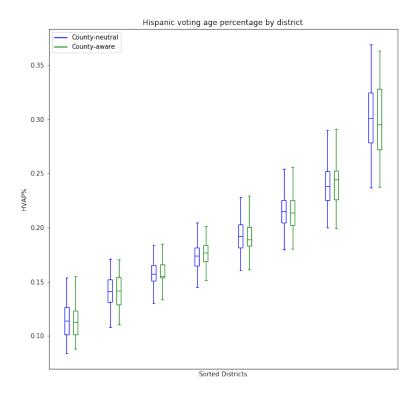


Figure 2: Hispanic voting age percentage by district for county-neutral and county-aware ensembles

One striking feature of these plots is that the preservation of counties does not seem to have much impact on the ability to draw one district with Hispanic voting age population significantly above 30%, or on the ranges of Hispanic voting age population in districts with lower percentages. But the situation is very different for the Non-White voting population; the county-neutral ensemble contains many plans with one district whose Non-White voting population is over 45%, while the expected range for the top district is a few percentage points lower for the county-aware ensemble. Additionally, the county-aware ensemble produces much narrower ranges for the middle 50% of possible values for the 2nd and 4th highest districts than the county-neutral ensemble.

3.3 Competitive districts

Competitive districts are defined in Amendment Y as "having a reasonable potential for the party affiliation of the district's representative to change at least once between federal decennial censuses." The lack of a quantitative standard in this definition has led to much discussion regarding the adoption of a standard for determining which districts will be considered competitive. At the time of this writing, the Commission had not adopted a formal definition, but it had decided to base its measure of competitiveness on an average of partisan outcomes (based only on votes for Democratic and Republican candidates) from 8 statewide elections from 2016 through 2020:

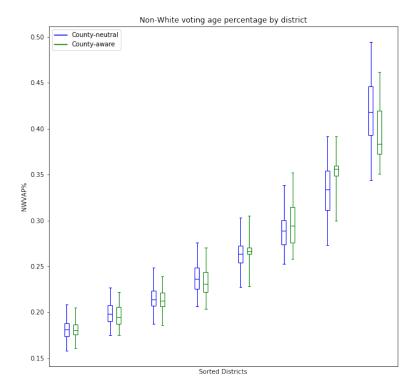


Figure 3: Non-White voting age percentage by district for county-neutral and county-aware ensembles

- the elections for President and U.S. Senator in 2016;
- the elections for Attorney General, Governor, Regent At Large, Secretary of State, and Treasurer in 2018;
- the election for U.S. Senator in 2020.

Each of these elections is given equal weight, creating a "composite election" whose Democratic and Republican vote percentages in each district are equal to the averages of the Democratic and Republican vote percentages, respectively, for these 8 elections in that district.

A typical measure of competitiveness involves prescribing a "vote band" about the 50% mark, and any election whose partisan vote share falls within that band is considered competitive. Since the Commission has not yet adopted a formal definition, we will consider three possible vote bands:

- 1. An 8.5% band (suggested to us by members of the Colorado Independent Legislative Redistricting Commission), so that partisan vote shares between 45.75% and 54.25% are considered competitive;
- 2. A 10% band (a common range found in academic literature on competitive elections), so that partisan vote shares between 45% and 55% are considered competitive;

3. An 11.5% band (in case the Commission is interested in the statistics for a wider band), so that partisan vote shares between 44.25% and 55.75% are considered competitive.

The histograms in Figures 4, 5, and 6 describe what percentage of plans in each ensemble have each possible number of competitive seats according to the given vote band, for both the county-neutral and county-aware ensembles.

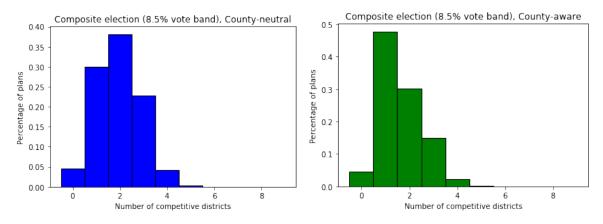


Figure 4: Numbers of competitive seats (8.5% vote band) for county-neutral and county-aware ensembles

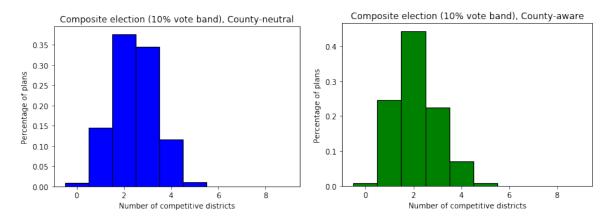


Figure 5: Numbers of competitive seats (10% vote band) for county-neutral and county-aware ensembles

For the county-neutral ensemble, the mean numbers of competitive districts are 1.93, 2.45, and 2.86 for the 8.5%, 10%, and 11.5% vote bands, respectively. For the county-aware ensemble, the mean numbers of competitive districts are 1.63, 2.12, and 2.60 for the 8.5%, 10%, and 11.5% vote bands, respectively.

It is important to observe here that, regardless of the vote band chosen, **constraining the number** of county splits reduces the expected number of competitive districts, with differences

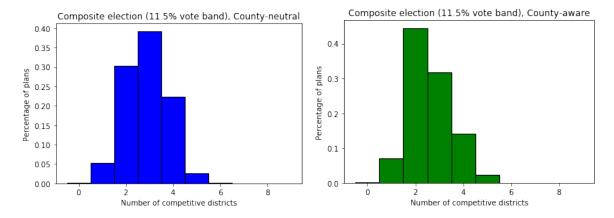


Figure 6: Numbers of competitive seats (11.5% vote band) for county-neutral and county-aware ensembles

ranging from 1/4 to 1/3 of a district on average. It seems likely that the same phenomenon may hold when the number of municipal splits is constrained, and perhaps when keeping other communities of interest whole is prioritized, although our experience suggests that this is a complicated issue that may behave in unexpected ways. (See our paper [5] for examples.)

For a more nuanced view on competitiveness, it is instructive to examine partisan outcomes by district. The box plots in Figure 7 are constructed similarly to those in Figures 2 and 3, except that now the boxes measure the observed ranges of Democratic vote share for each plan in the ensembles, ordered from most Republican to most Democratic. Also included in this plot are horizontal lines at the 50% mark and at the boundaries of each of the three vote bands for reference.

From this figure we can make the following observations:

- The 2 most Democratic districts are essentially never competitive.
- The 3rd most Democratic district is occasionally within the 10% and 11.5% vote bands, but almost never within the 8.5% vote band.
- The 4th most Democratic district is within the 11.5% vote band about half the time for both ensembles, and within the narrower bands somewhat less often. This district is significantly more likely to be within the 8.5% band for the county-neutral ensemble than for the county-aware ensemble.
- The 4th most Republican district is almost always competitive for all three vote bands.
- The 3rd most Republican district is almost always within the 11.5% vote band, and within the narrower bands slightly less often. This district is somewhat more likely to be within the 8.5% band for the county-neutral ensemble than for the county-aware ensemble.

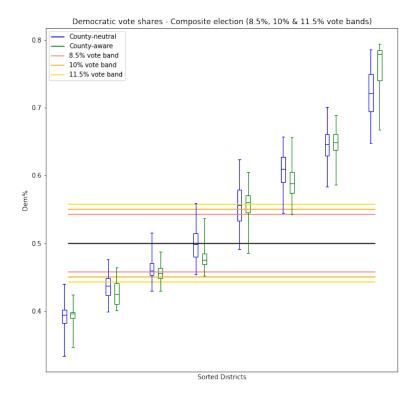


Figure 7: Democratic vote shares by district for county-neutral and county-aware ensembles, with competitiveness vote bands

- the 2nd most Republican district is occasionally competitive, mostly within the 11.5% vote band, and somewhat more likely to be within the narrower bands for the county-neutral ensemble than for the county-aware ensemble.
- The most Republican district is essentially never competitive.

3.4 Partisan seat share

Partisan seat share—i.e., the number of seats won by each political party in a particular election—is not one of the considerations prescribed by Amendment Y for district plans, but it is perhaps the outcome that is of the greatest interest to the most people. The histograms in Figure 8 describe what percentage of plans in each ensemble result in each possible number of Democratic seats won in the composite election. (The corresponding histograms for the numbers of Republican seats won would be the mirror images of the ones shown here.)

The two ensembles are strikingly different by this measure: For the county-neutral ensemble, outcomes of 4 and 5 Democratic seats are both very common, with 3 and 6 seats each being less common, but still not extreme outliers. But for the county-aware ensemble, over 80% of plans produce 4 Democratic seats, with 3 and 5 seats being much less common, and 6 seats an extreme

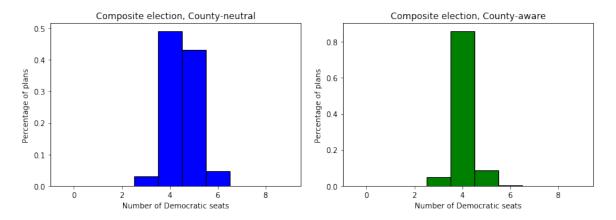


Figure 8: Numbers of Democratic seats won in composite election for county-neutral and county-aware ensembles

outlier which occurs for only 0.2% of plans. The mean numbers of Democratic seats are 4.50 seats for the county-neutral ensemble and 4.04 seats for the county-aware ensemble.

As for competitive districts, we can see a more nuanced picture in the box plots of Figure 7. The key difference is in the 4th most Republican seat, where the box representing the middle 50% of plans for the county-neutral ensemble is almost exactly centered at the 50% vote share line, while the analogous box for the county-aware ensemble is entirely below the 50% vote share line. This difference between the two ensembles explains why this district is about equally likely to be majority-Democrat or majority-Republican in the county-neutral ensemble, while it is usually majority-Republican in the county-aware ensemble.

4 Comparison of First Staff Plan to ensembles

On September 3, 2021, the Commission's nonpartisan staff released the First Staff Plan for Congressional districts. In this section we compare this plan to our ensembles for the measures described in the previous section.

We wish to emphasize that the First Staff Plan is **absolutely not expected to be at or near the mean values** for either ensemble with respect to all the measures that we have computed. Even if the plan were drawn entirely randomly, about half of its computed values would be expected to lie outside the middle 50% range for the ensemble. Furthermore, the Commission and nonpartisan staff are not attempting to draw a completely average plan, but rather to fulfill the Constitutional requirements that dictate that they attempt to preserve communities of interest and attempt to maximize the number of competitive districts. The comparison given here between the First Staff Plan and our ensembles is intended **only** to provide context which may be used by the Commission as just one of many measures to evaluate the First Staff Plan.

4.1 County Splits

The First Staff Plan splits 10 counties and contains 13 total splits. These values are very close to the mean values of 10.2 and 15.2 that we obtained for counties split and total splits, respectively, for our county-aware ensemble.

4.2 Minority representation

In Figures 9 and 10, we add the values for the districts in the First Staff Plan for the Hispanic voting age population and Non-White voting age population, respectively, to the box plots from Figures 2 and 3.

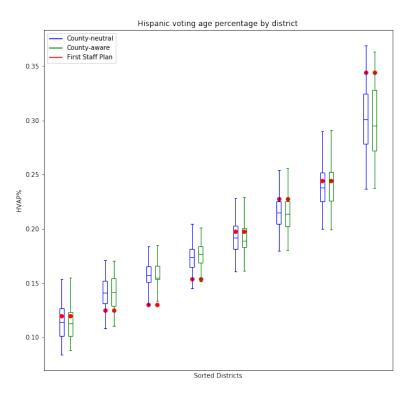


Figure 9: Hispanic voting age percentage by district for ensembles and First Staff Plan

For Hispanic voting age population, the First Staff Plan district with the highest percentage (District 8, with 34.4% HVAP) is somewhat above the middle 50% of both ensembles, but not an extreme outlier. The districts with the 2nd, 3rd, and 4th highest percentages (Districts 1, 3, and 6, with 24.4%, 22.8%, and 19.8% HVAP, respectively) are all slightly above the means of both ensembles, while the districts with the 5th, 6th, and 7th highest percentages (Districts 5, 7, and 2, with 15.4%, 13.0%, and 12.5% HVAP, respectively) are all well below the means of both ensembles. The district with the lowest percentage (District 4, with 12.0% HVAP) is slightly above the mean of both ensembles.

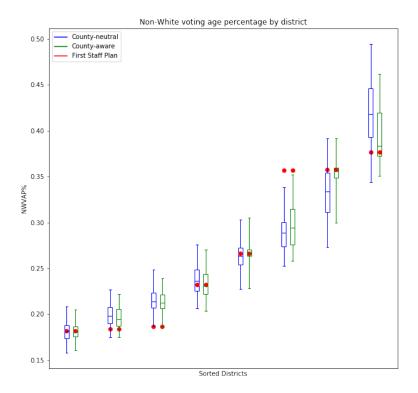


Figure 10: Non-White voting age percentage by district for ensembles and First Staff Plan

For Non-White voting age population, the First Staff Plan district with the highest percentage (District 6, with 37.7% NWVAP) is somewhat below the middle 50% of the county-neutral ensemble and slightly below the mean of the county-aware ensemble. The districts with the 2nd and 3rd highest percentages (Districts 8 and 1, with 35.8% and 35.7% NWVAP, respectively) are above the means of both ensembles, with the Non-White voting age population of District 8 high enough that it might be considered an extreme outlier with respect to both ensembles. The districts with the 4th and 5th highest percentages (Districts 5 and 3, with 26.7% and 23.2% NWVAP, respectively) are close to both ensemble averages. The districts with the 6th and 7th highest percentages (Districts 2 and 4, with 18.7% and 18.4% NWVAP, respectively) are below the means of both ensembles, while the district with the lowest percentage (District 7, with 18.2% NWVAP) is approximately at the mean of both ensemble averages.

4.3 Competitive districts

In Figures 11, 12, and 13, we have added the values for the districts in the First Staff Plan for the number of competitive districts for each of the three vote bands to the histograms from Figures 4, 5, and 6.

The First Staff Plan contains 3 competitive districts, regardless of which of the three vote bands

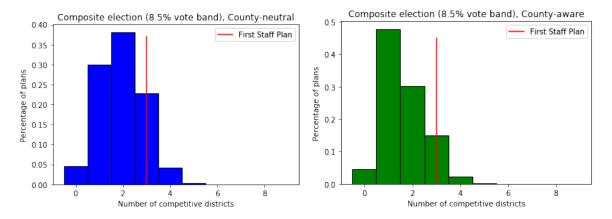


Figure 11: Numbers of competitive seats (8.5% vote band) for ensembles and First Staff Plan

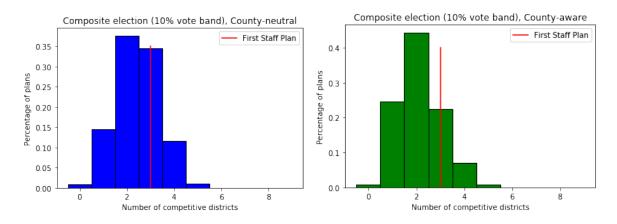


Figure 12: Numbers of competitive seats (10% vote band) for ensembles and First Staff Plan

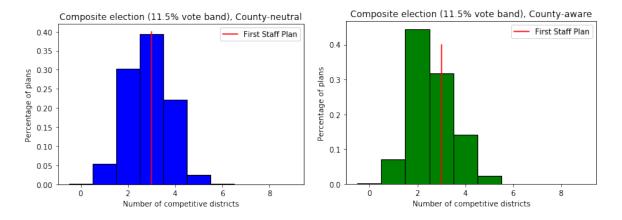


Figure 13: Numbers of competitive seats (11.5% vote band) for =ensembles and First Staff Plan

is used. This is above the mean for both ensembles and all vote bands, and significantly above the mean for the county-aware ensemble with 8.5% vote band. For an additional perspective, we note

that:

- 27.3% of plans in our county-neutral ensemble and 17.5% of plans in our county-aware ensemble have 3 or more competitive districts with respect to the 8.5% vote band;
- 47.1% of plans in our county-neutral ensemble and 30.1% of plans in our county-aware ensemble have 3 or more competitive districts with respect to the 10% vote band;
- 64.2% of plans in our county-neutral ensemble and 48.4% of plans in our county-aware ensemble have 3 or more competitive districts with respect to the 11.5% vote band.

It appears that the staff placed a high priority on maximizing the number of competitive districts within a fairly narrow vote band. Ensemble results suggest that if the vote band were set at 11.5%, it might be possible to find plans with 4 competitive districts, although this expectation may be affected by other priorities not included in our model.

In Figure 14, we have added the values for the districts in the First Staff Plan to the box plots for the Democratic vote share for the composite election from Figure 7.

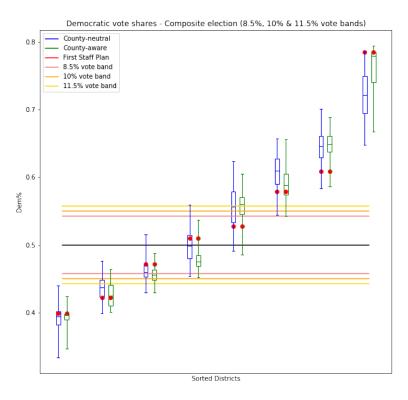


Figure 14: Democratic vote shares by district for ensembles and First Staff Plan, with competitiveness vote bands

Here we can see clearly how the First Staff Plan has been designed to create 3 maximally competitive districts: The 4th most Republican district (District 8, with vote shares of 50.7% D/49.3% R) will

almost always be competitive. The 4th most Democratic district (District 7, with vote shares of 52.6% D/47.4% R) and the 3rd most Republican district (District 3, with vote shares of 47.1% D/52.9% R) are both just outside the middle 50% in both ensembles (and slightly further outside this range in the county-aware ensemble), in the direction of greater competitiveness. While neither of these districts look extreme with regard to Democratic/Republican vote shares, it should be noted that plans that achieve this threshold for both of these districts will be more rare than plans that only achieve it for one or the other.

If a wider vote band were chosen and an attempt made to draw a plan with 4 competitive districts, the districts which are next-closest (but not particularly close) to the 11.5% threshold are the 3rd most Democratic district (District 6, with vote shares of 57.8% D/42.2% R) and the 2nd most Republican district (District 4, with vote shares of 42.4% D/57.6% R). While these districts are equally spaced relative to the 50% line in the First Staff Plan, the ensemble suggests that it would be easier to move District 4 into the 11.5% vote band than District 6. But the actual map tells a slightly different story: because Districts 4 and 6 are adjacent, it could theoretically be possible to redraw the boundary between them so as to make both districts more competitive. However, this would come at the cost of splitting Arapahoe County and/or the city of Aurora and thereby breaking up significant communities of interest.

4.4 Partisan seat share

Finally, we compare the First Staff Plan to our ensembles regarding partian seat share. In Figure 15, we have added the value for the districts in the First Staff Plan for the number of Democratic seats in the composite election to the histograms from Figure 8.

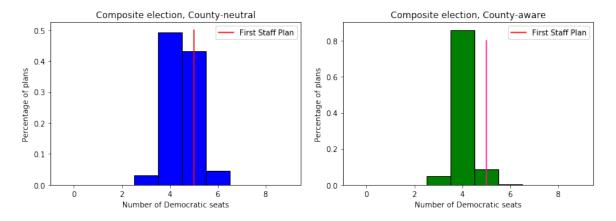


Figure 15: Numbers of Democratic seats won in ensembles and First Staff Plan

The First Staff Plan produces 5 Democratic seats for the composite election. For the county-neutral ensemble, 47.8% of plans produce 5 or more Democratic seats, but for the county-aware ensemble, only 9.0% of plans produce 5 or more Democratic seats. So for the county-aware ensemble, this

result might be considered uncommon, but it is not an extreme outlier.

As we can see from Figure 14, the difference between the most common outcome of 4 Democratic and 4 Republican seats for our county-aware ensemble and the outcome of 5 Democratic and 3 Republican seats in the First Staff Plan is the 50.7% D/49.3% R vote share in District 8. This district is extremely competitive and has had both Democratic and Republican majorities among the 8 elections included in the composite election.

Our ensemble is designed to detect partisan bias in the form of extreme outliers, and our results illustrate that unbiased plans can have a range of outcomes, ranging from 3-6 Democratic seats if only one of the second tier priorities (compactness) is built in and from 3-5 Democratic seats if we build in a partial version of another second tier priority (county preservation). Our ensemble does not provide evidence that plans producing seat shares within these ranges display partisan bias. Moreover, building in variations to our ensemble generation algorithm to preserve additional political boundaries and/or communities of interest could produce slightly different ranges and distributions of reasonable outcomes. Consequently, we do not see any evidence of partisan bias in the design of the First Staff Plan.

4.5 Conclusion

The Commission and the nonpartisan staff have clearly put much thought and effort into the design of the First Staff Plan. Our computer-generated ensembles of plans cannot take into account the myriad of considerations that went into its design, or those that the Commission will prioritize for the remaining Staff Plans. For the measures that we did attempt to model—county preservation, minority representation, competitive districts, and partisan seat share—we do not detect any evidence of bias or other problematic features in the First Staff Plan.

5 Acknowledgments

We are very grateful to Moon Duchin and the MGGG Redistricting Lab for their pioneering work in ensemble analysis, for their open source python package GerryChain (available at https://github.com/mggg/GerryChain) which we have used for our computations, and for their ongoing support for our work.

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A Technical details

A.1 Data collection

In order to build the precinct map used to generate ensembles, we obtained data from the following sources:

- A shapefile with the geographic boundaries of all 2020 voting precincts in Colorado, including precinct-level election results for all statewide elections in 2020, was given to us by Louis Pino from the Commission's nonpartisan staff.
- In the summer of 2019, the third author's student Haley Colgate compiled a shapefile with the geographic boundaries of all 2018 voting precincts in Colorado, including precinct-level election results for all statewide elections in 2018, with the assistance of Todd Bleess of the Colorado State Demography Office.
- A shapefile with the geographic boundaries of all 2016 voting precincts in Colorado, including
 precinct-level election results for all statewide elections in 2016, was obtained from the Voting
 and Election Science Team's repository on the Harvard Dataverse at
 https://dataverse.harvard.edu/dataverse/electionscience.
- Population data from the 2020 Census was taken from the 2020 PL 94-171 Data Summary File for Colorado based on the Decennial Census at the Census Block Level, obtained from the Redistricting Data Hub at https://redistrictingdatahub.org.

The open source python package Maup, developed by the MGGG Redistricting Lab and available at https://github.com/mggg/maup, was used to aggregate/disaggregate all population and election data from their original geographies onto the precinct geographies in the 2020 precinct shapefile. The resulting shapefile contains all the data required to compute population and election results for any district composed of 2020 precincts.

A.2 Ensemble generation

In order to generate our ensembles, we used the Recombination ("ReCom") method developed by the MGGG Redistricting Lab in 2018. (See [6] for a thorough treatment of this method.) For this method, the precinct map is modeled by a mathematical object called a **dual graph**, where each precinct is represented by a point called a **vertex**, and two vertices are connected by an **edge** if the precincts that they represent share a geographic boundary of positive length. A map of Colorado's 2020 voting precincts and its dual graph are shown in Figure 16.

A district plan is then represented by a partition of the dual graph into connected subgraphs, one for each district. (See Figure 17.) A partition is **valid** if it represents a legally valid district

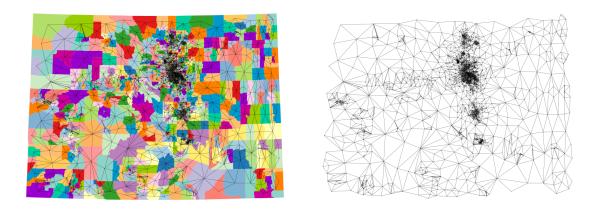


Figure 16: Colorado 2020 precinct map and dual graph

plan; at a minimum, the districts in the plan should be contiguous and have (approximately) equal population.

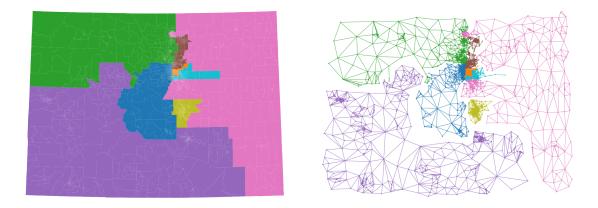


Figure 17: Staff Plan 1 Congressional districts and corresponding dual subgraphs

An ensemble starts with one randomly constructed valid plan, called the "seed plan." The ensemble is then constructed by a mathematical process called a Markov chain, in which each new plan is created by applying a random process to modify the previous plan in some way. For the ReCom method used to build our ensembles, this random process works as follows: At each step, the algorithm randomly selects a pair of adjacent districts and merges the two subgraphs corresponding to these districts into a single graph. Next, it generates a **spanning tree** for the merged graph—i.e., a subgraph consisting of all the graph's vertices and a subset of its edges, with the property that this subgraph is contiguous and has no closed loops—chosen randomly and uniformly from the set of all spanning trees of the merged graph. Finally, it looks for an edge to cut in order to create two new districts that each satisfy the population constraint. (District contiguity is automatic with this method.) This process is illustrated in Figure 18.

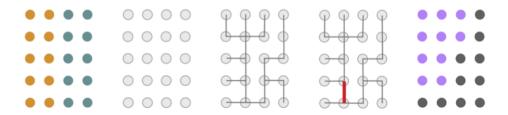


Figure 18: A ReCom step (Figure 4 in [6]; used with permission.)

Part of the appeal of the Markov chain approach is a well-developed theory and a long history of applications of Markov chain sampling methods (see, e.g., [7]). In particular, a sufficiently long Markov chain is theoretically guaranteed to produce an ensemble that accurately represents a specific probability distribution on the entire space of valid district plans. In general, this probability distribution is difficult to determine explicitly, but for the ReCom method there is good heuristic and experimental evidence indicating that the probability of any particular plan appearing in the ensemble is closely related to a natural discrete measure for district compactness. In practice, this means that this method is strongly biased towards plans with relatively compact districts and has no other detectable bias towards any particular type of plan (see, e.g., [4] and [6]). Some examples of plans produced by this method are shown in Figure 19.

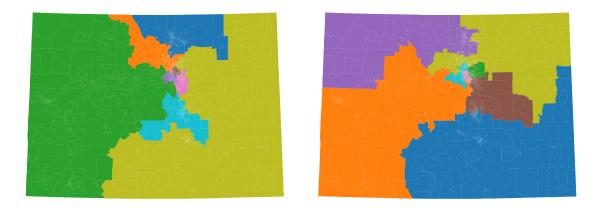


Figure 19: Examples of plans created by the ReCom method for county-neutral ensemble

Our county-neutral ensemble was generated with the basic ReCom method as described above. For our county-aware ensemble, a variation was used in the construction of the spanning tree for the merged graph, in which the random choice of edges to form the spanning tree is more heavily weighted towards intra-county edges, so that the resulting spanning tree contains relatively few edges connecting precincts in different counties. When the tree is cut, it is less likely to produce districts that split counties. As we can see from the histograms in Figure 1, this variation is quite effective in reducing the number of county splits in the resulting plans. Some examples of plans

produced by this variation are shown in Figure 20.

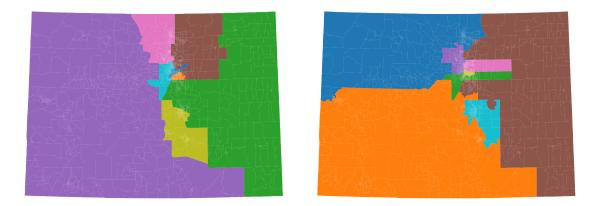


Figure 20: Examples of plans created by the ReCom method for county-aware ensemble

A.3 Ensemble size

Regarding the question of how long is "sufficiently long" for a Markov chain to produce a representative sample of plans, there is unfortunately no good theoretical answer. This question is usually answered heuristically, by running chains until statistics of interest appear to stabilize in a way that is not dependent upon the choice of seed plan. This stabilization is referred to as "convergence" of the statistics being measured.

For our ensembles of Congressional plans, we initially constructed three separate ensembles of 200,000 plans each, starting from three different seed plans with substantially different values for partisan seat share across districts for a variety of elections. (As these chains were intended only for benchmarking, we collected less data for these chains than for the final chains used for our main analysis.)

A typical example of the results of this experiment is shown in Figure 22, which shows the Democratic vote percentages by district for the 2018 Attorney General election for each of the three chains. The values for each of the three seed plans for each district are marked as dots of the corresponding color. As this figure shows, the boxes and whiskers for all three ensembles span essentially the same ranges, despite very different starting values for the seed plans.

For another example, Figure 22 shows the histograms for the Republican vote shares from the most Republican district in this election for each of the three chains, with the values for each of the three seed plans included for comparison. The agreement between the three histograms is not perfect—and in fact it never will be, regardless of how long we run the Markov chains—but we can clearly see the shape of the frequency distribution to understand which values are "typical" and which values might be regarded as extreme outliers.

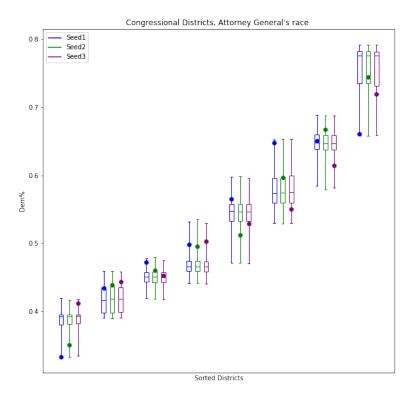


Figure 21: Democratic vote shares by district (AG18 election) for three ReCom ensembles of size 200,000 with different seed plans

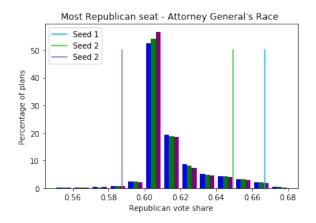


Figure 22: Republican vote shares for the most Republican district (2018 Attorney General election) for three ReCom ensembles of size 200,000 with different seed plans

All statistics that we examined for these three ensembles exhibited similar convergence behavior to those shown above after 200,000 steps, and we concluded that an ensemble of size 200,000 is sufficient to conduct a reliable analysis.

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Addendum 6

Competitiveness Comparison Chart

In re Congressional Redistricting Commission—Case No. 2021SA208 Comparison of 2011 Map and 2021 Map Competitiveness

Election Results¹

District	2011 Existing Map (using 2010 data²)	2011 Existing Map (using 2020 Data)	2021 Final Plan (using 2020 Data)
1	-43.6	-48.4	-57.1
2	-19.6	-24.3	-34.1
3	8.1	7.2	9.3
4	9.8	21.8	26.6
5	26.0	22.0	20.2
6	10.7	-10.2	-15.1
7	-9.2	-16.9	-6.9
8			-1.3

¹ Numbers given are the average vote differential between Republican and Democratic candidates in selected races. A positive number represents a Republican advantage, and a negative number represents a Democratic advantage. Bright green shading represents a district within an 8.5% vote band. Lighter green shading is a district within an 8.51% to 10% vote band.

² The 2010 Data is an average of election results from two state-wide races from that year, U.S. Senator and Treasurer. The 2010 Governor's race is not used because of its anomalous result: a third-party candidate came in second with over 35 percent of the vote. The 2020 Data is an average of eight-state wide races: 2016 U.S. Senate, 2016 President, 2018 Attorney General, 2018 Governor, 2018 Treasurer, 2018 Secretary of State, 2018 CU Regent at Large, and 2020 Senate.