The Submerged Electorate:

Winner-Take-All Allocation and the Structural Dilution of Minority Votes in "Safe" States (Mississippi and California, 2020–2024)

Cody L. Hall
Independent Research

May 2026

Abstract

A companion to "Safe States, Silent Voters" (Hall, 2026), which showed that partisan safety suppresses aggregate turnout, this paper asks who bears the cost. We argue that the winner-take-all (WTA) allocation of electoral votes does not merely depress participation; it structurally dilutes the political leverage of voters whose preferences diverge from their state's statewide majority, a population concentrated among racial and ethnic minorities in non-competitive states. Using certified Federal Election Commission and state results for 2020 and 2024, validated-voter vote splits (Pew Research Center, 2025; Catalist, 2025), and a formal model of the marginal electoral utility of a ballot, we examine two contrasting "safe" states: Mississippi, the state with the highest Black population share in the country, and California, the largest and most diverse Democratic stronghold. In Mississippi, we estimate that roughly 366,000 Black Democratic votes in 2020 translated into zero of the state's six electoral votes. In California, the same mechanism erases on the order of three million minority Republican ballots and renders more than 1.5 million Democratic votes mathematically surplus. The pattern is symmetric across the partisan divide, which indicates that vote dilution is a structural feature of the allocation rule rather than a partisan artifact. We further show that WTA shields dominant state parties from the national electoral consequences of localized turnout suppression, and we evaluate the National Popular Vote Interstate Compact (NPVIC), now enacted in 19 jurisdictions holding 222 electoral votes (National Popular Vote, 2026; NPR, 2026), as a remedy that would make every minority ballot a uniform fraction of the decisive national total.

Executive Summary

- **Winner-take-all erases the losing side completely.** In any state, every vote for the statewide loser, plus every winning vote beyond the threshold needed to win, produces zero

marginal electoral votes. In a "safe" state the losing side is the *same* bloc every cycle, so a fixed, identifiable population is submerged election after election.

- **Mississippi (the density case).** Black residents are about 38% of the population and 37% of eligible voters, the highest share in the nation, and roughly 93% of Black Mississippians backed the Democratic candidate in 2020. Because the white majority votes Republican, all 539,398 Democratic votes in 2020, an estimated 366,000 of them cast by Black voters, yielded zero of the state's six electoral votes.

- **California (the volume case).** Because the state is locked Democratic, the roughly 6.08 million Republican ballots in 2024, a large share cast by Latino and Asian voters, were erased, while about 1.6 million Democratic votes beyond the winning threshold were rendered surplus. Conservative minorities and progressive minorities alike are structurally ignored.

- **The dilution is bipartisan and therefore structural.** The system submerges progressive Black voters in the South and conservative minority voters on the coasts through the identical mechanism. WTA also shields dominant state parties from the national cost of localized suppression, since a state casts its full electoral allocation no matter how many of its citizens are kept from the polls.

- **The NPVIC changes the math.** With every ballot entering a single national tally, a vote in Jackson, Mississippi carries the same weight as one in Philadelphia, and depressing any group's turnout directly shrinks a party's national total. We assess the compact as the leading proposed remedy while presenting the principal scholarly objections to it.

Contents

1 Introduction

A companion study, "Safe States, Silent Voters" (Hall, 2026), established across six presidential cycles that turnout falls systematically as a state becomes less competitive, and that the relationship is stable enough to be a structural feature of the Electoral College rather than an artifact of any candidate. That paper measured the size of the participation gap. This paper asks a different and more pointed question: when a safe state's outcome is foreordained, *whose* votes are rendered powerless, and what does that imply for the political leverage of racial and ethnic minorities?

We introduce the term *submerged vote* to describe a ballot that is cast but that, under winner-take-all (WTA) allocation, carries no marginal influence over the assignment of a state's electoral votes. A submerged vote is not an abstention. It is a citizen who participated and whose expressed preference was nonetheless converted into zero electoral weight by the allocation rule. The central claim of this paper is that submerged votes are not randomly distributed. They fall disproportionately on voters whose partisan preference diverges from their state's entrenched majority, and in the United States that population is heavily, though not exclusively, composed of racial and ethnic minorities sorted into states where they constitute a permanent statewide minority.

1.1 Beyond the Monolithic "Safe State"

Public discussion treats a safe state as a settled bloc, "deep red" Mississippi or "deep blue" California, as if the label described every voter inside its borders. It does not. Mississippi, which gave all six of its electoral votes to the Republican nominee in both 2020 and 2024, also contains the largest Black population share of any state, a population that votes overwhelmingly Democratic. California, which has not been competitive at the presidential level in a generation, contains millions of Latino, Asian, and Black voters whose internal partisan diversity is erased the instant the statewide result is called. The monolithic label conceals exactly the populations whose votes the allocation rule submerges.

The contribution of this paper is to make that submersion quantitative. We select two contrasting safe states, isolate the demographic composition of their submerged votes using validated-voter data, and formalize the difference between the marginal value of a ballot under WTA and under a national popular vote. The methodological hook is deliberately bipartisan. By showing that the system silences progressive Black voters in Mississippi and conservative minority voters in California through the same mechanism, we demonstrate that vote dilution is a property of the allocation rule, not a grievance of one party.

2 Theoretical Framework: Wasted Votes and the Marginal Utility of a Ballot

2.1 Wasted Votes

The concept of a wasted vote is well developed in the study of legislative districting. Stephanopoulos and McGhee (2015) define a vote as wasted if it is cast either (1) for a losing candidate (a "lost" vote) or (2) for a winning candidate in excess of the number needed to prevail (a "surplus" vote). Their efficiency gap aggregates lost and surplus votes to measure partisan gerrymandering. We borrow the lost/surplus vocabulary but apply it to a different object: not a multi-district map, but the single statewide WTA contest that allocates a state's electoral votes. One caveat must be stated plainly. In a two-candidate statewide race, lost plus surplus votes always equal exactly half of the two-party total, by arithmetic identity, so the raw *share* of wasted votes is 50% in every state and cannot by itself distinguish a safe state from a competitive one. What distinguishes safe states is not how many votes are wasted but two other properties: *who* is wasted is fixed and predictable cycle after cycle, and the marginal value of an additional vote is structurally near zero.

2.2 The Marginal Electoral Utility of a Ballot

Following the rational-choice tradition (Downs, 1957; Riker and Ordeshook, 1968), define the instrumental value of a single ballot as the expected quantity of electoral votes it influences. Under WTA, a ballot in state s influences the state's electoral votes EV_s only in the event that it is pivotal, that is, only if it changes which candidate carries the state. Let $P_{\text{piv}}(s)$ denote the probability that one additional ballot flips state s. Then the marginal utility of a vote under winner-take-all is

$$U_{\text{wta}}(s) = P_{\text{piv}}(s) \cdot EV_s. \tag{1}$$

In a safe state, $P_{\text{piv}}(s) \approx 0$ by definition, so $U_{\text{wta}}(s) \approx 0$ for every voter in the state. For the bloc whose preferred candidate cannot win the state regardless of turnout, the result is sharper still: their ballots cannot alter EV_s under any realizable turnout scenario, so their effective electoral weight is identically zero. This is the submerged vote in formal terms.

Under a national popular vote, the presidency is awarded to the winner of the national aggregate, so a ballot's influence no longer depends on the state in which it is cast. Its marginal utility is

$$U_{\text{npv}} = P_{\text{piv}}(\text{nat}) \cdot 538, \tag{2}$$

where $P_{\text{piv}}(\text{nat})$ is the probability that one ballot flips the national result. Equivalently, every ballot enters the decisive national tally with identical direct weight $1/V_{\text{nat}}$, where V_{nat} is the national vote total. The essential point is not that $P_{\text{piv}}(\text{nat})$ is large; in a national electorate it is also tiny.

The point is that equation (2) is *uniform across all voters*, whereas equation (1) sets the value to approximately zero specifically and permanently for safe-state minorities while concentrating all positive pivotality in a handful of swing states. WTA does not distribute a scarce good thinly and evenly. It distributes it to a few geographic locations and assigns zero to the rest. A national popular vote replaces a step function with a flat one.

2.3 From Pivotality to Representation

The pivotality model captures the instrumental, election-night value of a ballot. A second and older tradition captures its representational value. Guinier (1994) described how majority-take-all rules can render a cohesive minority a permanent loser, casting ballots that never translate into representation. Lijphart (1997) showed that when non-participation and non-representation are concentrated by group, political influence is distributed unequally. The submerged vote sits at the intersection of these traditions: it is a ballot with near-zero instrumental utility *and* near-zero representational yield, borne disproportionately by an identifiable demographic bloc, cycle after cycle. The remainder of the paper measures that bloc.

3 Data and Methods

3.1 Vote Totals

Certified statewide totals are drawn from the Federal Election Commission's official publications (Federal Election Commission, 2021, 2025) and from state certifications (Mississippi Secretary of State, 2020). For 2024 we use the same certified figures reported in the companion paper's appendix (Hall, 2026). All wasted-vote arithmetic is computed on the two-party total unless otherwise stated.

3.2 Demographic Vote Splits

Consistent with the decision to anchor the analysis in validated-voter rather than exit-poll data, group-level vote choice comes from the Pew Research Center's validated-voter study of 2024 and the Catalist "What Happened in 2024" report (Pew Research Center, 2025; Catalist, 2025). Nationally, Pew's validated voters show Harris winning Black voters 83% to 15%, Hispanic voters 51% to 48%, and Asian voters 57% to 40% in 2024, with Black support for the Democratic nominee near 90% in 2020. For Mississippi we use the state's 2020 Associated Press voter survey, which recorded 93% Black support for Biden and an electorate that was 69% white (Pew Research Center, 2025). State electorate composition for California is taken from the Public Policy Institute of California (Public Policy Institute of California, 2025), whose likely voters are roughly 50% white, 29% Latino, 12% Asian, and 5% Black. Eligible-voter racial shares draw on Census Citizen Voting Age Population tabulations.

We are explicit that group vote splits are estimates with sampling uncertainty, and that applying a national split to a single state introduces additional error. Where a quantity depends on such an assumption, we report a range and label it as an estimate rather than a certified count.

3.3 Case Selection

The two cases are chosen to hold the safe-state condition fixed while varying the form of minority concentration. Mississippi is the *density* case: a single minority group at the highest population share in the country, unusually unified in its vote, submerged inside a reliably Republican state. California is the *volume* case: enormous and internally diverse minority populations whose conservative and progressive segments are both erased inside a reliably Democratic state. Together they let us test whether the dilution mechanism is symmetric across the partisan divide. As a comparison class we use the competitive states of Georgia and Pennsylvania, where the same demographic blocs hold decisive, high-utility votes.

3.4 Wasted-Vote Accounting

For each state and year we decompose the two-party vote into the winner's threshold (half the two-party total), the winner's surplus (winning votes above the threshold), and the loser's votes (all lost). We then estimate the demographic composition of the submerged total using the vote splits above. All arithmetic was computed programmatically and is reproduced in the supplementary calculation file.

4 Quantitative Analysis

4.1 Mississippi: The Submerged Black Electorate

Mississippi gave all six of its electoral votes to the Republican nominee in both 2020 and 2024. Table 1 decomposes its two-party vote. In 2020, Biden's entire 539,398-vote total was lost, yielding zero electoral votes, and Trump's surplus above the winning threshold added a further 108,683 votes with no marginal electoral effect.

The demographic composition of that lost total is the heart of the matter. Black Mississippians are about 38% of the population and 37% of eligible voters, the highest share in the nation, yet they made up roughly 30% of actual 2020 voters, the gap reflecting both turnout differences and the felony-disenfranchisement regime discussed in Section 5. Applying the state's 93% Black Democratic vote share to a Black electorate share in the 28% to 33% range yields an estimate of 342,000 to 403,000 Black Democratic votes, with a midpoint near 366,000. Every one of those ballots was submerged: cast, counted, and converted to zero electoral votes. A bloc large enough to be decisive in a competitive state was rendered electorally invisible by the allocation rule, and the

Table 1: Mississippi wasted-vote decomposition (two-party basis). The Democratic total is lost in full; the Republican surplus carries no marginal electoral votes.

	2020 (Trump win)	**2024 (Trump win)**
Republican votes (winner)	756,764	747,744
Democratic votes (loser, lost)	539,398	466,668
Two-party total	1,296,162	1,214,412
Winning threshold (≈50%)	648,081	607,206
Winner surplus (wasted)	108,683	140,538
Electoral votes to Democratic voters	0 of 6	0 of 6

same submersion recurred in 2024.

4.2 California: Erased Conservatives and Surplus Progressives

California illustrates that the mechanism is indifferent to which party benefits. Because the state is locked Democratic, two distinct populations are submerged at once. Table 2 shows the decomposition.

Table 2: California wasted-vote decomposition (two-party basis). The Republican total is lost in full; a large Democratic surplus carries no marginal electoral votes.

	2020 (Biden win)	**2024 (Harris win)**
Democratic votes (winner)	11,110,250	9,276,179
Republican votes (loser, lost)	6,006,429	6,081,697
Two-party total	17,116,679	15,357,876
Winning threshold (≈50%)	8,558,340	7,678,938
Winner surplus (wasted)	2,551,910	1,597,241
Electoral votes to Republican voters	0 of 55	0 of 54

First, the roughly 6.08 million Republican ballots of 2024 were lost in full. A large share were cast by minority voters: with Latinos near 29% of the electorate and Asian Americans near 12% (Public Policy Institute of California, 2025), and with national validated splits showing 48% of Latino and 40% of Asian voters backing Trump (Pew Research Center, 2025), an order-of-magnitude estimate places roughly three million minority Republican ballots inside that erased column. These are precisely the conservative-leaning minority voters whose existence the "deep blue" label denies. Second, about 1.6 million Democratic votes in 2024 were surplus, beyond the threshold needed to win and therefore without marginal electoral effect. Progressive minority voters who turned out in already-decided California added to a margin that yielded no additional electoral votes. Both the dissenting minority and the surplus majority are submerged.

4.3 The Comparative Matrix

Table 3 summarizes how the two allocation regimes value the same votes. The contrast is not rhetorical; it follows directly from equations (1) and (2).

Table 3: How the allocation rule values a minority vote in a safe state.

Dimension	**Winner-Take-All (current)**	**National Popular Vote (NPVIC)**
Value of a minority vote in a safe state	Zero or surplus: absorbed by the statewide majority or rendered redundant by a lopsided margin.	Equalized: every ballot alters the national total by the same $1/V_{\text{nat}}$ regardless of state.
Campaign incentives	Hyper-targeted: outreach concentrates in roughly 7 to 13 swing states (Gimpel et al., 2007; Enos and Fowler, 2018).	Diffused: a vote in Jackson is worth a vote in Philadelphia, so mobilization must span all states.
Effect of demographic change in a safe state	Muted: shifts register electorally only if they cross the 50% tipping point.	Immediate: incremental shifts register in the national tally at once.

4.4 The Swing-State Contrast

The submerged vote is defined by contrast with the decisive vote. Table 4 places the two safe states beside two competitive ones. In Georgia in 2020 the statewide margin was 11,779 votes, so a cohesive bloc, and Black voters were close to a third of the electorate, could and did determine all of the state's electoral votes. In Mississippi and California the same-sized bloc determined none. The marginal utility of equation (1) is near its maximum in the first case and approximately zero in the second.

Table 4: Marginal value of a vote: safe states versus competitive states. Margin is the two-party percentage-point gap; pivotality is qualitative.

State	**Type**	**2024 margin**	**Minority-bloc leverage**
Mississippi	Safe (R)	23.0%	Submerged (zero)
California	Safe (D)	20.8%	Submerged (zero)
Georgia	Competitive	2.2%	Decisive (2020 margin 11,779)
Pennsylvania	Competitive	1.7%	Decisive

5 Institutional Incentives: How Winner-Take-All Shields Localized Suppression

The submerged-vote analysis exposes a perverse institutional incentive. Under WTA, a state casts its entire electoral allocation regardless of how many of its citizens are prevented from voting. A dominant state party that depresses turnout among a disfavored bloc, whether through restrictive registration, polling-place closures, or felony disenfranchisement, loses no electoral influence at the national level, because the state's electoral votes are fixed and already controlled. WTA thus decouples localized suppression from national electoral consequence.

Mississippi is the clearest illustration. Its felony-disenfranchisement regime, rooted in provisions of the 1890 state constitution that were designed to exclude Black voters, continues to fall heavily along racial lines: Black residents are about 37% of the state's population but more than 60% of those stripped of the vote by a felony conviction (The Sentencing Project, 2024). This barrier shrinks the Black electorate before a single ballot is cast, and WTA then submerges the preferences of those who do vote. The two mechanisms compound. Crucially, under the current system the dominant party pays no national price for the first mechanism, because the state's six electoral votes are delivered intact no matter how many citizens are excluded.

A national popular vote inverts this incentive. If the presidency turns on the raw national aggregate, then every voter kept from the polls in any state subtracts directly from the national total available to the parties competing for that voter. Suppression that once cost a dominant state party nothing would, under a national tally, reduce its own national pool. The reform does not by itself repeal a single restrictive law, but it removes the structural immunity that WTA currently grants to localized suppression.

6 The NPVIC and the Re-enfranchisement of the Submerged Electorate

If WTA submerges the votes of safe-state minorities by setting their marginal electoral utility to zero, then a rule that makes every ballot a uniform component of the decisive total should, in principle, raise those votes back to parity. The National Popular Vote Interstate Compact (NPVIC) is the most prominent proposal to do so. It is an agreement among states to award their electoral votes to the national popular-vote winner, taking effect only once member states control at least 270 electoral votes; because it operates through state law, it requires no constitutional amendment (Koza et al., 2013). As of April 13, 2026, following Virginia's enactment, the compact has been adopted by 19 jurisdictions holding 222 electoral votes, leaving it 48 short of activation (National Popular Vote, 2026; NPR, 2026).

Under the compact, the distinction between safe and battleground states dissolves. A Black

Democratic vote in Mississippi and a conservative Latino vote in California's Central Valley would each enter the national tally with the same weight as a vote in Pennsylvania. The submerged populations quantified in Section 4, the roughly 366,000 Black Mississippians whose 2020 ballots yielded no electoral votes and the millions of Californians on the losing or surplus side of a foregone result, would for the first time hold ballots of non-zero marginal utility. The companion paper's regression evidence, that participation rises sharply when a state becomes competitive (Hall, 2026), suggests that nationalizing competitiveness would also lift turnout among the very groups WTA currently submerges.

6.1 Scholarly Objections

Intellectual honesty requires presenting the case against the compact. DeWitt and Schwartz (2016) argue that the NPVIC would introduce procedural instability, including the prospect of nationwide recounts and non-compliant electors, and raise questions of constitutionality under the Compact Clause. Evans and Gaines (2019) contend that its support has been almost entirely Democratic, which they argue makes both its passage and its durability uncertain; the compact's current membership, every one a state carried by the Democratic nominee in 2024, lends weight to that observation. A further technical objection is that the national total becomes ill-defined if member states adopt incompatible ballot systems such as ranked-choice voting.

These objections are real, but they are objections of implementation, not of principle, and they do not touch the finding of this paper. The submersion of minority votes documented here is a present and recurring fact under the status quo, paid in full every four years by identifiable communities in Mississippi, California, and every other safe state. The procedural questions raised by the compact are solvable through uniform recount rules, careful drafting, and interstate coordination. A complete accounting weighs a fixable set of administrative challenges against a structural, ongoing dilution of minority political power; on that ledger the burden of proof rests with the defense of the status quo.

7 Conclusion

The safe-state label conceals more than it reveals. Behind Mississippi's reliably Republican six electoral votes stands the largest Black electorate share in the country, voting overwhelmingly Democratic and submerged in full. Behind California's reliably Democratic bloc stand millions of minority Republican voters whose ballots are erased and millions of Democratic voters whose ballots are surplus. The winner-take-all rule converts the expressed preferences of these populations into zero marginal electoral weight, and it does so symmetrically across the partisan divide, which is the strongest evidence that the dilution is structural rather than partisan.

The same rule shields dominant state parties from the national consequences of suppressing the very voters it submerges, compounding exclusion with impunity. A national popular vote, toward

which the NPVIC has now assembled 222 of the necessary 270 electoral votes, would replace a step function that assigns power to a few geographic locations with a flat one that values every ballot equally. Whether the compact is the right instrument is a question on which serious scholars disagree. That the current system submerges identifiable communities of voters, election after election, is not in dispute once the votes are counted.

Data Availability

Certified vote totals are available from the Federal Election Commission (https://www.fec.gov/) and the Mississippi and California Secretaries of State. Validated-voter splits are published by the Pew Research Center and Catalist; California electorate composition by the Public Policy Institute of California; felony-disenfranchisement estimates by the Sentencing Project; and NPVIC enactment status by National Popular Vote, Inc. The wasted-vote calculation script is included as supplementary material.

References

Catalist (2025). *What Happened in 2024: A Catalist Analysis of the 2024 Elections*. Catalist, Washington, D.C.

DeWitt, D. and Schwartz, T. (2016). A calamitous compact. *PS: Political Science & Politics*, 49(4):791–796.

Downs, A. (1957). *An Economic Theory of Democracy*. Harper and Row, New York.

Evans, J. and Gaines, B. J. (2019). The myth of the bipartisan National Popular Vote plan. *The Forum*, 17(2):345–368.

Enos, R. D. and Fowler, A. (2018). Aggregate effects of large-scale campaigns on voter turnout. *Political Science Research and Methods*, 6(4):733–751.

Federal Election Commission (2021). *Official 2020 Presidential General Election Results*. Federal Election Commission, Washington, D.C.

Federal Election Commission (2025). *Official 2024 Presidential General Election Results*. Federal Election Commission, Washington, D.C.

Gimpel, J. G., Kaufmann, K. M., and Pearson-Merkowitz, S. (2007). Battleground states versus blackout states: The behavioral implications of modern presidential campaigns. *The Journal of Politics*, 69(3):786–797.

Guinier, L. (1994). *The Tyranny of the Majority: Fundamental Fairness in Representative Democracy*. Free Press, New York.

Hall, C. L. (2026). Safe states, silent voters: A six-cycle analysis of partisan predictability and voter turnout in U.S. presidential elections (2004–2024). Working paper.

Koza, J. R., Fadem, B., Grueskin, M., Mandell, M. S., Richie, R., and Zimmerman, J. F. (2013). *Every Vote Equal: A State-Based Plan for Electing the President by National Popular Vote*. 4th edition. National Popular Vote Press, Los Altos, CA.

Lijphart, A. (1997). Unequal participation: Democracy's unresolved dilemma. *American Political Science Review*, 91(1):1–14.

Mississippi Secretary of State (2020). *Amended Certification of Vote for Electors for President and Vice President*. Office of the Secretary of State, Jackson, MS.

National Popular Vote, Inc. (2026). *Progress of the National Popular Vote Interstate Compact*. https://www.nationalpopularvote.com/state-status. Accessed May 2026.

Lopez, A. (2026). Virginia ups the National Popular Vote Compact to 222 votes. *NPR*, April 14, 2026.

Pew Research Center (2025). *Behind Trump's 2024 Victory, a More Racially and Ethnically Diverse Voter Coalition* (validated-voter analysis of the 2024 election). Pew Research Center, Washington, D.C.

Public Policy Institute of California (2025). *California Voter and Party Profiles*. PPIC, San Francisco.

Riker, W. H. and Ordeshook, P. C. (1968). A theory of the calculus of voting. *American Political Science Review*, 62(1):25–42.

The Sentencing Project (2024). *Locked Out 2024: Four Million Denied Voting Rights Due to a Felony Conviction*. The Sentencing Project, Washington, D.C.

Stephanopoulos, N. O. and McGhee, E. M. (2015). Partisan gerrymandering and the efficiency gap. *University of Chicago Law Review*, 82(2):831–900.