

Nevada

Since the 2010 census, Nevada's population grew by more than 15%, with an increase of over 400,000 residents. Nevada became more ethnically and racially diverse and is now a majority-minority state.⁶⁷ The share of the Hispanic population of Nevada increased by 24.3% between 2010 and 2020, the share of the Black population increased by 47.5%, and the share of the Asian population increased by 70.4%. The share of the white population experienced an 11.1% decrease. Much of this growth was concentrated in the Las Vegas suburbs.

Following the 2011 redistricting cycle, Democrats were packed into the first congressional district, which contains Las Vegas and favored Democrats by twenty-two points. Hispanic voters made up 40.5% of the Voting Age Population (VAP) in District 1, and 16.22% and 26.92% in the surrounding districts (Districts 3 and 4). Following the 2020 congressional elections, Districts 1, 3, and 4 are represented by Democrats, while District 2 continues to be a Republican stronghold.

Nevada has already approved a new congressional map. On November 16th, the governor signed a new map into law that unpacks Democratic voters and Hispanics in District 1 and distributes them among the surrounding districts. Under the new map, three seats favor Democrats by low single-digit margins, while one seat favors Republicans by double digits.⁶⁸ Hispanic advocacy groups are unhappy with the proposed map because it dilutes their voting power by reducing their share of the population in District 1 from 45.1% to 35.5%.⁶⁹

The adopted map is already the subject of litigation.⁷⁰ The plaintiffs are a Republican assemblyman and his Republican constituent who allege that the new maps are partisan gerrymanders that deny voters an equal opportunity to participate in the political process, in violation of the Nevada constitution and the Fifth and Fourteenth Amendments of the U.S. Constitution. The lawsuit alleges that the purpose of the congressional plan is to dilute rural Nevadans' voting power.

I drew two maps for Nevada, each prioritizing a different redistricting principle. I considered a variety of principles to optimize for in my Good Government map—enhancing minority representation, keeping political subdivisions intact, and maximizing compactness. Members of minority communities are in the majority in two out of four of Nevada's existing districts, so I did not feel it was necessary to try to enhance minority representation at the congressional level in order to comply with the *Johnson v. De Grandy* proportionality standard. I ultimately chose to

⁶⁷ *Nevada Quick Facts*, U.S. CENSUS BUREAU, <https://www.census.gov/quickfacts/NV> (last accessed Jan. 15, 2022).

⁶⁸ *What Redistricting Looks Like in Every State*, FIVETHIRTYEIGHT (Jan. 14, 2022) <https://projects.fivethirtyeight.com/redistricting-2022-maps/nevada/>.

⁶⁹ *Progressives Say Nevada Redistricting Maps Split Latino Vote*, ASSOCIATED PRESS (Nov. 13, 2021) <https://www.usnews.com/news/best-states/nevada/articles/2021-11-13/progressives-say-nevada-redistricting-maps-split-latino-vote>.

⁷⁰ Complaint for Declaratory and Injunctive Relief, *Keonig v. Nevada*, No. 21C0016619 (D. Nev. Nov. 17, 2021) <https://www.democracydocket.com/wp-content/uploads/2021/11/2021-11-17-Complaint.pdf>.

maximize compactness, as I felt Nevada’s small size and heavily rural population would make it possible to draw highly compact districts. This results in a plan that gives Republicans a significant partisan advantage.

My least change map is intended to keep the district lines as close to the originally adopted plans as possible. This means that Hispanic voters remain packed into District 1 and Republicans hold a slim majority in District 3, the state’s southernmost district.

Least Change Plan

Much of Nevada’s population growth was concentrated in the south. To restore District 2, the northernmost district, to population equality, I could not avoid splitting Lyon county and adding VTDs from District 4.

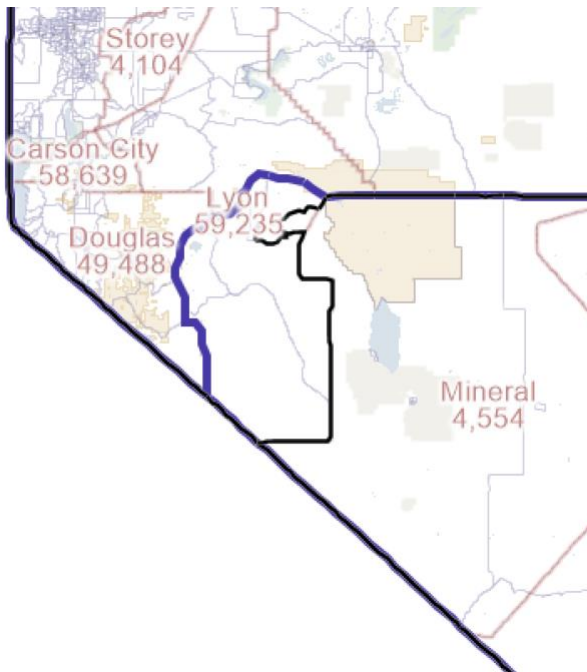


Figure 50 This is an image of District 2 in the Least Change plan for Nevada, with previous boundaries of the districts in purple.

I also shifted White Pine county from District 2 to District 4.

In southern Las Vegas, I tried to maintain the compact shape of the first district and shifted the borders to the south to capture increased population in District 3 and restore the districts to population equality.

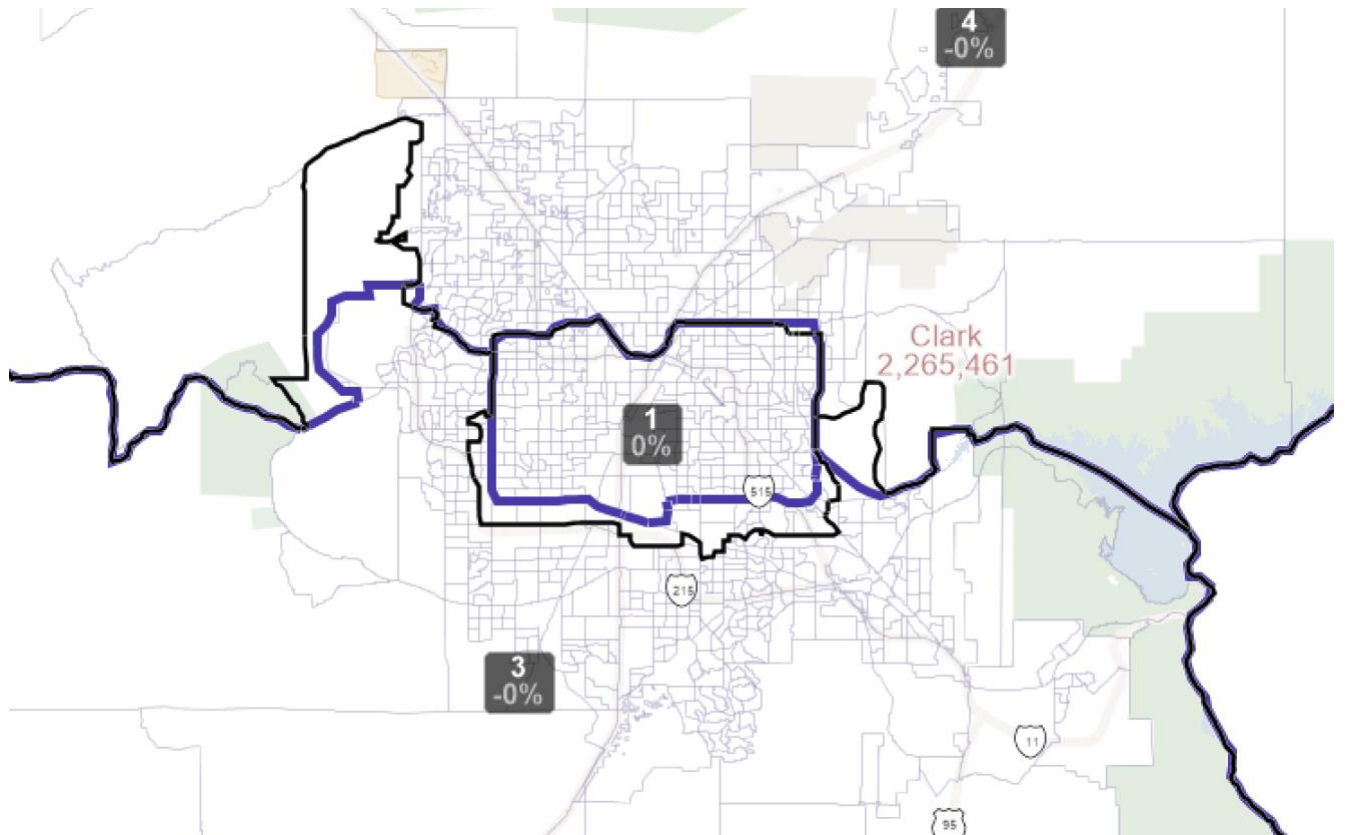


Figure 51 This is an image of District 1 in the Least Change plan for Nevada, with the previous district boundaries in purple.

Good Government Plan

My Good Government Plan was focused on maximizing compactness. Concededly, this creates a partisan advantage for Republicans.



Figure 52 This is a google maps image of my Good Government plan.

Democratic voters and non-white voters remain packed into a single district (what is, under my Good Government plan, District 3 and under the existing plan, District 1). Like District 1, the new District 3 (GG3) captures most of Las Vegas and East Las Vegas. GG3 is closer to a square shape than the existing District 1, which is shaped more like a rectangle. This increases the district's Reock compactness score from .53 under the existing plan to .60.

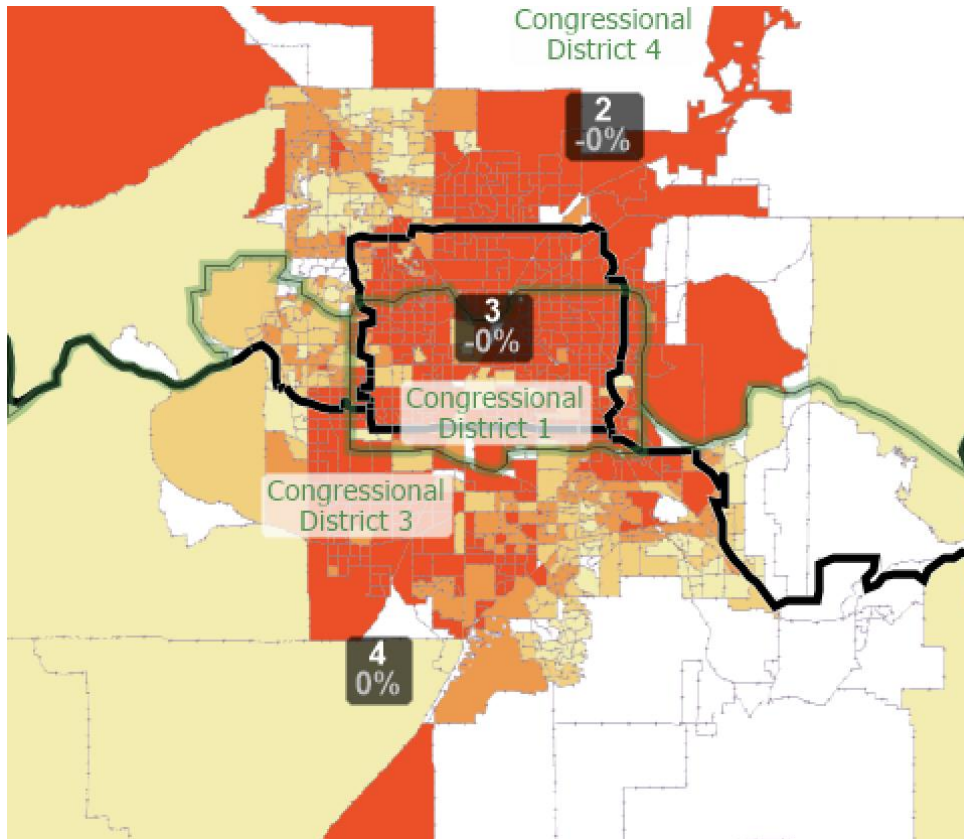


Figure 53 This is an image of District 3 in the Nevada Good Government Plan. Previous district lines are in green.

I also significantly changed the geographical makeup of the northernmost District 2, adding Nye, Mineral, and Esmerelda counties to District 2. This creates a district that crosses diagonally across the state. The previous district is shaped more like a rectangular. This decreases the Reock compactness score of District 2 (GG District 1) from .5 under the existing plan to .49 under the Good Government plan. It increases the Reock compactness score of District 4 (GG District 2) from .48 to .55.

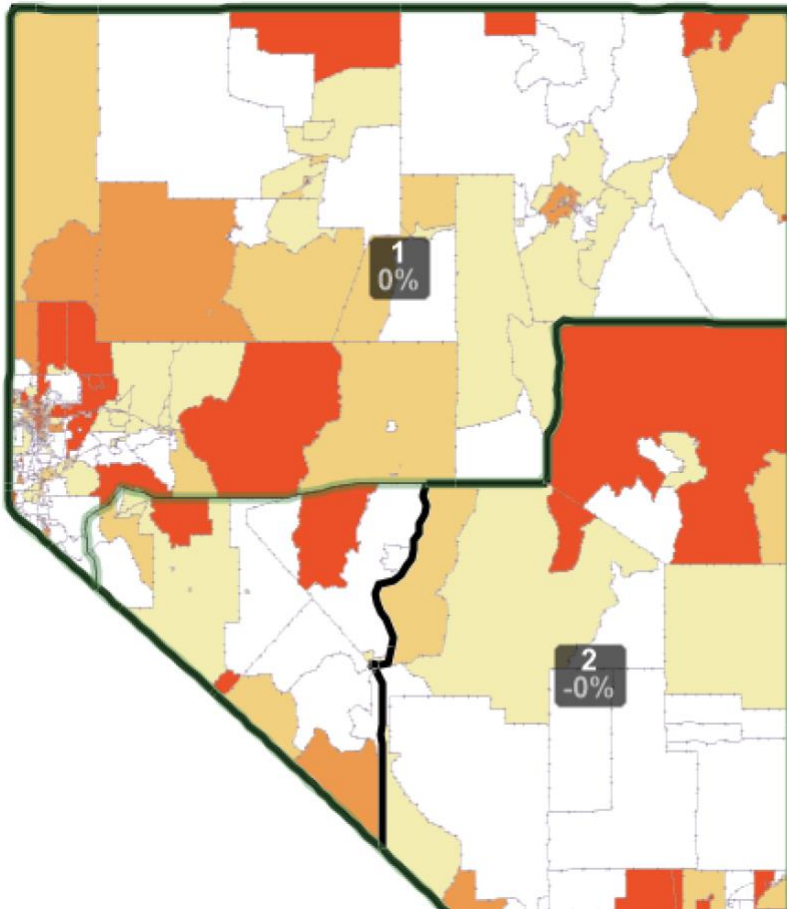


Figure 54 This is an image of the changes to the northernmost congressional districts in the Good Government plan.

Legal Requirements

Federal Requirements:

One Person-One Vote

Article I §2 of the U.S. Constitution requires that Congressional districts “be apportioned among the several States . . . according to their respective numbers. . . .”⁷¹ In *Karcher v. Daggett*, the Supreme Court held that any deviations from perfect population equality in congressional districts must be justified with respect to traditional districting principles, including respect for political subdivisions,

⁷¹ U.S. Const. Art. I §2.

compactness, and avoiding contests between incumbents.⁷² Therefore, a population deviation of 0% is the gold standard in drawing congressional district lines.

Both my least change and Good Government plans for Nevada comply with 1P1V. As of the 2020 census, Nevada's population was 3,104,614. This means that the ideal population for each district is 776,154. In my least change plan, two districts have a population of 776,154 and two districts have a population of 776,153. In my Good Government plan, the same is true – two districts have a population of 776,154 and two districts have a population of 776,153.

Shaw v. Reno

In *Shaw v. Reno*, the Supreme Court held that a plaintiff could challenge a redistricting plan under the 14th Amendment's Equal Protection Clause based on the harm caused by the legislature's decision to use race as the predominant factor in drawing the plan.⁷³ A plan that violates *Shaw*, therefore, is one that cannot be understood as anything other than a plan designed to separate voters on the basis of race.

Latinos are the largest minority group in Nevada and are therefore likely to be the subject of a *Shaw* claim. The districts in my Good Government plan are likely to pass muster under *Shaw v. Reno*. A plan that uses race as a predominant factor is one that does not respect traditional districting principles like compactness. My plan uses compactness as the predominant factor, while maintaining respect for political subdivision lines and maintaining adequate minority representation.

A *Shaw* claim might be more viable against the Least Change plan, although this too is unlikely to succeed. Hispanic voters are packed into District 1, but a defender of the plan could argue that they are packed into District 1 for political, not racial reasons. *Shaw* claims are most potent against districts that are strangely shaped, as in *Shaw* itself, but a strange shape is not a necessarily a pre-condition for a *Shaw* violation, as in *Miller v. Johnson*. However, there typically would need to be extraneous evidence of intent to use race as the predominant factor in districting. Latinos make up a plurality of the population in the first district, but not the majority. District 1 has a very regular shape and a high Reock compactness score of .54. Given that Latinos are not the majority of the CVAP or VAP in any district and no additional evidence of intent to use race as the predominant factor exists, it is unlikely that a *Shaw* claim would succeed here.

Section 2 of the Voting Rights Act

Section 2 of the VRA does not require the creation of a majority-Latino district in Nevada. The first prong of Gingles is not met: no minority group is sufficiently large and compact to comprise the majority of the CVAP in a single

⁷² Karcher v. Daggett, 462 U.S. 725, 740 (1983).

⁷³ Shaw v. Reno, 509 U.S. 630, 649 (U.S. 1993).

member district. It is possible to create a district where Hispanic voters are the majority of the VAP, but not possible using CVAP data. Furthermore, Nevada does not meet the third prong of Gingles, racially polarized voting. Based on data from the 2020 elections, Joe Biden was the candidate of choice among Hispanics. In 2020, Biden was the candidate of choice for 61% of the Latino population.⁷⁴ The same was true of minority voters in general. According to exit polls, 80% of Black Nevadans preferred Joe Biden to Donald Trump, and 64% of Asian voters at Minority voters make up 50.04% of the VAP which means that minority voters should be entitled to elect their candidate of choice in two out of four districts under the *Johnson v. De Grandy* proportionality standard.⁷⁵ In the 2020 elections, Democrats were elected to three out of four Congressional seats. This means that minority voters are actually now overrepresented relative to their share of the population. There is some evidence of racial polarization, as the majority of white voters preferred Donald Trump to Joe Biden in 2020. But 43% of white voters nevertheless voted for Joe Biden, meaning that white voters do not vote sufficiently as a bloc to prevent minority voters from electing their candidate of choice.

State requirements

The Nevada constitution provides that “representation shall be apportioned according to population” and the census “... shall serve as the basis of representation in both houses of the Legislature,”⁷⁶ but does not list any additional requirements. However, a 2011 state court decision imposed requirements on congressional plans.⁷⁷ The court ordered that congressional districts may not vary in population by more than one person, must be contiguous and not irregularly shaped by arbitrary distortions or non-arbitrary distortions, must avoid dividing political subdivisions, and must preserve communities of interest. Communities of interest are defined as groups with common educational backgrounds, housing patterns, income levels, living conditions, cultural or language characteristics shall be kept intact, and must be as regularly shaped and compact as possible.

As I will discuss in the subsequent sections, my plans comply with these requirements.

Contiguity

⁷⁴ *Exit poll results and analysis from Nevada*, THE WASHINGTON POST (Nov. 17, 2021) <https://www.washingtonpost.com/elections/interactive/2020/exit-polls/nevada-exit-polls/>.

⁷⁵ In *Johnson v. De Grandy*, the Supreme Court held that no voting rights act violation could be found in a plan where minority members formed effective voting majorities in a number of districts that was roughly proportional to the minority voters’ respective shares of the population. See *Johnson v. De Grandy*, 512 U.S. 997, 1000 (1994). While proportionality is not dispositive of a claim under § 2, it is a rule of thumb that can be helpful in assessing whether a plan complies with the VRA. See *id.*

⁷⁶ NEV. CONST. ART. I, § 15.

⁷⁷ Order re: Redistricting, *Guy v. King*, No. 11 OC 00042 1B (D. Nev. Sep. 21, 2021) https://www.ncsl.org/Portals/1/Documents/Redistricting/NV_11-OC-00042-1B_2011-09-21_Order_Re-Redistricting_20076.pdf.

All districts in both plans are fully contiguous, with no districts contiguous only by water.

Compactness

My Good Government plan significantly improves the average compactness scores of the existing and least change plans across all measures. My Good Government plan has an average Reock compactness score of .49, with a minimum of .33 and a maximum of .60. The existing plan has an average Reock compactness score of .47, a minimum of .35, and a maximum score of .53. The least change plan has an average Reock compactness score of .47, a minimum of .35, and a maximum of .55. The plan recently adopted by the Nevada state legislature has the lowest average Reock scores of any of the three plans I have discussed, with an average Reock score of .44. Its minimum score is .24 and its maximum score is .55.

The Good Government plan has an average Schwartzberg compactness score of 1.33, with a minimum of 1.25 and a maximum of 1.43. The existing plan has an average Schwartzberg compactness score of 1.35, with a minimum of 1.29 and a maximum of 1.49. The least change plan has an average Schwartzberg score of 1.41, a minimum of 1.27, and a maximum of 1.61. The recently adopted plan has a Schwartzberg compactness score 1.56, a minimum of 1.29, and a maximum of 1.93.

The Good Government plan has an average Polsby-Popper score of .51, with a minimum of .44 and a maximum of .64. This is the only metric on which the Good Government plan is less compact than the existing plan. The enacted plan has, with an average of .53, a minimum of .42, and a maximum of .58. The least change plan has an average Polsby-Popper score of .49, a minimum of .33, and a maximum of .61. The recently adopted plan has an average Polsby-Popper compactness score of .44, a minimum of .25, and a maximum of .58.

I have summarized these results in a table:

Compactness Scores									
Plan	Min Reock	Avg. Reock	Max Reock	Min. PP	Avg. Polsby-Popper	Max PP	Min. Schwartzberg	Avg. Schwartzberg	Max Schwartzberg
Good Government	.33	.49	.60	.44	.51	.64	1.33	1.37	1.44
Existing	.35	.47	.53	.42	.53	.58	1.29	1.35	1.49
Least Change	.35	.47	.53	.33	.49	.61	1.27	1.41	1.61

Adopted Plan	.24	.44	.55	.25	.44	.58	1.29	1.51	1.99
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Political Subdivision splits

The existing plan, the Least Change plan, and the Good Government plan all split two counties. This is unavoidable because Clark County’s population is too large to be contained within one district. A second county in Northern Nevada must be split in order to attain perfect population equality. Though the Good Government plan splits two counties, it splits far fewer voting districts than the other two plans. My Good Government plan splits two counties and only three voting districts. The Least Change plan splits fifteen voting districts. The enacted plan splits the most political subdivisions of any of the plans that I have discussed in this paper. It splits four counties and thirty-nine voting districts.

Political Subdivision splits		
Plan	Counties	VTDs
Good Government	2	3
Least Change	2	12
Existing	2	15
Adopted	4	39

Communities of interest

Nevada has three major regions: the Reno and Carson City metro areas, the Las Vegas metro area, and the rural and frontier counties, which make up 86.9% of the landmass of the state.⁷⁸ Nevada is also home to a large number of Native American communities, including the Washoes, the Northern Paiutes, the Western Shoshones, and the Southern Paiutes.⁷⁹

Reno Metro Area Communities of interest

In both the Least Change and Good Government maps, heavily populated communities in Washoe County are united with rural counties in the North. Politically, Washoe County shares some similarities with Las Vegas in the South, as

⁷⁸ *Appendix B: Nevada Geographic and Demographic Data 2012 – 2016 State Plan for AoA*, NEV. AGING AND DISABILITY SERVS. DIV., <https://adsd.nv.gov/uploadedFiles/adsdngov/content/About/Reports2/StatePlan/AppendixBNevadaGeographicandDemographicData.pdf> (last accessed Jan. 15, 2022).

⁷⁹ *Map of Nevada Tribes*, NEVADA INDIAN TERRITORY, <https://nevadaindianterritory.com/map/> (last accessed Jan. 15, 2022).

it voted by a slim margin for Joe Biden in the 2020 elections⁸⁰ and for Hillary Clinton in the 2016 elections.⁸¹ The rural counties in the North are very conservative areas and have voted overwhelmingly for Donald Trump in the past two presidential elections.⁸² However, Northern Nevada has a distinct cultural history stemming from its role in the silver mining trade and the construction of railroads.⁸³ Many Northern Nevadans are the descendants of immigrants from Spain, Ireland, Germany, England, Japan, and China who settled in Nevada during the mining boom. One challenge with my Good Government map is that it splits the town of Tonopah, a historic mining town. The westernmost part of Tonopah, a region that contains 192 people, is included in District 1, while the rest of the town is included in District 2. This was the only way to equalize the populations of Districts 1 and 2, while maximizing the districts' compactness scores. The existing plan contains a similar split, leaving 204 people in the Yerington Indian reservation in District 4, with the remaining 35 people living in the reservation in District 3.

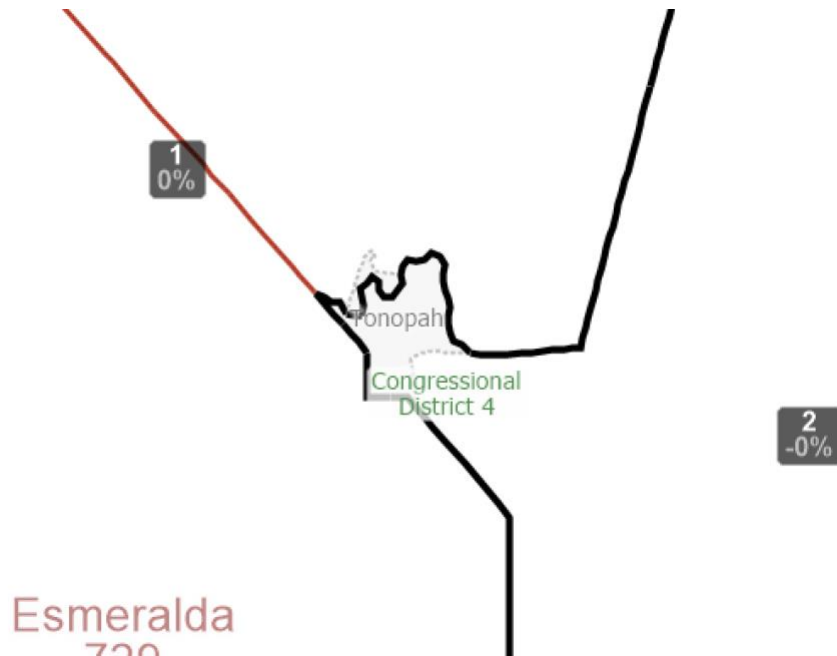


Figure 55 This is an image of Tonopah, a town that is split under my Good Government plan

Las Vegas Metro Area Communities of Interest

⁸⁰ 2020 Nevada Presidential Results, POLITICO, <https://www.politico.com/2020-election/results/nevada/> (last accessed Jan. 15, 2021)

⁸¹ 2016 Nevada Presidential Results, POLITICO, <https://www.politico.com/2016-election/results/map/president/nevada/> (last accessed Jan. 15, 2021).

⁸² 2020 Nevada Presidential Results, POLITICO, <https://www.politico.com/2020-election/results/nevada/> (last accessed Jan. 15, 2021).

⁸³ *Step Back into Reno Tahoe's Storied Past*, RENO TAHOE (last accessed Jan. 15, 2022) <https://www.visitrenotahoe.com/things-to-do/arts-and-culture/heritage/>.

In the Good Government plan, the Las Vegas metro area is divided into three congressional districts—Districts 2, 3, and 4.

District 3 of the Good Government plan keeps the heavily Hispanic, working class neighborhoods in North Las Vegas, Sunrise Manor, and Las Vegas intact. The majority-white, higher income suburbs of Las Vegas including Henderson and Paradise are included in District 4. Summerlin, another high-income suburb of Las Vegas, is divided between Districts 2 and 3.

The enacted plan similarly keeps minority communities of interest intact. As the Democratic controlled state legislature found in the 2020 redistricting cycle, this had the effect of packing minority voters into a Las Vegas-centered district. The new maps, adopted in 2020, crack Latino communities in North Las Vegas, Sunrise Manor, and Las Vegas. This has drawn the ire of Latino voting rights advocacy groups, who say that the new maps dilute the voting strength of the Latino community.⁸⁴

Native American tribes

My Good Government map largely tracks the regions historically associated with Native American tribes in the state. Unlike the existing plan, which divides the Yerington Indian Reservation into two districts, my Good Government plan does not divide any Indian Reservation across district lines.

⁸⁴ ASSOCIATED PRESS, *supra* note 62.

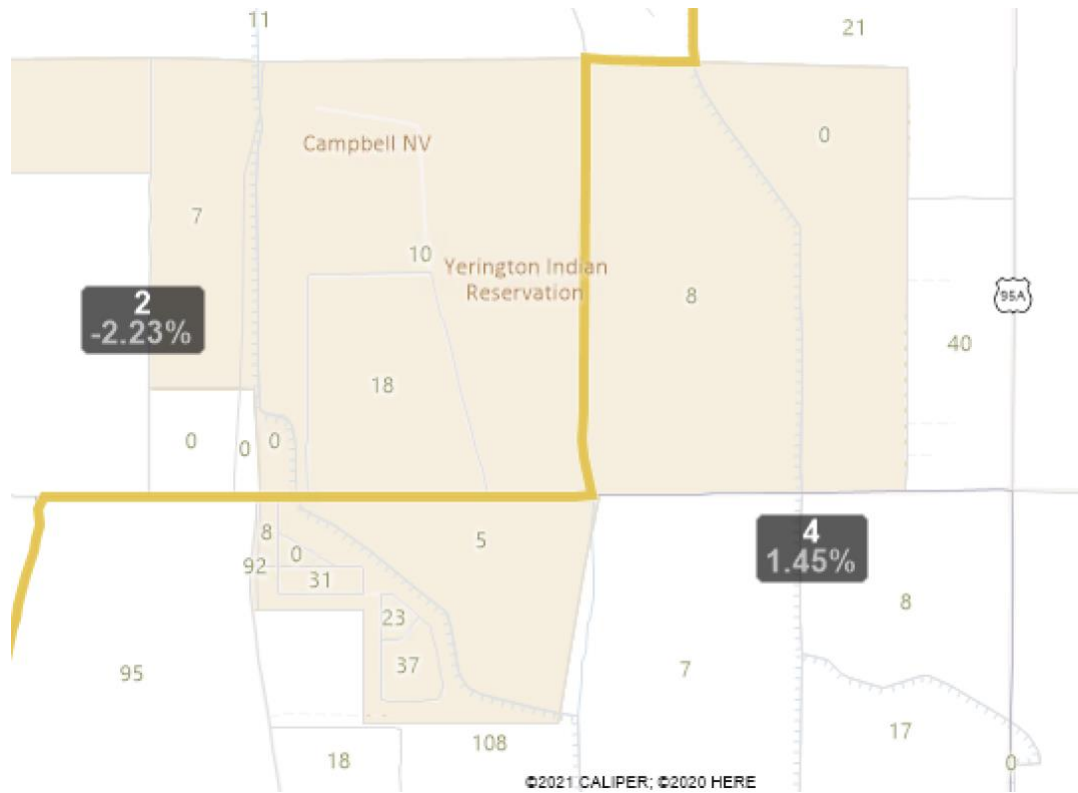


Figure 56 This is an image of the split of the Yerington Indian reservation in the existing plan.

Furthermore, the district boundaries map on to the historic boundaries of Indian territory. For example, District 1 includes the territory Northern Paiutes and Shoshones. District 2 tracks land historically inhabited by the Western Shoshones, and Districts 3 and 4 include territory inhabited by the Southern Paiutes.

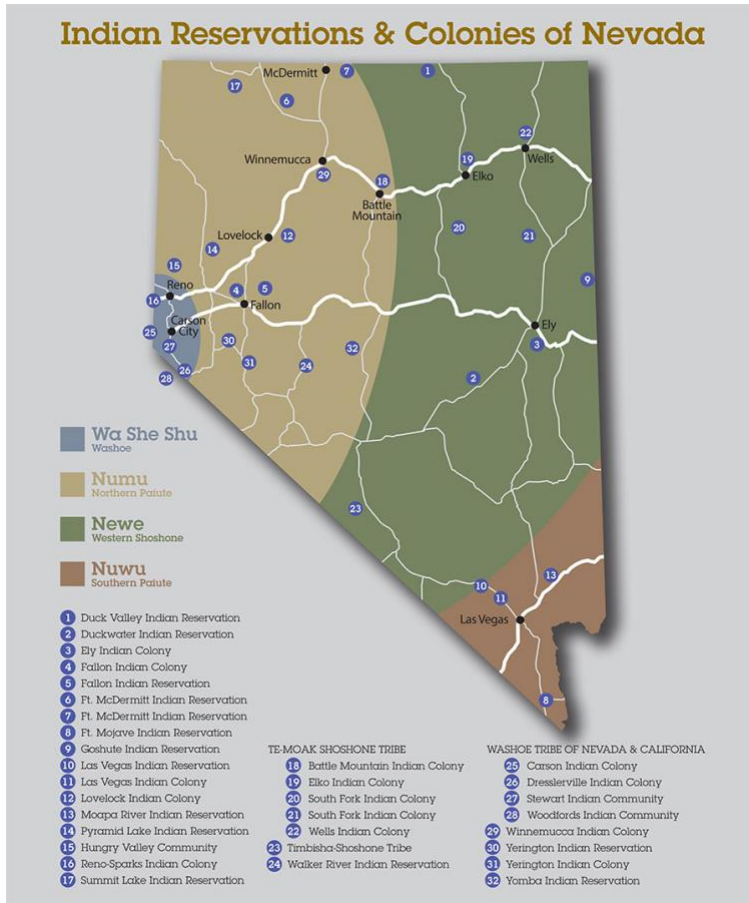


Figure 57 This is an image of the regions historically occupied by Native American tribes in Nevada. Source: <https://nevadaindianterritory.com/map/>

Partisan Considerations

My Good Government plan, which prioritizes traditional districting principles like respect for political subdivisions and compactness, creates a significant electoral advantage for Republicans. According to PlanScore,⁸⁵ votes for Republican candidates are inefficient at a rate 10.2% lower than votes for Democrats, favoring Republicans in 74% of predicted scenarios. In a hypothetical, perfectly tied election, Republicans would be expected to win 10.7% extra seats. This plan creates three districts that lean Republican and one solidly Democratic district centered on Las Vegas.

This is a stronger partisan bias than the existing plan, which has an 7.7% efficiency gap favoring Republicans and a 6.9% partisan bias in favor of Republicans. The plan that the Democratic-controlled state legislature recently adopted has a Democratic bias of 6.5%, meaning that in a perfectly tied election, Democrats would win an additional 6.9% of seats.

⁸⁵ PlanScore analyses for my proposed plans are available on the Nevada plans pages at www.DrawCongress.org.

These results reflect an effect noted in the political science literature on redistricting: that human geography has an impact on partisan advantage. For example, in 2013, Jowei Chen and Jonathan Rodden demonstrated the impact of “unintentional gerrymandering,” which arises when one party’s voters are more geographically clustered than those of the other party.⁸⁶ Using data from the 2000 election, they generated thousands of hypothetical districting plans for 20 states. They found that when Democratic voters are heavily concentrated into urban areas, as they are in Las Vegas, reliance on traditional districting principles creates significant Republican electoral advantages.

Both my Least Change and Good Government plans preserve the partisan balance of the existing districts. According to PlanScore data from the last ten years of elections in Nevada, both plans and the existing plan create one safe Democrat seat, one safe Republican seat, and two districts that Lean Republican. By contrast, the Adopted plan unpacks Las Vegas voters into three districts to create three swing districts and one safe Republican seat.

Partisan considerations					
Plan	Lean Democrat	Safe Democrat	Lean Republican	Safe Republican	Partisan Bias
Existing Plan	0	1	2	1	6.9%
Least Change	0	1	2	1	3.6%
Good Government	0	1	3	0	10.7%
Adopted Plan	2	0	1	1	6.5%

Comparison to the adopted plan

My Good Government plan is significantly more compact on average than the adopted plan, with an average Reock compactness score of .49, an average Polsby-Popper score of .51, and an average Schwartzberg score of 1.37. The Adopted plan has an average Reock score of .44, an average Polsby-Popper score of .44, and an average Schwartzberg score of 1.51.

Average Compactness Scores: Good Government v. Adopted Plan			
Plan	Reock	Polsby-Popper	Schwartzberg
Good Government	.49	.51	1.37
Adopted	.44	.44	1.51

⁸⁶ Jowei Chen and Jonathan Rodden, *Unintentional Gerrymandering: Political Geography and Electoral Bias in Legislatures*, 8 QUARTERLY J. POL. SCI. 239, 240 (2013) <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.397.5148&rep=rep1&type=pdf>.

The Adopted plan also contains more majority-minority districts than my Good Government plan. The Adopted plan contains three districts where non-white voters are the majority of the voting age population. My Good Government plan, by contrast, contains only one district where non-white voters are the majority of the voting age population. Essentially, my plan packs the non-white community in Las Vegas and East Las Vegas, while the adopted plan cracks this community. There is a debate as to whether the Latino community in Las Vegas has more political influence under plans that concentrate Latino voters into a single district, as my Good Government plan and the Existing plans do. Under my Good Government plan, Latino voters make up 43% of the VAP in the Las Vegas-centered district. In the adopted plan, Latino voters make up roughly 30% of the voting age population in two districts.

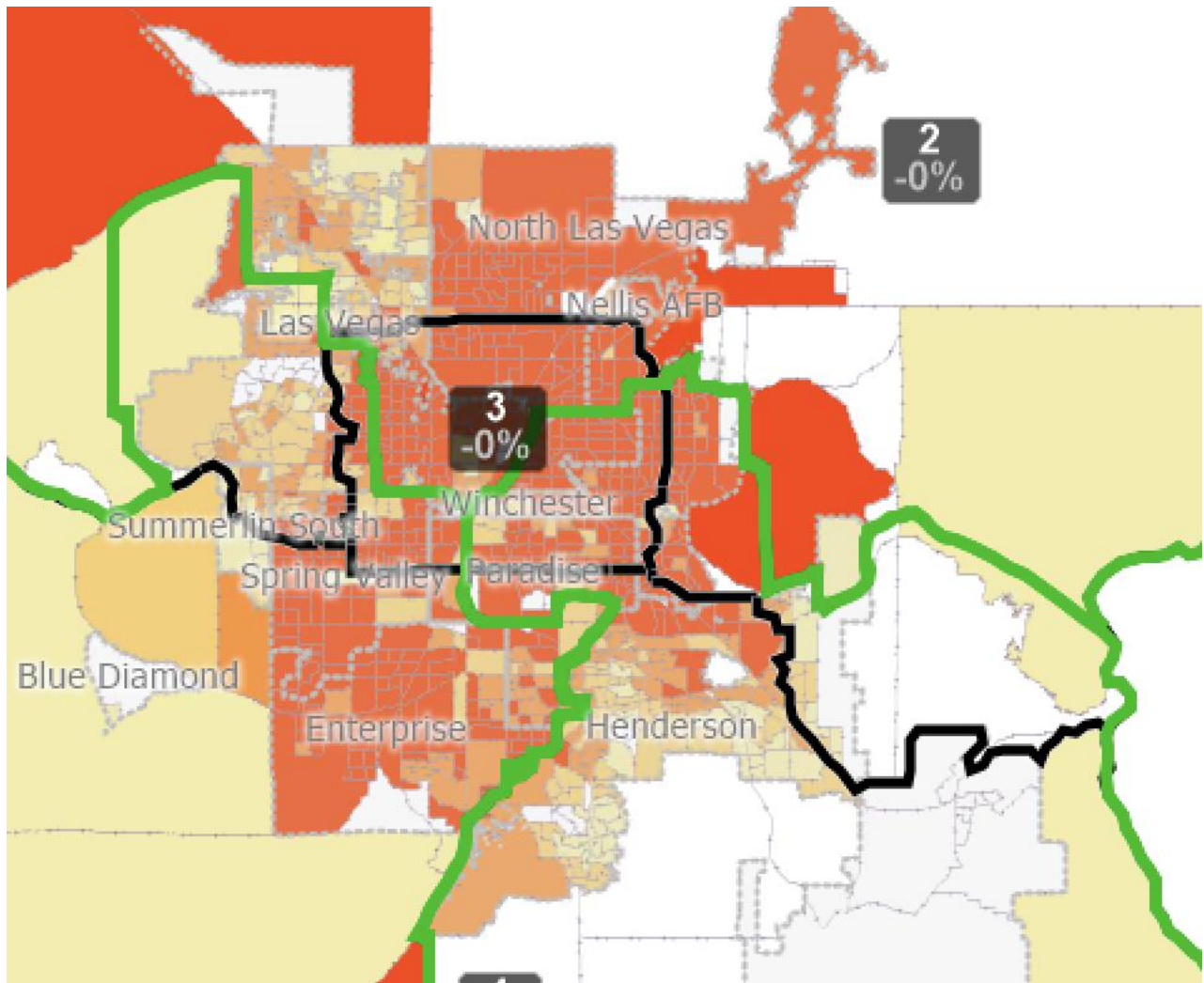


Figure 58 This is an image comparing my Good Government plan in the Las Vegas area with the Adopted plan. The Good Government plan lines are in black and the Adopted plan lines are in green.

One similarity between my Good Government plan and the adopted plan is that both plans keep the Yerington Indian reservation intact—a community of interest that had previously been split under the 2011 plan.

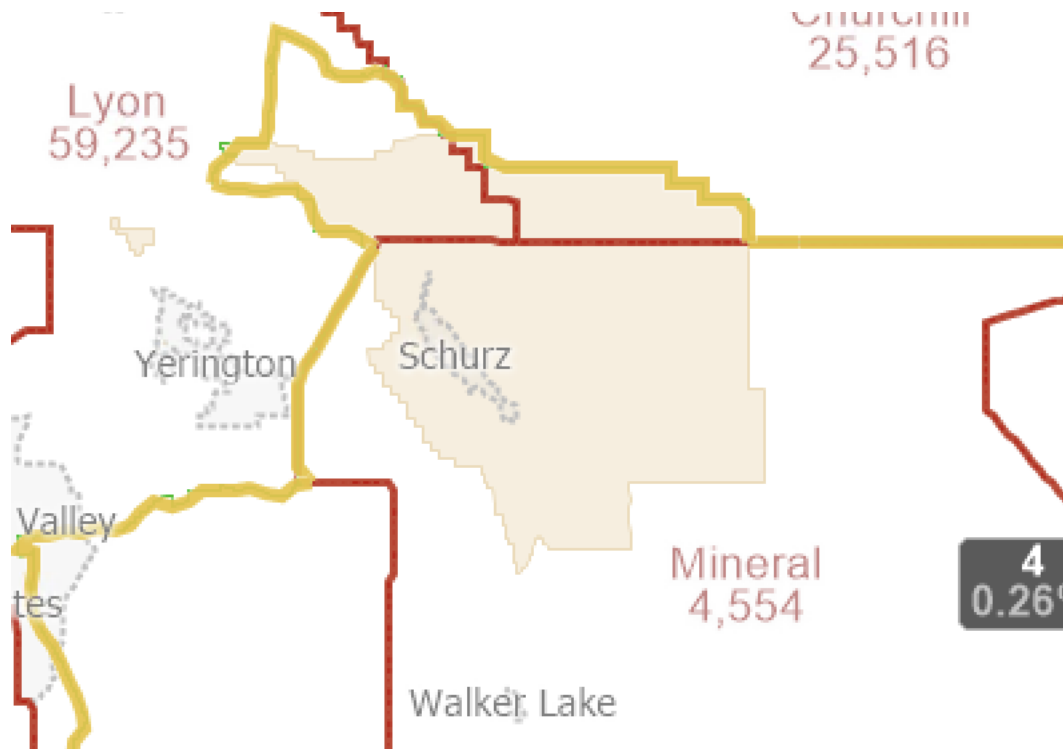


Figure 59 This is an image of the Yerington Indian reservation, which is no longer split under the Adopted plan.

Overall, my Good Government plan performs well on traditional measures relative to the adopted plan, except with respect to partisan balance.

Conclusion

In this paper, I have endeavored to illustrate the tradeoffs that mapdrawers face in attempting to comply with the competing demands of federal and state law and traditional districting principles. I have drawn plans that attempt to comply with all legal requirements, allow members of minority communities to have an equal opportunity to elect representatives of their choice, and respect communities of interest. My hope is that this paper can serve as a guide to help the public learn about all the considerations that state legislators face during the redistricting process.