

EXHIBIT 2

December 1, 2023 Declaration of Dr. Collingwood

Expert Report of Dr. Loren Collingwood

Loren Collingwood

2023-12-01

Executive Summary

I have been retained by plaintiffs as an expert, and have been asked to analyze whether five plaintiff proposed remedial maps will perform electorally for Latino voters in Legislative District 14 in the Yakima Valley region– the area comprising Central Washington’s large Latino community.

To assess electoral performance, as in my prior reports, I examine whether the minority-preferred candidate wins in contests featuring racially polarized voting in nine statewide elections subset to LD-14 in each of plaintiffs’ five remedial plans.¹

An electoral performance analysis reconstructs previous election results based on new district boundaries to assess whether a minority or white preferred candidate is most likely to win in a given jurisdiction under consideration (i.e., a newly adopted legislative district).

Based on my analysis, I conclude that all five of plaintiffs’ proposed maps provide Latino voters in the Yakima Valley region with an equal opportunity to elect candidates of choice to the state legislature in LD-14.

My opinions are based on the following data sources: Washington State general election precinct/vtd returns from 2016-2020; 2020 US Census block data, 2021 5-Year American Community Survey (ACS) data, and remedial map geojson files provided by plaintiffs’ counsel.

I am being compensated at a rate of \$400/hour. My compensation is not contingent on the opinions expressed in this report, on my testimony, or on the outcome of this case.

Background and Qualifications

I am an associate professor of political science at the University of New Mexico. Previously, I was an associate professor of political science and co-director of civic engagement at the Center for Social Innovation at the University of California, Riverside. I have published two

¹ My prior reports submitted to the court as Trial Exhibits 1-2 and my testimony at trial demonstrate which candidates are majority (white) and minority (Latino) preferred.

books with *Oxford University Press*, 42 peer-reviewed journal articles, and nearly a dozen book chapters focusing on sanctuary cities, race/ethnic politics, election administration, and RPV. I received a Ph.D. in political science with a concentration in political methodology and applied statistics from the University of Washington in 2012 and a B.A. in psychology from the California State University, Chico, in 2002.

In between my B.A. and Ph.D., I spent 3-4 years working in private consulting for the survey research firm Greenberg Quinlan Rosner Research in Washington, D.C. I also founded the research firm Collingwood Research, which focuses primarily on the statistical and demographic analysis of political data for a wide array of clients, and lead redistricting and map-drawing and demographic analysis for the Inland Empire Funding Alliance in Southern California. I was the redistricting consultant for the West Contra Costa Unified School District, CA, independent redistricting commission in which I was charged with drawing court-ordered single member districts. I am contracted with Roswell, NM, Independent School District to draw single member districts.

I served as a testifying expert for the plaintiff in the Voting Rights Act Section 2 case *NAACP v. East Ramapo Central School District*, No. 17 Civ. 8943 (S.D.N.Y. 2020), on which I worked from 2018 to 2020. In that case, I used the statistical software eiCompare and WRU to implement Bayesian Improved Surname Geocoding (BISG) to identify the racial/ethnic demographics of voters and estimate candidate preference by race using ecological data. I am the quantitative expert in *LULAC vs. Pate* (Iowa 2021), and have filed an expert report in that case. I am the BISG expert in *LULAC Texas et al. v. John Scott et al.*, 1:21-cv-0786-XR (W.D. Tex. 2022). I filed two reports and have been deposed in that case. I was the RPV expert for the plaintiff in *East St. Louis Branch NAACP, et al. vs. Illinois State Board of Elections, et al.*, (N.D. Ill. 2021), having filed two reports in that case. I am the Senate Factors expert for plaintiff in *Pendergrass v. Raffensperger* (N.D. Ga. 2021), where I filed two reports, was deposed, and testified at trial. I was the RPV expert for plaintiff in *Johnson, et al., v. WEC, et al.*, No. 2021AP1450-OA (Wis. 2022), having filed three reports in that case. I was the RPV expert for plaintiff in *Faith Rivera, et al. v. Scott Schwab and Michael Abbott* (Kan. 2022). I filed a report, was deposed, and testified at trial. I served as the RPV expert for the intervenor in *Walen and Henderson v. Burgum and Jaeger*, No 1:22-cv-00031-PDW-CRH (D.N.D. 2023), where I filed a report and testified at trial. I was the RPV expert in *Lower Brule Sioux Tribe v. Lyman County* (D.S.D. 2022), where I filed a report. In this case, I was the RPV expert for plaintiffs, where I filed two reports, was deposed, and testified at trial. I was the RPV expert for plaintiff in *IE United et al. v. Riverside County*, CVRI2202423 (Cal. Super. Ct. 2022), where I filed a report and was deposed. I was the RPV expert for plaintiff in *Paige Dixon v. Lewisville Independent School District, et al.*, Civil Action No. 4:22-cv-00304 (E.D. Tex. 2022), where I filed two expert reports. I was the RPV expert for plaintiff in *Turtle Mountain Band of Chippewa Indians v. Jaeger*, No. 3:22-cv-00022-PDW-ARS (D.N.D. 2023), where I filed two reports, was deposed, and testified at trial.

My curriculum vitae was submitted to the Court as Trial Exhibit 531.

Proposed Maps

Plaintiffs' counsel provided me with the geojson files for five remedial maps. Each map's 2021 ACS Citizen Voting Age Population (CVAP) demographic estimates are presented in Table 1 below.

Table 1. Demographics 2021 CVAP.

Demographic	Map.1	Map.2	Map.3	Map.4	Map.5
Percent Hispanic CVAP 2021	51.65	51.65	50.14	50.14	47
Percent White CVAP 2021	37.14	37.14	38.86	38.86	42.34
Percent Black CVAP 2021	1.37	1.37	1.34	1.34	1.51
Percent Native CVAP 2021	7.08	7.08	7.04	7.04	6.91
Percent AAPI CVAP 2021	1.95	1.95	1.96	1.96	1.75

In terms of electoral performance, I previously analyzed the performance of LD-15 in the Enacted Plan. An electoral performance analysis tests whether different plans would provide a more equal ability for minority voters to participate in the electoral process and to elect candidates of choice. For the performance analysis, I gathered precinct results for the following nine statewide elections: 2016 U.S. Senate, 2016 President, 2016 Governor, 2018 U.S. Senate, 2020 Treasurer, 2020 State Supreme Court Position 3, 2020 President, 2020 Governor, 2020 Attorney General. To examine how a candidate performs in plaintiffs' remedial versions of LD-14, I then subset the precincts to only those falling within the new LD-14 boundary. I did not use district-based elections for the performance analysis because by nature they do not allow for a full reconstruction of previous elections in the new proposed district boundaries. For this reason, in addition to the low turnout and other unusual circumstances outlined in my prior reports, the LD-15 2022 election is not a probative gauge of performance in remedial districts, and I did not utilize it to analyze the performance of remedial districts in this report.

Assessing electoral performance in the proposed maps, LD-14 performs well – and similarly – for Latino voters in all five of plaintiffs' remedial maps. It should be noted that maps 1 and 2, then 3 and 4 are the same LD-14 so produce identical numbers. The average margin of victory in Maps 1 and 2 in my analysis is 14.3% for the Latino-preferred candidate. The average margin of victory in Maps 3 and 4 in my analysis is 14.1% for the Latino-preferred candidate. Finally, the average margin of victory in Map 5 is 13.6%. Thus, all maps produce similar electoral outcomes. Notably, Latino-preferred state legislative candidates will frequently receive a lower percentage than statewide candidates, and that is especially the case where the candidate is also Latino. As a result, these performance results are sufficient to provide Latino voters with an equal opportunity to elect candidates to the state legislature. The results of my analysis are reported below in Figure 1 and Table 2 in the Appendix.

Figure 1. Electoral Performance analysis, Legislative District 14, 2016-2020 statewide general elections, paneled by map alternative.



Conclusion

Overall, each of the five proposed maps perform well for Latino voters' preferred candidates in LD-14. Therefore, Latino voters have a strong possibility of being able to elect their preferred candidate if any of plaintiffs remedial maps 1-5 is selected.

Pursuant to 28 U.S.C. § 1746, I, Loren Collingwood, declare the foregoing is true and correct.

Dr. Loren Collingwood

Dated: December 1, 2023

Appendix

Table 2. Electoral Performance Analysis, LD-14 in Maps 1-5, 2016-2020 contests.

Candidate	Preferred_Candidate	Map	Year	Contest	Vote
Trump	White	Map 1	2020	President	0.407
Biden	Latino	Map 1	2020	President	0.569
Culp	White	Map 1	2020	Governor	0.444
Inslee	Latino	Map 1	2020	Governor	0.554
Larkin	White	Map 1	2020	Attorney General	0.423
Ferguson	Latino	Map 1	2020	Attorney General	0.576
Davidson	White	Map 1	2020	Treasurer	0.449
Pellicciotti	Latino	Map 1	2020	Treasurer	0.551
Larson	White	Map 1	2020	State Sup. Ct. 3	0.424
Montoya	Latino	Map 1	2020	State Sup. Ct. 3	0.574
Trump	White	Map 2	2020	President	0.407
Biden	Latino	Map 2	2020	President	0.569
Culp	White	Map 2	2020	Governor	0.444
Inslee	Latino	Map 2	2020	Governor	0.554
Larkin	White	Map 2	2020	Attorney General	0.423
Ferguson	Latino	Map 2	2020	Attorney General	0.576
Davidson	White	Map 2	2020	Treasurer	0.449
Pellicciotti	Latino	Map 2	2020	Treasurer	0.551
Larson	White	Map 2	2020	State Sup. Ct. 3	0.424
Montoya	Latino	Map 2	2020	State Sup. Ct. 3	0.574
Trump	White	Map 3	2020	President	0.410
Biden	Latino	Map 3	2020	President	0.566
Culp	White	Map 3	2020	Governor	0.448
Inslee	Latino	Map 3	2020	Governor	0.550
Larkin	White	Map 3	2020	Attorney General	0.426
Ferguson	Latino	Map 3	2020	Attorney General	0.573
Davidson	White	Map 3	2020	Treasurer	0.452
Pellicciotti	Latino	Map 3	2020	Treasurer	0.547
Larson	White	Map 3	2020	State Sup. Ct. 3	0.409
Montoya	Latino	Map 3	2020	State Sup. Ct. 3	0.588
Trump	White	Map 4	2020	President	0.410
Biden	Latino	Map 4	2020	President	0.566

Candidate	Preferred_Candidate	Map	Year	Contest	Vote
Culp	White	Map 4	2020	Governor	0.448
Inslee	Latino	Map 4	2020	Governor	0.550
Larkin	White	Map 4	2020	Attorney General	0.426
Ferguson	Latino	Map 4	2020	Attorney General	0.573
Davidson	White	Map 4	2020	Treasurer	0.452
Pellicciotti	Latino	Map 4	2020	Treasurer	0.547
Larson	White	Map 4	2020	State Sup. Ct. 3	0.409
Montoya	Latino	Map 4	2020	State Sup. Ct. 3	0.588
Trump	White	Map 5	2020	President	0.403
Biden	Latino	Map 5	2020	President	0.571
Culp	White	Map 5	2020	Governor	0.443
Inslee	Latino	Map 5	2020	Governor	0.554
Larkin	White	Map 5	2020	Attorney General	0.425
Ferguson	Latino	Map 5	2020	Attorney General	0.575
Davidson	White	Map 5	2020	Treasurer	0.454
Pellicciotti	Latino	Map 5	2020	Treasurer	0.546
Larson	White	Map 5	2020	State Sup. Ct. 3	0.426
Montoya	Latino	Map 5	2020	State Sup. Ct. 3	0.571
Hutchinson	White	Map 1	2018	U.S. Senate	0.455
Cantwell	Latino	Map 1	2018	U.S. Senate	0.545
Hutchinson	White	Map 2	2018	U.S. Senate	0.455
Cantwell	Latino	Map 2	2018	U.S. Senate	0.545
Hutchinson	White	Map 3	2018	U.S. Senate	0.455
Cantwell	Latino	Map 3	2018	U.S. Senate	0.545
Hutchinson	White	Map 4	2018	U.S. Senate	0.455
Cantwell	Latino	Map 4	2018	U.S. Senate	0.545
Hutchinson	White	Map 5	2018	U.S. Senate	0.460
Cantwell	Latino	Map 5	2018	U.S. Senate	0.540
Trump	White	Map 1	2016	President	0.406
Clinton	Latino	Map 1	2016	President	0.538
Bryant	White	Map 1	2016	Governor	0.423
Inslee	Latino	Map 1	2016	Governor	0.577
Vance	White	Map 1	2016	US Senate	0.383
Murray	Latino	Map 1	2016	US Senate	0.617
Trump	White	Map 2	2016	President	0.406

Candidate	Preferred_Candidate	Map	Year	Contest	Vote
Clinton	Latino	Map 2	2016	President	0.538
Bryant	White	Map 2	2016	Governor	0.423
Inslee	Latino	Map 2	2016	Governor	0.577
Vance	White	Map 2	2016	US Senate	0.383
Murray	Latino	Map 2	2016	US Senate	0.617
Trump	White	Map 3	2016	President	0.410
Clinton	Latino	Map 3	2016	President	0.532
Bryant	White	Map 3	2016	Governor	0.427
Inslee	Latino	Map 3	2016	Governor	0.573
Vance	White	Map 3	2016	US Senate	0.386
Murray	Latino	Map 3	2016	US Senate	0.614
Trump	White	Map 4	2016	President	0.410
Clinton	Latino	Map 4	2016	President	0.532
Bryant	White	Map 4	2016	Governor	0.427
Inslee	Latino	Map 4	2016	Governor	0.573
Vance	White	Map 4	2016	US Senate	0.386
Murray	Latino	Map 4	2016	US Senate	0.614
Trump	White	Map 5	2016	President	0.410
Clinton	Latino	Map 5	2016	President	0.528
Bryant	White	Map 5	2016	Governor	0.428
Inslee	Latino	Map 5	2016	Governor	0.572
Vance	White	Map 5	2016	US Senate	0.393
Murray	Latino	Map 5	2016	US Senate	0.607