

Legislative Apportionment Board: Senate Report

January 7, 2022

Legislative Apportionment Board
Sections 13, 18 and 73 of Chapter II of the Vermont Constitution

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Legislative Apportionment Board Members

Thomas A. Little, Shelburne, Vermont, Chair, is Vice President and General Counsel at Vermont Student Assistance Corporation in Winooski, Vermont. He chaired the Apportionment Board in 2010-2020. He represented Shelburne in the Vermont House of Representatives in the 1992 – 2002 sessions. Currently, he is Chair of the District 4 Environmental Commission, Chancellor of the Episcopal Diocese of Vermont, and Chair of the Board of Trustees of the University of Vermont Medical Center.

Edward Adrian, Burlington, Vermont, is Of Counsel at the Law Firm of Monaghan Safar Ducham PLLC in Burlington and previously served as the Chief Prosecuting Attorney at the Vermont Secretary of State's, Office of Professional Regulation. He is the former Vice-Chair of the Burlington Democratic Party. Ed was on the Burlington City Council from 2007-2012 and was Chair of the Burlington Library Commission from 2013-2017. A former commentator on Vermont Public Radio, currently Ed serves on the Vermont Commission on Women.

Jeanne Albert, Lincoln, VT, is a retired mathematics educator. From 1996 to 2008, she was a professor at Castleton State College (now Castleton University), and from 2008 to 2020 she was Director of STEM and Quantitative Support in Middlebury's Center for Teaching, Learning, and Research. Jeanne has served as a Board member for regional organizations including the Vermont State Colleges Faculty Federation, the New England Faculty Development Consortium, and the Appalachian Mountain Club's Three Mile Island Family Camp on Lake Winnepesaukee. She is currently Chair of Lincoln's town Democratic Party Committee.

Jeremy Hansen, Berlin, Vermont, a member of the Norwich University computer science faculty, earned his Ph.D. at the University of Wisconsin-Milwaukee in 2009 with a dissertation describing the structure of cryptographic hash algorithms. More recently, his research has explored the social implications and applications of technology, including privacy, computational social choice, security of implantable medical devices, and elections. He served on the Berlin Select board from 2013 to 2020. Jeremy founded and is Chair of the Governing Board of the public Internet service provider CVFiber.

Mary Houghton, Putney, Vermont, is retired from a career in the development and stewardship of affordable housing. She worked for the Burlington Community Land Trust (now the Champlain Housing Trust) and Brattleboro Housing Partnerships. She currently serves on the Boards of Directors of the Housing Foundation, Inc., and the Tri-Park Housing Cooperative.

Tom Koch, Barre Town, practiced law in Barre City for 40 years and is now retired. He represented the Town in the Vermont House of Representatives from 1977 to 1981 and

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again from 1997 to 2015. He is a member of the Barre Town, Washington County, and Vermont Republican Committees, and is Assistant Treasurer of the state Committee. He is a member of Shepherd of the Hills Lutheran Church in Montpelier, where he serves on the Church Council.

Robert Roper, Stowe, Vermont, currently is the President of the Ethan Allen Institute and frequent guest host of True North Radio. He previously was Chairman of the Vermont Republican Party, Executive Director for the Vermont Chapter of FreedomWorks and Executive Director for Vermonters for Better Education. He served on the Apportionment Board in 2010-2020.

Introduction

Sections 13, 18 and 73 of Chapter II of the Vermont Constitution mandate reapportionment of the Vermont Senate and House following the release of the decennial U.S. Census, and requires reapportionment to rely on the Census results. In 1965, the General Assembly enacted Chapter 34A of Title 17, establishing the Legislative Apportionment Board (the Board) to prepare and file proposed Senate and House plans with the General Assembly to adjust district boundaries to reflect shifts in population and assure substantially equal representation across all districts statewide.

The 2020 U.S. Census counted 643,077 residents in the state, a 2.8% increase over the 2010 census count. Population change was not uniform across the state, however; for example, Essex increased by 2,507 people (+12.8%); Poultney decreased by 412 people (-12.0%); and Barre Town and Guilford saw virtually no change (each decreased by 1 person). Long term population shift trends have continued over the last 10 years, resulting in increased pressures on the reapportionment process – particularly in certain parts of the state.

Here are four key definitional concepts used throughout this report:

Ideal Senate District Population = State population (643,077) / # of members in the Senate (30) x # of members in district (between 1 and 3 for the Senate.) **The ideal district population is 21,436 per Senator.**

District Deviation = Actual district population – Ideal district population.

Percentage Deviation = District Deviation / Ideal population x 100. Generally speaking, if a district has a percentage deviation greater than 9% over or under the ideal, legal precedent suggests that the district could or may likely exceed what is constitutionally acceptable.

Overall Deviation – The overall deviation of a House or Senate redistricting proposal is the “spread,” or difference between the greatest negative percentage deviation and the greatest positive percentage deviation across the districts.

The Board reviewed a plan that would adjust the existing Senate districts mainly where a district's population deviated from that of the ideal district by more than nine or 10 percent; these proposed changes also resulted in revising adjoining districts owing to the unavoidable "ripple" effect inherent in the reapportionment effort. The Board also reviewed a plan with all single-member Senate, and on November 29, 2021, adopted this as the Board's proposed Senate redistricting plan by a 4-3 vote. (Note that under 17 V.S.A. §1907, the Board's Senate plan is not sent to all towns and cities for review and

comment by their Boards of Civil Authority. The Board did, however, receive comments and suggestions about the Senate plan, some in BCA reports about the House plan, and others from individuals and groups.) The adopted plan clusters five single-member House districts to form each single-member Senate district. The resulting district map does not resemble a map of the counties.

All of the Board's working proposals, video recordings, and the detailed Minutes of the Board's 28 meetings, are available on the Board's website, <https://sos.vermont.gov/apportionment-board/> to assist in the next phase of the Senate district reapportionment process as it moves to the Senate and the House of Representatives. The alternate Senate redistricting proposal from the three member minority of the Board, is likewise posted on the Board's website, together with the associated map. The final maps may also be found on the Board's website under "Map Drafts:" <https://sos.vermont.gov/apportionment-board/map-drafts/>.

Impacts of (i) the Delay in Receiving U.S. Census Data and (ii) the COVID-19 Pandemic

In early 2021, the U.S. Census Bureau notified the Apportionment Board that the release of the final and official Vermont redistricting dataset of the 2020 United States decennial census would be delayed from the federal statutory deadline of March 31, 2021 to a release date on or before September 30, 2021. This delay meant that the Board would be unable to meet its statutory deadlines. In February 2021, the Board asked the General Assembly to amend Chapter 34A of Title 17 to establish revised deadlines for the Board's 2021 work and reports. The General Assembly did so in Act 11 (H. 338), signed into law on April 21, 2021 by Governor Scott.

<https://legislature.vermont.gov/Documents/2022/Docs/ACTS/ACT011/ACT011%20As%20Enacted.pdf>

Act 11 act required the Board to submit its proposals for the 2022 reapportionment of the House of Representatives and the Senate to the General Assembly not later than 90 days following the U.S. Census Bureau's release of Vermont's 2020 redistricting dataset. All other deadlines and procedures for the 2022 reapportionment of the House of Representatives and the Senate remained unchanged.

Had the census results been delivered on time, the Board's deadline to file final House and Senate plans would have been in August 2021. When the Board learned of this significant delay, it adjusted its work plan accordingly but continued to meet to review estimated census data and discuss its overall approach to its work. (The Board had begun meeting in September 2020 in anticipation of receiving the census data in March 2021.) The delayed census dataset was delivered in mid-August 2021, triggering several weeks of technical work uploading the data into the mapping software the Board used, testing

the data in the software, and training Board members and Secretary of State staff on the software. The Board owes much to the Information Technology team at the General Assembly (the Office of Legislative Information Technology) for leading these efforts, and to the Secretary of State's staff for helping Board members to learn how to work with the mapping software. When these efforts were completed, the Board had some 10-12 weeks in which to use the mapping software to prepare draft maps of proposed new Senate and House districts that would comply with the reapportionment laws.

All of the Board's work (and all of the support it received from the Secretary of State's office, the Office of Legislative Information Technology, the Vermont Center for Geographic Information, and the inputs from members of the public) was done during the COVID-19 pandemic and its profound changes to work and meeting practices, habits and protocols. These conditions challenged the progress of the Board's work.

Role and Function of the Legislative Apportionment Board

As noted above, every 10 years, following the release of the U.S. Census data, state law requires reapportionment of Vermont's Senate districts "in such manner as to achieve substantially equal weighting of the votes of all voters in the choice of legislators." 17 V.S.A. §1901. Chapter II, Section 18, of the Vermont Constitution establishes the same requirement, as does the Equal Protection provisions of the U.S. Constitution. This substantial equality requirement is the overarching mandate of our law.

The decennial process starts with the Legislative Apportionment Board. Under the law, the Board's overall purpose is to provide advice and assistance to the General Assembly. The Board was constituted in 2020 and has seven members. Each of the three major political parties chose a member; Governor Scott appointed one member from each party and the Chief Justice of the Vermont Supreme Court appointed the Board's Chair.¹ The Board's meetings were open to the public and its records are public records.

The Board looked at each Senate district's percentage deviation from the ideal district population. The state's population per the 2020 U.S. Census was 643,077. Thus, the ideal district population (a/k/a the "apportionment standard") is 21,436 per Senator. Each existing Senate district has a positive or negative deviation percentage. For example, a single-member Senate district with a population of 22,711 (the existing Grand Isle-Chittenden district) has 1,275 residents over the apportionment standard, and a deviation of +6.0 %. A single-member district with a population of 20,339 (the existing Orange

¹ Jeanne Albert was chosen by the Vermont Democratic Party, Robert Roper was chosen by the Vermont Republican Party, and Jeremy Hansen was chosen by the Vermont Progressive Party. Governor Scott appointed Democrat Edward Adrian, Progressive Mary Houghton and Republican Thomas Koch. Chief Justice Paul Reiber appointed Thomas A. Little as Chair.

district) has 1,097 residents under the standard, and a deviation of -5.1 %. To the extent that a district has a significant negative deviation, it is over-represented. And, to the extent that a district has a significant positive deviation, it is under-represented. The difference between the district with the highest positive deviation and the lowest negative deviation is the "overall deviation" of the Vermont House apportionment.

With four of the 13 current Senate districts having an 8% or greater positive or negative deviation percentages (and one of those in excess of 10%), some district adjustments were clearly very likely required in order to align the Senate districts with the Constitution's equality of population mandate.

The 2001 and 2011 Apportionment Board reports present a well-written explication of the constitutional and statutory principles that govern and guide this Board's work. We include an excerpt from the Board's 2001 report in Appendix 1. The 2001 report includes an analysis of the Vermont Supreme Court's important 1993 decision, *In re Reapportionment of Town of Hartland*, where the Court decided consolidated reapportionment disputes involving the constitutional and statutory issues of (i) substantial voting equality, (ii) geographical compactness and contiguity, and (iii) patterns of geography, social interaction, trade, political ties and common interests. 160 Vt. 9 (1993).²

Since the Town of Hartland decision, only one challenge has been made to a reapportionment plan enacted by the General Assembly – to the 2002 House reapportionment. In *In re Reapportionment of Towns of Woodbury and Worcester*, 177 Vt. 556 (2004), the residents of the Washington County towns of Woodbury and Worcester unsuccessfully challenged their new district, arguing that placing their towns in the Lamoille-Washington-1 two-member district violated the requirements of compactness and contiguity and did not respect county lines. The case did not involve a challenge based on population deviation. The Supreme Court appointed a factfinder who took testimony and issued finding on the Town's claims. The factfinder "found that all four towns have one or more boundaries in common with another town in the district, and that the T-shaped district 'in fact is contiguous and relatively compact.'" *Id.* at ¶ 12. The Court also noted that the challenged statewide House redistricting plan "places ninety-eight towns in districts that cross county lines, which is not unusual. In fact, in this respect it is identical to the 1992 reapportionment plan we upheld in *Hartland*, 160 Vt. at 31, 624 A.2d at 336." *Id.* at ¶ 16. The Court concluded that the two towns had failed to clear the strong presumption in favor of a plan adopted by the General Assembly.

No challenge was filed against the 2012 Senate or House reapportionments.

² Challenges to a redistricting plan enacted by the General Assembly are filed directly with the Vermont Supreme Court. 17 V.S.A. §1909.

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A redistricting plan proposal, in addition to achieving substantial equality of population across districts, must also demonstrate how the other standards beyond equality are met. In the Mahon case, the United States Supreme Court cautioned that an overall deviation of 16.4% “approach[es] tolerable limits.” It explained that the ultimate inquiry is whether the legislature's plan “may reasonably be said to advance [a] rational state policy,” and if so, “whether the population disparities among the districts that have resulted from the pursuit of this plan exceed constitutional limits.” Mahan v. Howell, 410 U.S. 315, 318 (1972).

As noted above, the law requires Senate districts with "minimum" deviation percentages. The law does not define "minimum," but Vermont and U.S. Supreme Court decisions tell us that an overall deviation under 10% is presumptively constitutional and one somewhat greater than 16% is probably, or may be, constitutional if the legislative record documents that other more complying options were tried without success and the plan advances rational state policies. Thus, any Senate district with a deviation in the 9% + range raises serious concerns and must be analyzed thoroughly and justified with credible, genuine reasons supported under the law.

In addition to the overall deviation, the Board’s Senate proposal must be guided by three statutory directives relating to: (1) preservation of existing political subdivision lines (i.e., town, city, and county boundaries); this directive is also found in the Vermont Constitution; (2) recognition and maintenance of patterns of geography, social interaction, trade, political ties and common interests; and (3) use of compact and contiguous territory. 17 V.S.A. §1903; VT Const. Ch. II, §18. When ruling on a challenge to a redistricting plan, the courts give significant weight to these non-numerical factors. Putting a steep mountain in the middle of a multi-town district may yield district lines that are not intuitive from looking at a flat map of the state. Avoiding that type of unfortunate result, which may make a proposed district’s percentage deviation greater than constitutionally desirable, can make a difference if a redistricting plan is challenged in court.

Importantly, in 2019, the General Assembly enacted a change to 17 V.S.A. § 1907, to limit the number of at-large Senators from a district “to a maximum of three members.” Act 2 (S. 11, 2019).

<https://legislature.vermont.gov/Documents/2020/Docs/ACTS/ACT002/ACT002%20As%20Enacted.pdf>

This has a clear and direct impact on the Board’s work, since for decades the Chittenden Senate district has had six at-large members.

A Word About the Methodology of Drawing Revised Legislative Districts

Developing revised legislative districts is very much a trial and error process. While the Board (and the General Assembly) has sophisticated mapping software, the software is not designed to take into account the importance of keeping towns and cities intact and the goal of combining towns into districts where the towns share common interests. When a Board member working on a redistricting map (and this work was done by Board members themselves) identifies a district with an unacceptably low or high population deviation (let's call this District A), the next step is to find a way to address that, which inevitably involves changing not one district boundary, but two: the contours of District A (the district with the deviation problem) and the contours of the district that is proposed to be used to solve that problem (District B). The mapping software tells when the population consequences of such a change would be - but does not do the "search and fix" work on its own. In many cases, the "fix" has altered the population of District B enough to create a deviation problem there, requiring a further fix using a third district, District C. And so on, in what can have a "domino effect." A "mapper" can work quite a way into a redistricting exercise and then find some unsolvable problem that requires going back to square one.

Another challenge, or frustration, in the mapping process is this: depending on where one starts a redistricting exercise, the resulting district map can look quite remarkably different from one using the same parameters for population deviations with a different starting point. For example, a Senate district map developed by starting in Bennington County and working its way across and up the state will invariably look different than one with Essex or Franklin County as the starting point. While the Senate redistricting process does not formally involve feedback from Boards of Civil Authority, the mapping process, while has far fewer moving pieces than the House map, is the same (as are the challenges and frustrations).

The Case for All Single-Member Senate Districts

As with the House redistricting plan, the Board split over whether all Senate districts should be single-member districts, with four members supporting that approach and three opposing it. The Board's House plan report presents a thorough discussion of this disagreement, and since the issues and arguments are virtually the same, the reader is directed to the House majority and minority reports for that discussion. Those House reports may be found on the LAB website here: <https://sos.vermont.gov/apportionment-board/resources/>. A comparable minority report accompanies this Senate report.

A majority of the LAB is persuaded that single-member Senate districts are preferable to multi-member districts for several reasons:

--Most counties have one center of population (perhaps two) where the voting power of a county lies. As a result, and certainly with exceptions, all of the Senators from a given county tend to reside in that center of population or closely thereby; witness the current representation from Franklin, Chittenden, Washington, Rutland, Bennington, and Windham Counties. Residents from the remaining communities in a given county stand little chance of electing one of their own to the Senate.

--The cost of campaigning for a Senate seat (for a term of just two years in one of the smallest states in the nation) has become excessive, even obnoxious. While we have been fortunate not to have experienced the dark money, campaign violations, and criminal dishonesty that has plagued some other states, the increasing costs of campaigning for a Vermont Senate seat increases the risks of such misadventures. Single-member districts should result in a reduction in the costs of campaigns.

--Single-member districts allow for a closer relationship between a Senator and the voters of that Senator's district. It is certainly easier to maintain communications with 21,000 voters than 63,000!

--Single-member districts provide more equal representation to voters. Presently, for example, a voter in Orange County who is especially concerned with a particular piece of legislation has but one Senator to contact and attempt to influence, while in neighboring Washington County, a voter is represented by, and can contact, three Senators.

To accommodate those findings, and because the "ideal" Senate district has exactly five times the population of the "ideal" House district, the majority of the LAB has constructed, and recommends adoption of, a Senate map that simply incorporates five House districts into each Senate district. While alternative districts could be created using the same methodology, this proposal has been drawn without regard to incumbencies or partisan politics and renders Senate districting relatively easy after the heavy work is done in the course of creating House districts.

Substantial Equality

In the Board's Senate proposal, adhering to House district lines is a "rational state policy" shaping the districts with an overall deviation of 11.40 %, with a low of 20,292 residents per Senate member in the South Burlington district (a -5.34 % deviation) and a high of 22,734 residents per Senate member in the Chittenden-Grand Isle-Franklin district (a +6.06% deviation).

The Board believes that its meeting Minutes and the record it has created of its draft proposals, and its initial and final proposal, establish that the overall deviation is well justified on its own merits (and compares favorably to the 18.99 overall deviation of the

enacted 2012 Senate plan). The Board's majority also believes that its proposal stands up to analysis under the non-numerical factors the Vermont Supreme Court has looked to when assessing the substantial fairness of an apportionment plan.

Geographical Compactness and Contiguity

The compactness of a legislative district is generally accepted as an important factor in assessing the soundness of an existing or proposed district's boundaries. Common sense tells us that a non-compact district that stretches out in a narrow band over a long distance, over mountains and valleys, is likely at risk of not capturing a community or group of communities that share common cultural, social, political and commercial ties and interests. As noted at Page 4 of the 2001 Board's report, "in the Hartland case, the Supreme Court explained that these criteria 'are an implementation and extension of our constitutional requirements that the legislature 'seek to maintain geographical compactness and contiguity and to adhere to boundaries of counties and other existing political subdivisions.'" Hartland decision at 21-22.

The Maptitude for Redistricting software can measure compactness using seven different approaches. The Apportionment Board in 2001 and 2011 used two of these seven methodologies, the "Reock" score and the "Polsby-Popper" rating, to measure the compactness of the current and proposed Senate districts.

The Reock test is an area-based measure that compares each district to a circle, which is considered to be the most compact shape possible. For each district, the Reock score computes the ratio of the area of the district to the area of the minimum enclosing circle for the district. The measure is always between 0 and 1, with 1 being the most compact. The Reock test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan. (Reock, E. C., Jr. Measuring the compactness as a requirement of legislative apportionment. *Midwest Journal of Political Science*, 5:70-74, 1961.)

The Polsby-Popper test computes the ratio of the district area to the area of a circle with the same perimeter: $4\pi\text{Area}/(\text{Perimeter}^2)$. The measure is always between 0 and 1, with 1 being the most compact. The Polsby-Popper test computes one number for each district and the minimum, maximum, mean and standard deviation for the plan. (Polsby, D. D., and R. D. Popper. The third criterion: compactness as a procedural safeguard against partisan gerrymandering. *Yale Law and Policy Review*, 9:301-353, 1991.)

The 2021 Apportionment Board continues this practice, finding the two methodologies to be reasonably easy to understand and for the sake of consistency with the 2001 and 2011 Board reports. Appendix 2 is a spreadsheet with the Reock scores and Polsby-Popper ratings of the proposed Senate districts. The metrics for both measurements for the

proposed districts are not markedly different than those for the existing districts. Under the Board's proposed plan, there are no non-contiguous areas in any district.

As noted above, a dominant goal of the Board's Senate plan is making all districts single-member districts. This results in a Senate district map that is distinctly different than the current and prior maps.

Adherence to County Boundaries and Other Existing Political Subdivisions

While the Board's recommended Senate map is, perhaps, a bit less bound to county boundaries than has been the case in the past, it must be acknowledged that counties in Vermont do not carry the same significance that they do in most other states; county government in Vermont has few functions besides maintaining the county courthouse and jail, and in recent years legislation has removed even those functions from some counties. It should also be noted that county lines have not been strictly adhered to in the 2012 redistricting; the Town of Orange, for example, is in the Caledonia district, and the Town of Huntington is in the Addison district, much to the consternation of residents of those towns. But if districts are smaller and more localized, the inclusion of towns from one or more counties in a single district should prove to be more acceptable.

Patterns of Geography, Social Interaction, Trade, Political Ties, and Common Interests

In many ways, the interests identified in this section can come into conflict with strict adherence to county boundaries. Geographically, some counties are divided internally by mountain ranges; in times gone by, for example, there was an informal agreement in Orange County that its senator would be elected for one term from the eastern part of the county, and the following term, the senator would come from the western part! In present days, many would argue that the towns in "the valley" in Washington County have little in common with the City of Montpelier, and likewise, the people of Barre are frequently known to be proud of their "blue collar" heritage, while viewing the "white collar" City of Montpelier as being very different.

The creation of single-member districts is, in part, an attempt to create districts that have more in common within a smaller area than is possible by creating multi-member districts that encompass entire counties. Different parts of the same county may well have well-defined, differing views on a given issue that present their senators with a dilemma: which area of the county do I support? Single-member districts consisting of smaller gatherings of communities have a much greater chance of being effectively represented by "their" senator than is the case with multi-member districts that are two or three times the size of a single-member district.

Incumbency

The law does not direct the Board to consider incumbencies as a factor in drawing Senate district lines, and the Board did not do so.

Descriptions of Proposed Single-Member Senate Districts

Each of the following proposed 30, single-member Senate district is comprised of five single-member House districts from the LAB majority's proposed single-member district House plan.

1. The proposed **Bennington-1** Senate district is comprised of proposed House districts BEN-1, BEN-5, BEN-2-1, BEN-2-2, and BEN-2-3, which include the towns of Bennington, Pownal, Readsboro, Searsburg, Stamford and Woodford. The district has a population deviation of -3.74%. All of these towns are currently in the Bennington Senate district.

2. The proposed **Bennington-Windham** Senate district is comprised of proposed House districts WDM-2, WDM-3, WDM-7, WDM-BEN-1, and BEN-3, which include 18 towns: the five Bennington County towns of Shaftsbury, Glastenbury, Winhall, Landgrove and Peru; and the 13 Windham County towns of Whitingham, Halifax, Marlboro, Wilmington, Newfane, Dover, Somerset, Stratton, Wardsboro, Townshend, Jamaica, Londonderry and Windham. The proposed district has a deviation of -1.98%. The Bennington County towns are currently in the Bennington Senate district while the Windham County towns are now in the Windham Senate district (excepting Londonderry, which currently is in the Windsor Senate district).

3. The proposed **Bennington-Rutland** Senate district is comprised of proposed House districts BEN-6, BEN-4, BEN-RUT-1, BEN-RUT-2, and RUT-1, which include the six Bennington County towns of Arlington, Sunderland, Sandgate, Manchester, Rupert and Dorset; and the nine Rutland County towns of Pawlet, Danby, Mount Tabor, Wallingford, Tinmouth, Wells, Middletown Springs and Shrewsbury. The proposed district has a population deviation of -0.62%. The Bennington towns are now in the Bennington Senate district while the Rutland towns are currently in the Rutland Senate district (with the exception of Mount Tabor, which is in the Windsor district).

4. The proposed **Windham-1** Senate district is comprised of proposed House districts WDM-1, WDM-4-1, WDM-4-2, WDM-4-3, and WDM-5, which include the five Windham County towns of Vernon, Guilford, Brattleboro, Dummerston and Putney, all of which are currently in the existing Windham Senate district. This proposed district has a population deviation of -2.14%. All of these towns are in the current Windham Senate district.

5. The proposed **Windham-Windsor** Senate district is comprised of proposed House districts WDM-6, WDM-8, WSR-WDM-1, WSR-10, AND WSR-11, which include the five Windham County towns of Brookline, Athens, Westminster, Grafton and Rockingham; and the two Windsor County towns of Springfield and Chester. This proposed district has a population deviation of +0.21%. The Windham County towns are currently in the Windham Senate district while the Windsor County towns are in the Windsor Senate district.

6. The proposed **Rutland-1** Senate district is comprised of proposed House districts RUT-5, RUT-2, RUT-4, RUT-7, and RUT-12, which include the Rutland County towns of Poultney, Ira, Mendon, Chittenden, Pittsford, Benson, West Haven, Fair Haven and Castleton, and portions of Hubbardton, West Rutland and Rutland; all of these are in the existing Rutland Senate district. This proposed district has a population deviation of +1.07%.

7. The proposed **Rutland-2** Senate district is comprised of proposed House districts RUT-3, RUT-8, RUT-9, RUT-10, and RUT-11, which include the Rutland County municipalities of Rutland City, Proctor, and portions of each of Rutland Town and West Rutland. The proposed district has a population deviation of +3.20%. All of these towns are in the existing Rutland Senate district.

8. The proposed **Windsor-1** Senate district is comprised of proposed House districts WSR-4, WSR-2, WSR-9, WSR-8, and WSR-1, which include the 13 Windsor County towns: Weston, Andover, Ludlow, Cavendish, Baltimore, Weathersfield, Windsor, West Windsor, Reading, Plymouth, Bridgewater and Woodstock. The proposed district has a population deviation of -0.12%. All of these towns are in the existing Windsor Senate district.

9. The proposed **Orange-Windsor-East** Senate district is comprised of proposed House districts WSR-3, WSR-7, WRS-6, WSR-5, and OAR-WSR-2, which include five Windsor County towns – Barnard, Pomfret, Hartford, Norwich, and Sharon; and two Orange County towns – Thetford and Strafford. The proposed district has a population deviation of +0.93%. The Windsor County towns are in the existing Windsor Senate district while the Orange County towns are in the existing Orange Senate district.

10. The proposed **Orange-Windsor-Rutland** Senate district is comprised of proposed House districts ORA-1, ORA-4, ORA-5, ORA-WSR-1, and WSR-RUT-1, which include 12 towns and portions of two more: Killington and Pittsfield (Rutland County); Stockbridge, Bethel and Royalton (Windsor County); and Tunbridge, a portion of Randolph, Chelsea, Vershire, West Fairlee, Fairlee, Corinth, Bradford, and a portion of Washington (Orange County). The proposed district has a population deviation of -2.17%. Of these towns, Killington and Pittsfield are in the existing Rutland Senate district; Stockbridge, Bethel and Royalton are in the existing Windsor Senate district;

Tunbridge, Chelsea, and Vershire are in the existing Orange Senate district; the included portions of Randolph and of Washington are in the existing Orange Senate district; and West Fairlee, Fairlee and Bradford are in the existing Caledonia Senate district.

11. The proposed **Addison-Windsor-Rutland** Senate district is comprised of proposed House districts ADD-RUT-1, ADD-1, ADD-8, RUT-6, and ADD-WSR-1, which include 15 towns and a portion of another: Orwell, Shoreham, Bridport, Cornwall, Whiting, Leicester, Salisbury, Middlebury, Ripton, Goshen, Hancock and Grandville (Addison County); Rochester (Windsor County); and a portion of Hubbardton (Rutland County). Together, these are the components of the five single-member House districts that form this proposed senate district. The proposed district has a population deviation of -0.05%. Of these towns, Hubbardton is in the existing Rutland Senate district; Rochester is in the existing Windsor Senate district; and Orwell, Shoreham, Bridport, Cornwall, Whiting, Leicester, Salisbury, Middlebury, Ripton, Goshen, Hancock and Granville are in the existing Addison Senate district.

12. The proposed **Addison-North** Senate district is comprised of proposed House districts ADD-2, ADD-3, ADD-4, ADD-5, and ADD-7, which include 10 towns and a portion of another: the towns of Addison, Weybridge, New Haven, Bristol, Lincoln, Starksboro, Monkton, Ferrisburgh, Waltham, the City of Vergennes, and a portion of Middlebury. The proposed district has a population deviation of +1.97%. All of these towns currently are in the existing Addison Senate district.

13. The proposed **Washington-Orange** Senate district is comprised of the proposed House districts WAS-1, WAS-4, WAS-7-1, WAS-7-2, and WAS-9, which include nine towns and portions of three others: Braintree, Brookfield, Fayston, Warren, Waitsfield, Roxbury, Duxbury, Moretown, and Williamstown; and portions of Randolph, Washington and Northfield. The proposed district has a population deviation of -3.11%. Of these towns, Braintree, Brookfield and Williamstown, and the portions of Randolph and Washington are in the existing Orange Senate district; Fayston, Warren, Waitsfield, Roxbury, Duxbury, Moretown, and the portion of Northfield are in the existing Washington Senate district.

14. The proposed **Washington-Orange-East** Senate district is comprised of the proposed House districts WAS-5-1, WAS 5-2, WAS-6-1, WAS-6-2, ORA-3, which include the four towns of Barre, Orange, Topsham, and Newbury, and Barre City. The proposed district has a population deviation of -2.25%. OF these, Barre Town and Barre City are in the existing Washington Senate District, while Orange, Topsham and Newbury are in the existing Caledonia Senate district.

15. The proposed **Washington-North** Senate district is comprised of the proposed House districts WAS-1, WAS-4, WAS-7-1, WAS-7-2, and WAS-9, which include the towns of Berlin, East Montpelier and Middlesex; portions of the towns of Waterbury and Northfield; and the City of Montpelier. The proposed district has a population deviation

of -4.38. All of these municipalities (and portions) are in the existing Washington Senate district.

16. The proposed **Orleans-Caledonia-Washington** Senate district is comprised of the proposed House districts ORL-3, ORL-4, CAL-2, WAS-2, and WAS-3, which include 15 towns or portions of towns: the Washington County towns of Plainfield, Marshfield, Calais, Worcester, Woodbury, and Cabot (and a portion of the Washington County town of East Montpelier); the Orleans County towns of Greensboro, Craftsbury, Glover, Albany, Barton, and Irasburg; and the Caledonia County towns of Walden, Hardwick, Stannard. The proposed district has a population deviation of -3.66%. Of these towns, Plainfield, the portion of East Montpelier, Marshfield, Calais, Worcester and Woodbury are in the existing Washington Senate district; Greensboro, Craftsbury, Glover, Albany, Barton, and Irasburg are in the existing Essex-Orleans Senate district; and Hardwick, Walden and Stannard are in the existing Caledonia Senate district.

17. The proposed **Caledonia** Senate district is comprised of the proposed House districts CAL-1, CAL-3, CAL-5, CAL-6, and CAL-7, which include eight Caledonia County towns: Groton, Ryegate, Barnet, Peacham, Danville, Waterford, St. Johnsbury and Lyndon. The proposed district has a population deviation of -2.1%. All of these towns are in the existing Caledonia Senate district.

18. The proposed **Northeast Kingdom** Senate district is comprised of the proposed House districts ORL-CAL-1, CAL-4, ORL-ESX-1, ORL-1, and ORL-2, which include the all of the Essex County towns (Concord, Lunenburg, Victory, Guildhall, Granby, East Haven, Maidstone, Ferdinand, Brunswick, Brighton, Bloomfield, Lemington, Canaan, Lewis, Averill, Norton, plus Warner's Grant, Warren's Gore and Avery's Gore; the Caledonia County towns of Kirby, Burke, Newark, Sutton, Sheffield and Wheelock; and the Orleans County towns of Westmore, Morgan, Holland, Derby, and Newport City. The proposed district has a population deviation of +1.44%. Of these towns and unorganized towns and gores, Kirby, Burke, Newark, Sutton, Sheffield and Wheelock are in the existing Caledonia Senate district, while all others are in the existing Essex-Orleans Senate district.

19. The proposed **Franklin-Orleans** Senate district is comprised of the proposed House districts FRA-1, FRA-3, FRA-4, ORL-5, and ORL-6, which include the Orleans County towns of Charleston, Brownington, Coventry, Newport Town, Troy, Jay, Westfield, and Lowell; and the Franklin County towns of Montgomery, Richford, Enosburgh, Berkshire, Franklin and Highgate. The proposed district has a population deviation of -1.54%. Of these towns, Highgate, Franklin, Berkshire and Enosburgh are currently in the existing Franklin Senate district, while Richford, Montgomery, Lowell, Jay, Westfield, Troy, Newport Town, Coventry, Brownington and Charleston are in the existing Essex-Orleans district.

20. The proposed **Lamoille Senate** district is comprised of the proposed House districts LAM-1, LAM-2, LAM-3, LAM-4, and LAM-6, which include these nine of the 10 the Lamoille County towns: Stowe, Elmore, Morristown, Wolcott, Hyde Park, Eden, Belvedere, Waterville, and Johnson. The proposed district has a population deviation of +3.13. Of these towns, all but Wolcott are in the existing Lamoille Senate district; Wolcott is in the existing Essex-Orleans Senate district.

21. The proposed **Franklin-Northwest** Senate district is comprised of the proposed House districts FRA-6, FRA-10, FRA-11, FRA-9, and FRA-5, which include the Franklin County towns of Sheldon, Swanton, and St. Albans, plus St. Albans City. The proposed district has a population deviation of +5.91. All of these towns and city and in the existing Franklin Senate district.

22. The proposed **Franklin-Chittenden-Lamoille** Senate district is comprised of the proposed House districts LAM-5, FRA-2, FRA-7, FRA-8, CHI-6, which include the Lamoille County town of Cambridge; the Chittenden County town of Westford and a portion of the town of Essex; and the Franklin County towns of Fletcher, Fairfax, Bakersfield and Fairfield, and all but a small portion of the town of Georgia. The population deviation of the proposed district is +3.39%. Of these towns, Cambridge is currently in the Lamoille Senate district; Westford and Essex are in the existing Chittenden Senate district; and Fletcher, Fairfax, Bakersfield and Fairfield, and Georgia are in the Franklin Senate district.

23. The proposed **Chittenden-Grand Isle-Franklin** Senate district is comprised of the proposed House districts CHI-9-3, CHI-3-1, CHI-3-2, CHI-GI-FRA, and GI-1, which include the Chittenden County town of Milton and a portion of Colchester; a small portion of Georgia in Franklin County; and all of the Grand Isle County towns – South Hero, Grand Isle, North Hero, Isle La Motte, and Alburgh. The proposed district's population deviation is +6.06. Of these towns, Georgia is in the Franklin Senate district; Milton is in the Chittenden Senate district; and Colchester and the Island towns are in the existing Chittenden-Grand Isle Senate district.

24. The proposed **Colchester-Winooski** Senate district is comprised of the proposed House districts CHI-9-1, CHI-9-2, CHI-9-4, CHI-11-1, and CHI-11-2, which include a portion of the town of Colchester and all of the city of Winooski, both in Chittenden County. The proposed district's population deviation is -1.72%. Colchester is currently in the Colchester-Grand Isle Senate district, while Winooski is in the existing Chittenden Senate district.

25. The proposed **Essex-Williston** Senate district is comprised of the proposed House districts CHI-10-1, CHI-10-2, CHI-10-3, CHI-10-4, and CHI-10-5, which include a portion of two Chittenden County towns – Essex and Williston. The population deviation of the proposed district is +0.44%. All of this proposed district is currently in the existing Chittenden Senate district.

26. The proposed **Chittenden East** Senate district is comprised of the proposed House districts CHI-4, CHI-7, CHI-2, CHI-13-1, and CHI-13-2, which include the Chittenden County towns of Underhill, Jericho, Richmond and a portion of Williston. The proposed district's population deviation is -1.75%. All of this proposed district is currently in the existing Chittenden Senate district.

27. The proposed **Burlington-1** Senate district is comprised of the proposed House districts CHI-14-1, CHI-14-2, CHI-14-3, CHI-14-4, and CHI-14-5, which include approximately the southern portion of the Chittenden County city of Burlington. The population deviation of the proposed district is +3.18%. All of this proposed district is currently in the existing Chittenden Senate district.

28. The proposed **Burlington-2** Senate district is comprised of the proposed House districts CHI-14-6, CHI-14-7, CHI-14-8, CHI-14-9, and CHI-14-10, which include approximately the northern portion of the Chittenden County city of Burlington. The population deviation of the proposed district is +5.6%. All of this proposed district is currently in the existing Chittenden Senate district.

29. The proposed **South Burlington** Senate district is comprised of the proposed House districts CHI-12-1, CHI-12-2, CHI-12-3, CHI-12-4, and CHI-12-5, which includes all of the Chittenden County city of South Burlington. The population of the proposed district is -5.34%. South Burlington is currently in the existing Chittenden Senate district.

30. The proposed **Chittenden-Washington** Senate district is comprised of the proposed House districts CHI-WAS-1, CHI-1, CHI-8, CHI-5-1, and CHI-5-2, which include the Chittenden County towns of Shelburne, Charlotte, Hinesburg, Huntington, Bolton; Buels Gore in Chittenden County; and a portion of the town of Waterbury in Washington County. The population deviation of the proposed district is +0.35%. Of these towns, Waterbury is currently in the Washington Senate district; Huntington and Buels Gore are in the Addison Senate district; and Shelburne, Hinesburg and Charlotte are in the existing Chittenden Senate district.

Conclusion

The Board read the prior Senate apportionment proposals, and state and local maps; studied the geography and topography of each part of the state; and considered a remarkable variety of Senate proposals generated by Board members and others. The Board members drew upon personal experiences in local government throughout the state

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and, in some cases, prior experiences in the reapportionment process.³ The Board's single-member district approach made a concerted effort, considering that framework, to draw a map that takes into proper account the population realities of our state, attention to county boundaries where feasible, and the non-numerical apportionment factors chosen by the General Assembly. The Board is confident that there is more than one way to draw a good, constitutional and sensible Senate map, but believes its proposal presents the people of the state with a sound option.

Respectfully submitted,

Legislative Apportionment Board

By:

Edward Adrian
Jeremy Hansen
Tom Koch
Robert Roper

³ Board Chair Little was a member of the House in the apportionment years of 1992 and 2002, and chaired the Apportionment Board in 2010-2011. Member Tom Koch served as a member of the House during prior reapportionments. Member Roper served on the Apportionment Board in 2010-2011.

Minority Report to the Legislative Apportionment Board Senate Report

Introduction

As noted in the Introduction to the Board’s Senate Report, 17 V.S.A. §1901 requires reapportionment of Vermont's legislative districts *in such manner as to achieve substantially equal weighting of the votes of all voters in the choice of legislators. Chapter II of the Vermont Constitution establishes the same requirement, as does the Equal Protection provisions of the U.S. Constitution. This substantial equality requirement is the overarching mandate of our law.*⁴ Based on this mandate, 17 V.S.A. §1903(b) then lays out the standards and principles that govern creation of legislative districts [**emphasis added**]:

“The standard for creating districts for the election of Senators on a county basis to the General Assembly shall be to form representative districts with minimum percentages of deviation from the apportionment standard for the Senate. The ... senatorial districts shall be formed consistent with the following policies insofar as practicable:

- (1) preservation of existing political subdivision lines;
- (2) recognition and maintenance of patterns of geography, social interaction, trade, political ties, and common interests;
- (3) use of compact and contiguous territory.”⁵

An apportionment plan with lower district percentage deviations—regardless of whether single- or multi-member-- indicates that the voting weights of residents across the state will be more nearly equal than in plans with higher deviations. This is the appropriate and constitutionally understood measure of “substantial equality.”

⁴ As the minority noted in its House report counterpoint, the main argument of the single-member-district advocates is that a resident in a two-member House district is represented by two House members, while a resident in a single-member district is represented by one – and that this is fundamentally unequal and unfair. This misses the fundamental constitutional point, however, which is that in the former district there are twice as many residents, and thus the proportional representation is substantially equal. That is what our Constitution requires, and that is what the alternate House redistricting proposal offers. We believe the same conclusion and concern applies with equal force to requiring all single-member Senate districts.

⁵ <https://legislature.vermont.gov/statutes/section/17/034A/01903>

As noted in the minority report to the Board’s House Report, in the redistricting plan, the majority of the Board introduced a requirement—that all House districts elect one representative-- that is nowhere in our Constitution or statutes. To the contrary, both one- and two-member districts are endorsed (see VT Const. Ch. II, § 13), with no preference given for either type of district. Likewise, Article II, Section 18 of the Constitution provides no textual basis for favoring single-member Senate districts. Rather than (for example) striving to create as many single-member House districts as possible—while following the directives in law for redistricting—the majority made single-member districts a foundational standard, to which the other statutory criteria must yield.

In their reapportionment of the Senate, the majority also chose to make an all-single-member district map their most important criterion. To achieve this result, their methodology for redistricting was to combine five contiguous single-member House districts in their entirety to form one single-member Senate district. For many of the same reasons the minority of the Board articulated in its House plan minority report, we believe that the majority erred in taking this approach.

The balance of this Senate minority report closely follows the structure, themes, and arguments of our House minority report. With respect to Vermont’s statutory standards and policies for redistricting, we compare several features of the all-single-member Senate district plan to those of the alternate district plan proposed by the other three Board members. These comparisons will illustrate how the majority plan does not comply with various elements of 17 V.S.A §1903.

17 V.S.A §1903(b) makes clear that while the substantial equality of population standard (in apportionment parlance, the *minimum deviation standard*) is foundational, it must be considered in concert with other non-numerical factors and policies; therefore, it is rarely (if ever) possible to achieve near-zero deviation for all or even most districts. In particular, along with the foundational standard, Vermont law identifies three policies that guide the formation of legislative districts, and directs that districts must (the statutes uses “shall”) —“insofar as practicable”— be formed consistent with these policy goals. With respect to these policies we compared the Board’s majority and alternate Senate district plans to illustrate how the majority’s rigid, single-member district framework and companion methodology (in all cases using five House districts per Senate district) resulted in outcomes significantly less conforming than the alternate plan.

In forming Senate districts “on a county basis,” Vermont law requires that Senate districts as much as possible adhere to some credible semblance of the counties. The policy goals that the law identifies are as follows:

Policy 1: preservation of existing political subdivision lines

Policy 2: recognition and maintenance of patterns of geography, social interaction, trade, political ties, and common interests

Policy 3: use of compact and contiguous territory.

Policy 1 places a significant value on avoiding subdividing towns and crossing county lines when drawing Senate districts “on a county basis.” As a state policy, it emphasizes the robust sense of collective identity shared by residents of Vermont’s cities, towns, counties, and the more lightly organized grants and gores, and the understandable disruption caused by separating parts of such entities into two or more legislative districts.

On the other hand, the nature and variation of county population sizes makes some splitting of counties unavoidable-- for example, Chittenden County’s population is far too large to be even a three-member⁶ district and all but a few of the remaining counties have populations that are either too small or too large to be a district on their own—whether as a one-, two-, or three-member district. (For reference, the current Senate district plan includes five divided counties.)

Similarly, Policy 2 envisions districts that “recognize and maintain” a sense of community and requires looking more deeply at some of the non-numerical factors that help bind a district together into a coherent entity. This policy is an important companion to Policy 1: to the extent that districts must be formed that cross town or county boundaries, the configuration of towns chosen should be based on an understanding of regional ties and interests (or lack thereof) so that such a sense of community coherence can be maintained.

Finally, Policy 3 promotes the creation of districts that are geographically contiguous and compact.

Not surprisingly, it takes some care and persistence to create districts that, “insofar as practicable,” minimize deviation, avoid dividing towns and counties, take into account geographic barriers, acknowledge and support community, social, and/or economic ties, and are reasonably compact. The following examples provide instances where it is indeed possible to create districts that achieve these criteria, but which the majority rejected

⁶ Senate Bill 11, enacted in 2019, limited the number of Senators per district to a maximum of three members. In so doing, the Legislature did not indicate a preference for the number of Senators. Indeed, the legislative text indicates an explicit recognition that the standard is equality of representation: “... the Board shall prepare a proposal for reapportionment of the Senate, apportioning the 30 senatorial seats among the counties or combinations of counties with a maximum of three members in each proposed district, and in such manner as to achieve substantial equality in the choice of members as guaranteed by the Equal Protection Clause of the Fourteenth Amendment to the U.S. Constitution.”

because of their self-imposed rule to create Senate districts that consist solely of five single-member House districts.

Example 1: Washington-N, Washington-Orange-South

The proposed Washington-N Senate district consists of Berlin, Middlesex, Montpelier, and portions of East Montpelier, Northfield, and Waterbury.

The proposed Washington-Orange-South district consists of Braintree, Brookfield, Duxbury, Fayston, Moretown, Roxbury, Warren, Waitsfield, Williamstown, and portions of Northfield, Randolph, and Washington.

Between the two districts, five towns are divided, and each division arises from a split in the town's underlying House district. Moreover, as part of the House plan development process, each town BCA opposed being divided. **All town splits could have been avoided** if the majority had been willing to combine these two districts into a two-member senate district, as well as reunite the smaller portions of East Montpelier, Randolph, Washington, and Waterbury with the larger portions.

Additional benefits of a two-member district:

- County division is removed from Chittenden-Washington
- Improved compactness: The Reock scores for Washington-N and Washington-Orange-S are 0.44 and 0.47, respectively; as a combined district the score is 0.50. Similarly, the Polsby-Popper ratings for each of the individual districts is 0.31, while as a combined district it is 0.49.

Example 2: Addison-N, Addison-Windsor-Rutland

The proposed Addison-N district consists of Addison, Bristol, Ferrisburgh, Lincoln, Monkton, New Haven, Panton, Starksboro, Vergennes, Waltham, Weybridge, and a portion of Middlebury.

The proposed Addison-Windsor-Rutland district consists of Bridport, Cornwall, Goshen, Granville, Hancock, Leicester, Orwell, Ripton, Salisbury, Shoreham, Whiting, Brandon, Sudbury, Rochester, and portions of Hubbardton and Middlebury.

Between the two districts, two towns are divided, and each division arises from a split in the town's underlying House district. Moreover, as in example 1, each town BCA opposed being divided. **Both town splits could have been avoided** if the majority had been willing to combine these two districts into a two-member senate district, and to reunite Hubbardton as part of the Rutland-1 district.

Additional benefits of a two-member district:

- County coherence: the combined district includes all of Addison County.
- Improved compactness: The Reock scores for Addison-N and Addison-Rutland-Windsor are 0.56 and 0.53, respectively; as a combined district the score is 0.65. Similarly, the

Polsby-Popper ratings for the individual districts are 0.51 and 0.36, while as a combined district it is 0.54.

Example 3: Rutland-1, Rutland-2

The proposed Rutland-1 district consists of Benson, Castleton, Chittenden, Fair, Haven, Ira, Mendon, Pittsford, Poultney, West Haven, and portions of Hubbardton, Rutland Town, and West Rutland.

The proposed Rutland-2 district consists of Clarendon, Proctor, Rutland City, and portions of Rutland Town and West Rutland.

Between the two districts, three towns are divided, and each division arises from a split in the town's underlying House district. Moreover, both Hubbardton and Rutland Town opposed being divided⁷. **All town splits could have been avoided** simply by combining these two districts into a two-member senate district, and reuniting Hubbardton. This result is much more consistent with our reapportionment laws.

Additional benefits of a two-member district

- County coherence: the majority's Senate plan separates Rutland County into five different districts; combining two of them would reduce this number to four. It is also possible to move Killington and Pittsfield from their proposed Orange-Washington-Rutland district into this combined two-member district, further reducing the division of the county (as well as producing a more compact and cohesive Orange-Washington district.)
- Improved compactness: The Reock scores for Rutland-1 and Rutland-2 are 0.41 and 0.36, respectively; as a combined district the score is 0.48. Similarly, the Polsby-Popper ratings for the individual districts are 0.17 (the plan minimum) and 0.35, while as a combined district it is 0.35.

Example 4: Chittenden-Grand Isle-Franklin

The proposed Chittenden-Grand Isle-Franklin district consists of Alburgh, Grand Isle, Isle La Motte, North Hero, South Hero, and portions of Colchester, Georgia, and Milton.

This district includes a very small portion of Georgia—265 residents—which is the only part of Franklin County included. Reuniting this portion of the town with the rest of Georgia is doable and sensible—especially given that Georgia's BCA opposed the majority's initial House district plan to divide the town. In addition, many individual residents of Georgia contacted the Board (via an online feedback submission form) to express their disagreement and dismay about the split of their town.

⁷ The division of West Rutland was not part of the Majority's initial House proposal.

Additional benefit of removing the division of Georgia

County coherence: the majority's Senate plan separates Franklin County into four different districts; reuniting Georgia (as part of their proposed Franklin-Chittenden-Lamoille district) would reduce this number to three.

Example 5: Bennington-Windham

The proposed Bennington-Windham district consists of Dover, Glastenbury, Halifax, Jamaica, Landgrove, Londonderry, Marlboro, Newfane, Peru, Shaftsbury, Somerset, Stratton, Townshend, Wardsboro, Whitingham, Wilmington, Windham, and Winhall.

Geographically, this is one of the largest districts in the majority's Senate plan, measuring ~72 miles from northwest Peru to southeast Halifax, and ~60 miles from southwest Shaftsbury to northeast Townshend. Only their proposed Franklin-Orleans district has a larger width: ~82 miles from northwest Highgate to eastern Charleston (this district also has the Reock plan minimum score, 0.19, owing to its extreme narrow shape overall.) Only their proposed Northeast Kingdom district exceeds Bennington-Windham in these measurements: ~72 miles from west Wheelock to northeast Canaan, and ~70 miles from northwest Derby to south Guildhall.

Furthermore, this district straddles the Green Mountains and there are no roads connecting the towns east and west. Indeed, feedback from town BCAs noted this lack of connection, both physical and with respect to community ties.

While creating geographically large, single-member districts can be hard to avoid in the northeast part of the state, other options were possible in this region-- had the majority been willing to consider them.

For example, in southern and south-central Vermont, the LAB's alternate plan proposes a two-member Bennington district, a two-member Windham district, a three-member Rutland district, and a three-member Windsor district; all except the Windham district include the entire county. Of these four districts, the Windsor district is the most geographically dispersed, measuring ~80 miles from Weston to Thetford and also from Rochester to Springfield. But this is balanced by other factors, such as county-based coherence, common interests, long-standing association as a Senate district, and having three senators.

Along with looking at individual districts, it is also useful to compare overall differences between the LAB's majority and alternate plans.

Town and County Division Summary		
	Majority Plan 1-member districts: 30	Alternate Plan 1-member districts: 7 2-member districts: 7 3-member districts: 3
Number of cities/towns divided <i>Current plan has no divided towns</i>	15	2
Number of districts that include a split part of a town (% of districts) <i>Current plan has no such districts</i>	18 (60%)	3 (17.6%)
Number of counties divided <i>Current plan has 5</i>	12	7
Total number of county portions in districts <i>Current plan has 21</i>	49	26
Number of districts that cross a county boundary <i>Current plan has 6 cross-county districts (50%)</i>	14 (46.7%)	8 (47.1%)

The first row of the table shows that the majority’s proposal divides an unusually large number of towns for a Senate district plan. As is indicated in the second row of the table, this results in a large percentage of districts that include a divided part of a town.

The table next displays analogous information regarding counties and again we see that the majority plan has many more such divisions than in the current plan or the Alternate plan. This difference is particularly stark when we look at the number of split portions of counties (row four in the table), which helps capture the “excess” division that occurs when a county is divided into more pieces than necessary. For example, Rutland County has an appropriate population size (60,572 people) to be represented by three Senators in one district (as it is now and as the Alternate plan proposes); however, the majority plan splits the County across five separate districts. Similarly, Franklin is divided between four districts, but its population size (49,946 people) can be represented with just two districts, if one of them has two Senators.

From the table it is evident that the majority plan divides many more communities than the Board’s alternate plan. Further, as the examples above illustrate, many of these divisions are entirely unnecessary and go against the preferences of the affected communities—preferences that clearly address statutory policy goals and that are satisfied using a two- or three-member district. Consequently, the majority plan does not comply with the “as far as practicable” clause of V.S.A §1903(b).

We conclude this minority report by excerpting a relevant portion of the Board minority’s House plan minority report, as the same observations and conclusions, we think, apply in the context of the Senate plan.

To justify excluding two-member districts from consideration, the first factor they identify is given below:

A general recognition that Vermont’s current hybrid model of single and two representative districts creates unavoidable inequities regarding representation between residents of differently configured districts, which raise serious questions regarding equal representation for all citizens.

This “general recognition”—essentially, opinion—is not supported by long-standing legal interpretation of “equal representation,” and is (perhaps) based on a misunderstanding of the core underlying concepts. As we noted in the introduction to this report, equal representation consists of the “equal weighting of the votes of all voters in the choice of legislators.” Since an ideal two-member district has twice the number of residents as an ideal one-member district, equal weighting is preserved between the two types of districts.

Put another way, the weight of a person’s vote is a measure of how much influence their vote has on the outcome of an election: indeed, the statutory directive to minimize percentage deviation embodies the recognition that residents in a district of either type with smaller population size have more influence over the outcome of an election than residents in a district of the same type that has larger population.

Compared to voters in a single-member district, to elect each of the two representatives for their district, voters in the two-member district must “compete” against twice as many other voters. Therefore, to elect each representative their votes have half the weight – or influence-- of a corresponding voter in a one-member district. Consequently, their two votes together then have the same weight as the voter in the single-member district.

*The Vermont Supreme Court has examined the meaning of equality of representation, and substantial equality of representation in important redistricting decisions. These include *In re Senate Bill 177*, 130 Vt. 365 (1972); *In re Senate Bills 177 & 83*, 132 Vt. 182 (1974); and *In re Reapportionment of Town of Hartland, et al.*, 160 Vt. 9 (1993). These decisions cite with approval important equality of representation redistricting decisions from the U.S. Supreme Court, including *Mahan v. Howell*, 410 U.S. 315 (1972), and *Reynolds v. Sims*, 377 U.S. 533 (1964) From these decisions flows the conclusion, we believe, that there is no constitutional requirement for single-member districts absent a demonstration of invidious discrimination. See *Whitcomb v. Chavis*, 403 U.S. 124, 142-143 (1971). The *Town of Hartland* decision likewise favorably points to this same line of cases.*

We note in this context Vermont Attorney General Opinion No. 27 (February 8, 1973), which addressed the question, “Are multi-member legislative districts constitutional?” The opinion is not binding in the way that a Vermont Supreme Court decision is but is an authoritative statement of a point of law relevant to this discussion. The Opinion concluded that a reapportionment plan “utilizing multi-member districts which achieve representational equality approximately equal to a single-member district plan would conform to the Fourteenth Amendment to the United States Constitution.”

The Board’s minority members believe there is very solid constitutional grounds for continuing to use both single and multi-member legislative districts in Vermont’s periodic reapportionment.

The second factor identified by the majority regarding their adoption of a single-member district plan is “overwhelming public support.” To support this conclusion, they point to the results of a public engagement survey that was developed by LAB members and posted to the Apportionment Board’s website. While survey respondents did strongly favor single-member districts, the results of the survey cannot be used to characterize the level of support among Vermonters for an all-single-member district scheme, for two essential reasons:

(1) The LAB’s survey was designed to engage Vermonters in a once-in-a-decade process, not as a way to gauge public opinion using standard random-sampling methods. Consequently, respondents as a group do not constitute a representative sample from which conclusions can be drawn about the wider state population.

(2) In addition, Vermont organizations that favor single-member districts-- including the VT Republican Party and VPIRG—encouraged their membership to complete the survey via email appeals, web newsletters, and direct links to the survey. This activity provides additional confirmation of the non-representative nature of survey respondents.

In support of their all-single-member district scheme, the third factor noted by the majority centers on testimony provided to the Board by Xusana Davis, the Executive Director of Racial Equity and Chair of the Vermont Racial Equity Task Force.

In her testimony, Executive Director Davis brought to our attention recommendations by Vermont’s Racial Equity Task Force⁸, and urged the Board to bring an equity lens to all facets of our redistricting work. Within this realm, Davis indicated that single-member

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Report of the Vermont Racial Equity Task Force, January 15, 2021, p.30.
https://racialequity.vermont.gov/sites/reap/files/doc_library/RETF-Report-2-Final.pdf

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districts can be the better choice in some instances and for some communities; however, neither she nor the task force recommended having only single-member districts.

Specifically, the Task Force recommends that, “the Reapportionment Commission modernize its criteria to include racial and social equity as explicit considerations as it engages in its critical work.” The members of the Board minority support this recommendation and we encourage the legislature to consider drafting appropriate legislation.

Finally, the majority recasts the predominantly negative BCA feedback in improper and misleading ways. We hope to clarify and correct the record here.

First, here is an overview of BCA feedback that categorizes their responses more clearly:

- **148 towns submitted feedback.** Of these:
- **46 towns (31.1%) supported their district** in the tentative proposal
- **97 towns (65.5%) opposed their district** in the tentative proposal
- **5 towns (3.4%) submitted mixed feedback** regarding their district in the tentative proposal (e.g., tie vote in BCA)

*Thus, evidence from BCAs shows that **towns that responded opposed the tentative plan for their district by more than a two-to-one margin over those that supported it.***

In their summary of these responses, the majority characterizes the BCAs that submitted no feedback as having “no objection” to their plan. However, the most we can say about towns that did not submit feedback is that we do not know whether they support or oppose the tentative proposal. In particular, characterizing these towns as having “no objection” is unwarranted and can mislead-- especially so since the majority groups the non-responding towns with the (much smaller) number of towns that submitted positive feedback about their proposed districts.

In addition, they state that, “of the [97] remaining towns that requested changes to the draft map, only 34 proposed returning to a two-member house district scenario, and of those 34, 12 either proposed being joined with town(s) that specifically did not consent to such a pairing, or such a request would not be possible due to population shifts within current district and surrounding region regardless of the single-member district framework adopted by the Board.”

However, these values are incorrect: of the 97 towns that opposed the tentative proposal’s plan for their district:

- **47 indicated a desire to be in a two-member district.** Further,
- **43 of these towns would be in a two-member under the alternate district plan.**

The majority report thus appears to significantly understate the degree of negative feedback for the single-member district proposal, and undercounts the number of two-

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member districts that were possible to create. The alternate proposal, we believe, offers a more reasoned, transparent, data-driven, and fairer approach to redistricting the House – and certainly one that adheres to the law.

Consistent with this foregoing minority report, the undersigned members of the Board have presented an alternate Senate redistricting plan, which is available at the Vermont Secretary of State’s website via this link: <https://sos.vermont.gov/apportionment-board/resources/>

Respectfully submitted,

Jeanne Albert
Mary Houghton
Thomas A. Little

Majority Rebuttal to the Minority Report

The Minority of the LAB tries to undermine the Majority Report with the argument that a map employing only single member districts leads to an overall map with a higher population deviation than a map utilizing single and multi-member districts, and that population deviation is the single most important factor in creating a fair and legal map. The Majority's opinion is that the Vermont Constitution does not support the Minority Report and provides the following rebuttal.

While population deviation is an important criterion to consider when creating a map that will pass constitutional muster, there is no exact numerical standard for measuring what is or is not a constitutionally acceptable deviation. With that said, it is commonly accepted jurisprudence at the federal level, that a deviation of 9.9% or less is constitutionally sound.

The highest deviations in the Majority Map occur in WDM-2 (8.65%), Marlboro, Newfane, and Townsend. The Majority considered that these three towns have historically formed a single member district, the BCA from Newfane affirmatively approved of the recommendation by the Majority that the three towns remain together and intact, and the other two towns made no objection. In light of those factors, the Majority decided the case was strong to allow a higher population deviation than would otherwise be considered ideal. The Minority Map, on the other hand, splits the town of Marlboro for no other reason than to lower the population deviation regardless of other factors.

The Minority asserts that, "the majority made single-member districts a foundational standard, against which the other statutory criteria must yield." The Majority disputes this characterization. The Majority used single members as a scaffold upon which to build, utilizing the other constitutionally and statutorily mandated factors.

The Majority of the LAB believes that national trends away from multi-member districts for equity reasons (multi-member districts are demonstrably a gerrymandering tool); public input from Vermont citizens indicating an overwhelming support for all-single-member districts; and local input for BCAs justifies the slightly higher population deviation in the Majority's single-member district map than exists in the Minority's hybrid map. It is also important to note that the Majority's single member district map has a lower overall population deviation than the final hybrid map approved by the Vermont legislature in 2012, that was not subject to a judicial challenge.

PUBLIC AND BCA INPUT

The Minority report cites a number of examples in which local BCA's requested to remain in or be put into two-member districts, accusing the majority of ignoring their requests.

Indeed, the Minority map is more dismissive of local input. For just a few examples, the Minority map:

- Ignores the request of Ferdinand to be placed into a district with the other Gores in its region.
- Ignores Sutton's general approval of the single-member district as proposed by the Majority, and their and Newark's request for the latter town to be joined with it in a single member district.
- Ignores Stowe's request that the portion of that town that must be removed due to population increase be placed in a single-member district.
- Ignores Putney's affirmed preference for the single-member district as proposed by the Majority.
- Ignores Manchester's approval of its single-member, single town district status as proposed by the Majority, and the expressed desires of the Sunderland and Arlington BCAs to be in a single member district with Sandgate separate from Manchester. (This is a decision that is arguably driven by gerrymandering to benefit the two Democratic incumbents who both reside in Manchester, incumbency being a factor the LAB is not supposed to consider.)

The Minority also completely disregards the overwhelming public support for single member districts as widely reported by Vermont Digger among others - <https://vtdigger.org/2021/10/06/vermonters-prefer-single-member-legislative-districts-but-are-they-fair/>, that was evident from a year of public outreach, education, and debate generated by the LAB. The LAB's detailed survey of a dozen questions received 634 responses, indicating 75% preference for single member districts and 65% support for an all-single-member district map.

The Minority, whose principal map author also co-authored the above referenced survey, now argues that the results should not be considered because the results were not scientific, writing:

- (1) The LAB's survey was designed to engage Vermonters in a once-in-a-decade process, not as a way to gauge public opinion using standard random-sampling methods. Consequently, respondents as a group do not constitute a representative sample from which conclusions can be drawn about the wider state population.

To this we would argue that the legislature takes testimony from citizens and experts in formal public hearings and from individual constituents on matters of consequence all the time that is not based on random-sampling methods. It is the majority's contention that that such public input should be taken seriously in this context and, in our democracy, given its due weight.

Moreover, the Minority seeks to discredit the public input because:

(2) In addition, Vermont organizations that favor single-member districts--including the VT Republican Party and VPIRG—encouraged their membership to complete the survey via email appeals, web newsletters, and direct links to the survey. This activity provides additional confirmation of the non-representative nature of survey respondents.

The Majority contends that that support for single member districts coming from the Vermont Republican Party of the Right and VPIRG of the Left⁹ is evidence for – not evidence to dismiss – broad and overwhelming public support for single member districts across partisan lines.

RACIAL EQUITY

The Minority writes:

In her testimony, Executive Director Davis brought to our attention recommendations by Vermont's Racial Equity Task Force¹⁰, and urged the Board to bring an equity lens to all facets of our redistricting work. Within this realm, Davis indicated that single-member districts can be the better choice in some instances and for some communities; however, neither she nor the task force recommended having *only* single-member districts.

The redistricting commentary from the Report of the Racial Equity Task Force states in full:

Extensive political research and case law have demonstrated that in most of the U.S., states and localities have taken increasingly flagrant tactics designed to

⁹ VPIRG's survey found that "Respondents had a small preference (52%-48%) for 2-member House districts over single-member House districts. Respondents had a slightly larger preference (54%-46%) for single member Senate districts over multi-member districts."
<https://www.vpirg.org/wp-content/uploads/2021/08/LAB-Survey-8.6.21.pdf>

¹⁰ Report of the Vermont Racial Equity Task Force, January 15, 2021, p.30.
https://racialequity.vermont.gov/sites/reap/files/doc_library/RETF-Report-2-Final.pdf

suppress and dilute the votes of communities of color. **One such tactic is the use of multi-member districts.** Most recently, the 2020 election cycle made the act of voting extraordinarily difficult for people of all social strata, in all regions. Clearly, the need for all voices to be heard cuts across every demographic group in the state. To encourage people of color to run for and succeed in public office, the state should continue to strive for an equitable field for all communities and ensure accurate representation. The Task Force recommends the Reapportionment Commission modernize its criteria to include racial and social equity as explicit considerations as it engages in its critical work. ¹¹(Footnotes excluded and emphasis added).

The Majority concurs that multi-member districts dilute concerns related to equity and that a modern reading of the Vermont Constitution demands that single member districts be utilized as the decision-making scaffold and that all other criteria guide the build-out of the legislative districts throughout the reapportionment process.

BCA RESPONSES

The Minority states:

“Finally, the majority recasts the predominantly negative BCA feedback in improper and misleading ways. We hope to clarify and correct the record here.”

The Majority vehemently disagrees with this characterization and believes that the record speaks for itself. The entire district-by-district Majority report incorporates in every district description the comments of each affected BCA and details regarding how and why we could or couldn't accommodate their requests for changes. This is a feature we believe to be entirely absent from the Minority Report.

¹¹ *Id.*

Minority Members Acknowledgement of Rebuttal; Response

The members of the minority on the Board acknowledge the majority members' rebuttal to the minority report, and stand by the analysis, rationale and substance of the minority report.

Appendices

APPENDIX 1

Excerpt from 2001 Apportionment Board Report (Pages 1-7)

1. Introduction

The Vermont Constitution requires reapportionment of the Vermont House and Senate every ten years following the release of the decennial census. Vt.Con. c.II, sec. 73. This is ultimately a legislative decision, but the preparation of an initial plan is the work of the Legislative Apportionment Board. The law obligates the Board to provide the General Assembly with Tentative Plans for the redistricting of the Vermont General Assembly by July 1 for the Senate and by August 15 for the House. This is the 2001 Tentative Plan for the Vermont House of Representatives.

In Vermont we apportion the legislature on the basis of population. It works this way for the House: take the number of people in Vermont in 2000 and divide it by the number of seats in the House of Representatives. With the numbers in mind, align the various towns and cities into appropriate-sized representative districts, enact them into law, and then use those districts in the next five Primary and General Elections. According to the 2000 Census, there are 608,850 people in Vermont.

According to the Vermont Constitution, there are 150 House members. Dividing the first by the second number equals 4,059 people, who would make an ideal single-member House district. Districts may be of any size to start, as initial districts. After the subdivision process is over, the constitution requires that there be only single- and two-member districts. In this plan, there are 59 single- 2 member districts and 34 two-member districts, with 16 House seats in three (unsubdivided) multi-member initial districts as yet undecided. The details appear below.

2. Constitutional and Statutory Principles

The Vermont Constitution identifies three principles to use in designing the House and Senate plans for reapportionment. The General Assembly is required to provide equality of representation and to “seek to maintain geographical compactness and contiguity and to adhere to the boundaries of counties and other existing political subdivisions.” A statute restates these principles and adds another--recognition and maintenance of patterns of geography, social interaction, trade, political ties and common interests.¹² Nor can incumbency be ignored, since apportionment is a political process.

¹² 17 V.S.A. § 1903(b). In the Hartland case, the Supreme Court regarded (b)(2) (recognition and maintenance of patterns of geography, social interaction, trade, political ties and common interests) as a natural outgrowth of the other two constitutional principles. See 160 Vt. at 22.

a. Substantial Equality. Changes in population make all the difference in reapportionment. Without substantial equality of population, as the courts have defined it, no plan will pass muster in a review by the judicial branch. Perfect equality (4,059 people per House member) is unlikely. Substantial equality is measured by the deviation from the norm for each district and for the overall plan.

In 1992, the maximum House deviation was 17.6%.¹³ The deviation in the 2001 Tentative House Plan is 15.84%. The district with the fewest number of residents per House member is Lamoille-3 (Elmore, Morrystown and Wolcott, a two-member district with 7,444 residents, or 3,722 per House member (a deviation of -8.3%). The district with the highest deviation—the most residents per House member—is Franklin-Lamoille-1 (Fletcher and Cambridge, a single member district with 4,365 people (a deviation of +7.54%). Using these criteria, no single member district may be smaller in numbers of residents than 3,722 nor larger than 4,365 and no two-member district may be smaller than 7,444 nor larger than 8,730 residents.

In addition to an analysis of population numbers, there is need for a credible argument demonstrating how the other standards beyond equality are met. In the Mahon case, the United States Supreme Court said 16.4% “approach[es] tolerable limits.” It explained that the ultimate inquiry is whether the legislature’s plan “may reasonably be said to advance [a] rational state policy” and, if so, “whether the population disparities among the districts that have resulted from the pursuit of this plan exceed constitutional limits.”¹⁴

b. Geographical compactness and contiguity. This principle measures the shape of each district. A district strung together in a straight line may not reflect a sense of community for its member towns. A district with parts separated from each other by other districts is certainly going to find it difficult to coalesce as a single unit of representation.

The computer program used by the LAB is Caliper Corporation’s Maptitude. It calculates a compactness factor, using two measures The first is the Reock test, an area-

¹³ The percentage of deviation is a measure of the extremes of the final plan from perfect equality. The Vermont Supreme Court explained it best in the Hartland case. 160 Vt. at 14, fn. 2, where it wrote, “According to the 1990 census, the state population is 562,758. The size of the ideal representative district--3752--is arrived at by dividing the total population by 150, the number of representatives mandated by Chapter II, § 13 of the Vermont Constitution. Deviations, whether positive or negative, are from this norm. If the number of citizens in the district is below 3752, there is a negative deviation, while a positive deviation results if there are more than 3752 citizens in the district. The overall, or maximum, deviation of a plan is calculated by disregarding the positive or negative signs, and taking the sum of the highest positive and negative deviations within the plan. For example, if the highest positive deviation of any district in a plan were 5.6%, and the highest negative deviation of any district in that plan were -5.6%, the overall deviation of the plan would be 11.2%.”

¹⁴ Mahan v. Howell, 410 U.S. 315, 318 (1972).

based measure that compares each district to a circle (the most compact shape possible), computing the ratio of the area of the district to the area of the minimum enclosing circle. A perfect circle would have a ratio of one. The other measure is the Polsby-Popper test, which computes the ratio of the district area to the area of a circle with the same perimeter. As with the Reock test, one represents the most compact district. Of course, none of the districts are circular, but the respective scores on these tests do provide some technical measure of the compactness of the proposed districts. The least compact district is Caledonia-Essex-1 (Bloomfield, Brunswick, Concord, Granby, Guildhall, Kirby, Lunenburg, Maidstone and Victory) with a Reock score of 0.30 and a Polsby-Popper rating of 0.26. The most compact district is Bennington-5 (Arlington, Manchester, Sandgate and Sunderland) with a Reock score of 0.63 and a Polsby-Popper rating of 0.78.

The map of the Tentative District also demonstrates contiguity: all districts are contiguous. In most cases, the entire town border is used to weld a district together. An exception such as Bennington-2, where Pownal and Woodford are together as a district and where the contact of those two towns is a line of less than half a mile in length in the northeastern corner of Pownal and the southwestern corner of Woodford, illustrates the extreme, and proves the rule.

Of this principle, the Vermont Supreme Court has written,

Voters in a community are less effectively represented when their elected representative's principal constituency lies outside their community and has interests different from their own. (Citations omitted). These considerations are particularly relevant in this state, which has a long history of preserving the independence and integrity of local government.

Similarly, compactness and contiguity requirements ultimately concern 'the ability of citizens to relate to each other and their representatives and . . . the ability of representatives to relate effectively to their constituency.' These relationships are fostered through shared interests and membership in a political community. They are undermined, however, when geographic barriers that severely limit communication and transportation within proposed districts are ignored.¹⁵

c. Adherence to county boundaries and other existing political subdivisions.

This criterion is a measure of the Plan's respect for existing political subdivision lines. In the Tentative House Plan, there are 15 districts that cross county lines, involving a total of 68 towns (counting those on both sides of the line). In most instances, in order to reach substantial equality, only one town is taken from another county to fill out the quota of people needed to make a proper-sized district. One district—Caledonia-Essex-Orleans-1 joins towns from three counties.

¹⁵ In re Reapportionment of Town of Hartland, 160 Vt. 9, 21-22 (1993).

Another measure of this criterion is found in the history of the various districts going back 36 years and analyzing how the alignments of different towns change in each of the previous four reapportionment plans, beginning in 1965. The practice of redesigning the House map has been conservative over time. The districts are essentially the same, with the addition or subtraction of a town from a district that is growing or not growing as much as the state's population during those years. Comparing the 1992 apportionment plan for the House to the one here proposed, for instance, reveals that 21 districts proposed in the 2001 Tentative House Plan remain unchanged.¹⁶ Looking more closely at the plan, most of the other districts are similar to their 1992 counterparts. The majority of changes involve moving a small town from one district to another, based on the need for substantial equality. When a district grows at a faster rate than the state, it often sheds towns. A district that grows at a slower rate, to remain intact, must add new towns taken from other districts.

d. Patterns of geography, social interaction, trade, political ties and common interests. In the Hartland case, the Supreme Court explained that these criteria “are an implementation and extension of our constitutional requirements that the legislature ‘seek to maintain geographical compactness and contiguity and to adhere to boundaries of counties and other existing political subdivisions.’”¹⁷

In Hartland, the Supreme Court rejected the legislature's proposal for a House plan placing the Franklin County town of Montgomery with towns in Orleans County because the legislative record showed no evidence the House committee considered social and economic ties in designing the district.¹⁸ Two years later, after the legislature made its report, the Court concluded the decision to place Montgomery in Orleans County was neither irrational nor illegitimate, and the plan remained in place for the remainder of the decennium.¹⁹

The Tentative Plan addresses these criteria, district by district. It includes a review of the roads that link towns within a district, physical features they share in common, and a look at the commercial center within the district (or the commercial center that serves the district). Vermont's State Geologist Edward Hitchcock defined the six physiographic regions of the State in the mid-nineteenth century, and those categories are used in this report. They are Champlain Lowlands, Taconic Mountains, Valley of Vermont, Green

¹⁶ The 21 are: Caledonia-1, Caledonia-2, Caledonia-4, Caledonia-5, Caledonia-Essex-1, Caledonia-Orleans-1, Chittenden-2, Chittenden-9, Orange-3, Orleans-2, Rutland-4, Rutland-9, Rutland-Windsor-1, Rutland-Windsor-3, Washington-8, Windham-4, Windham-5, Windham-6, Windsor-1, Windsor-2, and Windsor-7.

¹⁷ In re Reapportionment of Town of Hartland, *supra*, 160 Vt. at 22.

¹⁸ In re Reapportionment of Town of Hartland, *supra*, 160 Vt. at 24.

¹⁹ In re Reapportionment of Town of Montgomery, 162 Vt. 617, 618 (1994).

Mountains, Vermont Piedmont and Northeastern Highlands. They provide a useful tool for describing the representative districts in this Plan.²⁰

The review of roads connecting districts turns up several anomalies. In Chittenden-Washington-1, Huntington shares a long border with Duxbury and Bolton, but no roads intersect the towns (the Long Trail crosses the boundaries), and this is used by critics of the present Plan (as well as that of 1992 and 1982) to argue against the alignment of these towns. The same problem exists in Addison-Rutland-1 (Goshen, Leicester, Ripton, Salisbury, Sudbury and Whiting) for the Town of Goshen and in Bennington-2 (Woodford and Pownal). Hubbardton and Pittsford are another example, since no roads intersect the two because of the Taconic Range. Other districts include towns accessible only by remote town highways that are not maintained in the winter season. In each case, you can get from one place to another by going outside the boundaries of the district.

Vermont towns are not city-states. Families, friendships and formal and informal social arrangements connect them, and these are lines that do not show on a map. Some share schools, whether they are in the same school district or not. Some share solid waste facilities, water and sewer, fire protection and rescue services. If, on the other hand, the only connection beyond a shared boundary for towns is a representative district, the sense of a political subdivision may be missing, and residents may feel misaligned and underrepresented. The issue goes beyond local control, and takes the form of the need for common elements beyond statistical harmony to make a district work.

e. Incumbency. Incumbency has been added to the standards BCAs are to use in subdividing multi-member districts.²¹ The first concern of any plan is population, the second is community. Incumbency is the least important criterion from a constitutional or statutory perspective. When the 1992 House plan was challenged, the Vermont Supreme Court rejected a challenge to the plan for Springfield by recognizing that reapportionment is a political process, and that a district designed to pit three incumbents against each other for two House seats is acceptable, as long as other criteria are considered.²²

The LAB has listed the location of all incumbent House members in this Plan, as an aid to the Legislature in forming a final plan. Some incumbents are affected by this Plan.

Chittenden-9 (Williston), a two-member district, has only one incumbent, Michael Quaid. The other incumbent, George Schiavone, now resides in Chittenden-13, a single-member district made up of St. George and a part of the Town of Shelburne.

²⁰ See Charles W. Johnson, *The Nature of Vermont* (1980), 22-38.

²¹ 17 V.S.A. §§ 1906 b(c)(4) and 1906c(c)(4).

²² *In re Reapportionment of Town of Hartland*, *supra*, 160 Vt. at 32.

Burlington presents a difficult case. In the 1992 plan, Burlington had ten representatives. In the 2001 Tentative Plan, it qualifies for nine.²³ One of the districts in the 1992 plan was a single-member district composed of a part of Burlington and a part of South Burlington. Incumbent Susan Wheeler of Burlington resided in that district. South Burlington has qualified for four House members. If the Tentative Plan is adopted, Burlington will have ten incumbents residing within the City for nine House seats. South Burlington now has four single-member districts and three incumbents, reflecting the change in the Burlington districts.

In Windham-7, consisting of the towns of Dover, Stratton and Wilmington, there is no resident incumbent. In 1992, Dover and Stratton were part of a single-member district with Jamaica, Londonderry and Wardsboro, represented by Richard Hube of Londonderry, and Wilmington was in a single-member district with Halifax, Somerset, Whitingham and Searsburg represented by Robert Rusten of Halifax. Londonderry is now part of Windham-Windsor-2 and Halifax is now a member of Bennington-Windham-1.

Rutland City had five single-member House seats in the 1992 plan. Its 2000 population warrants four seats. By the decision of the Rutland Board of Civil Authority, the City will be split into four single-member districts. Rutland-5 has two incumbents—Thomas DePoy and Cheryl Hooker.

Where do these House seats go? In the end there are still 150 House members. The small changes in the districts are spread across the representative district map as population in different places gains or loses compared to the rate of growth of the State as a whole. Vermont grew 8.2% between 1990 and 2000, and that increase was not uniform among towns and cities. Changing districts and changing incumbencies are the natural consequence of uneven growth.

3. The Duty of the Legislative Apportionment Board

The Legislative Apportionment Board is governed by provisions in the Vermont Constitution and state statute. The Board's authority stems from Sections 13, 18, and 73 of the Vermont Constitution. Under Section 73, the General Assembly "may provide for establishment of a legislative apportionment board to advise and assist the General Assembly concerning legislative apportionment." Section 13 relates to the House, Section 18 to the Senate. In each instance, the standards for the design of districts are set out:

In establishing [representative or senatorial] districts, which shall afford equality of representation, the General Assembly shall seek to maintain geographical compactness

²³ See discussion of Burlington's Census issue below.

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and contiguity and to adhere to boundaries of counties and other existing political subdivisions.

There is also statutory authority for the Board's work.²⁴ Chapters 33 and 34 of Title 17 contain the districts adopted as law by the General Assembly in 1992, including an enumeration of districts for the House of Representatives and Senate. Chapter 34A describes the process of reapportionment.

* * *

²⁴ 17 V.S.A. Chapters 33, 34, & 34A.

APPENDIX 2
Measures of District Compactness

Spreadsheets Showing Reock Scores and Polsby-Popper Ratings

House:

https://sos.vermont.gov/media/cemje11c/final_house_compactness.pdf

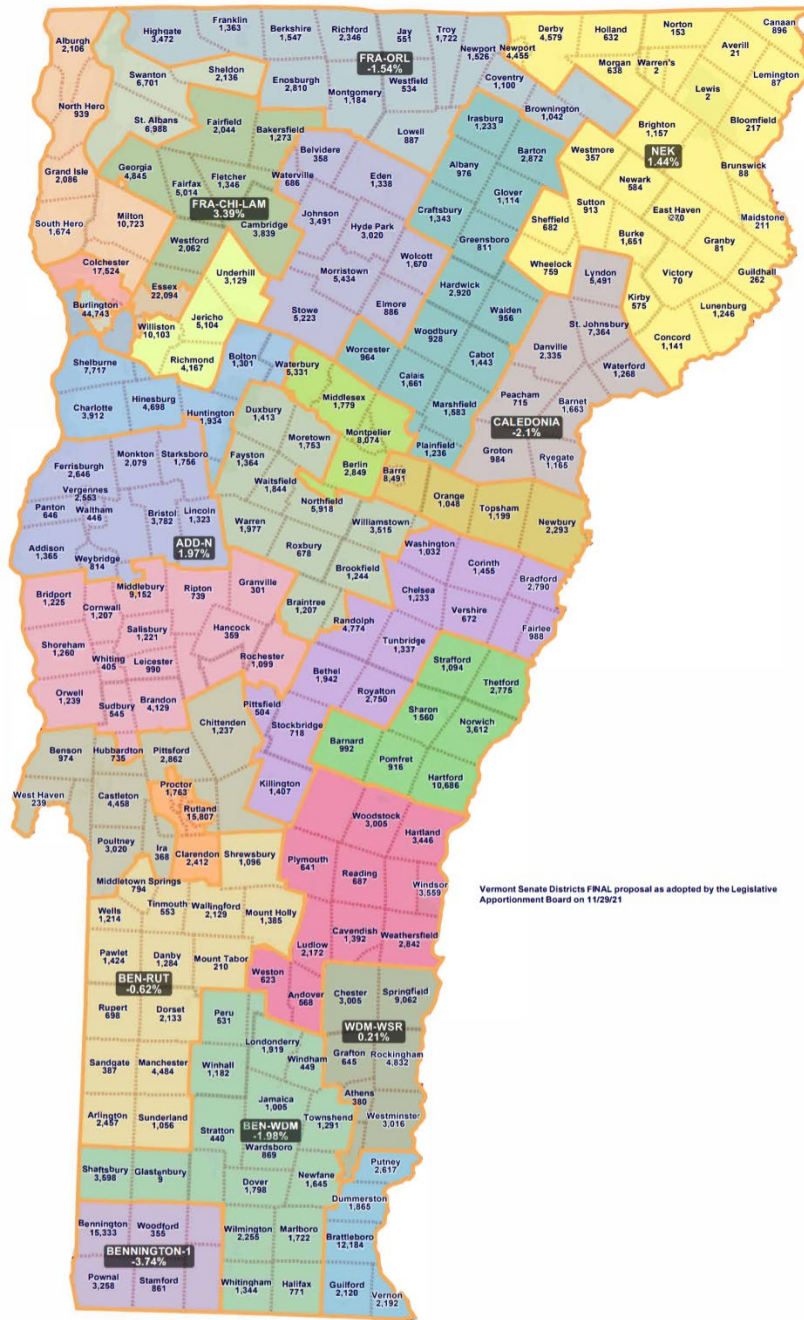
Senate:

https://outside.vermont.gov/dept/sos/Services/LAB/approved_senate_compactness.pdf

APPENDIX 3

Apportionment Board's Final Senate District Map Proposal

<https://outside.vermont.gov/dept/sos/Services/LAB/LAB%20Senate%20Map%20FINAL%20SMD%202021%201129.pdf>

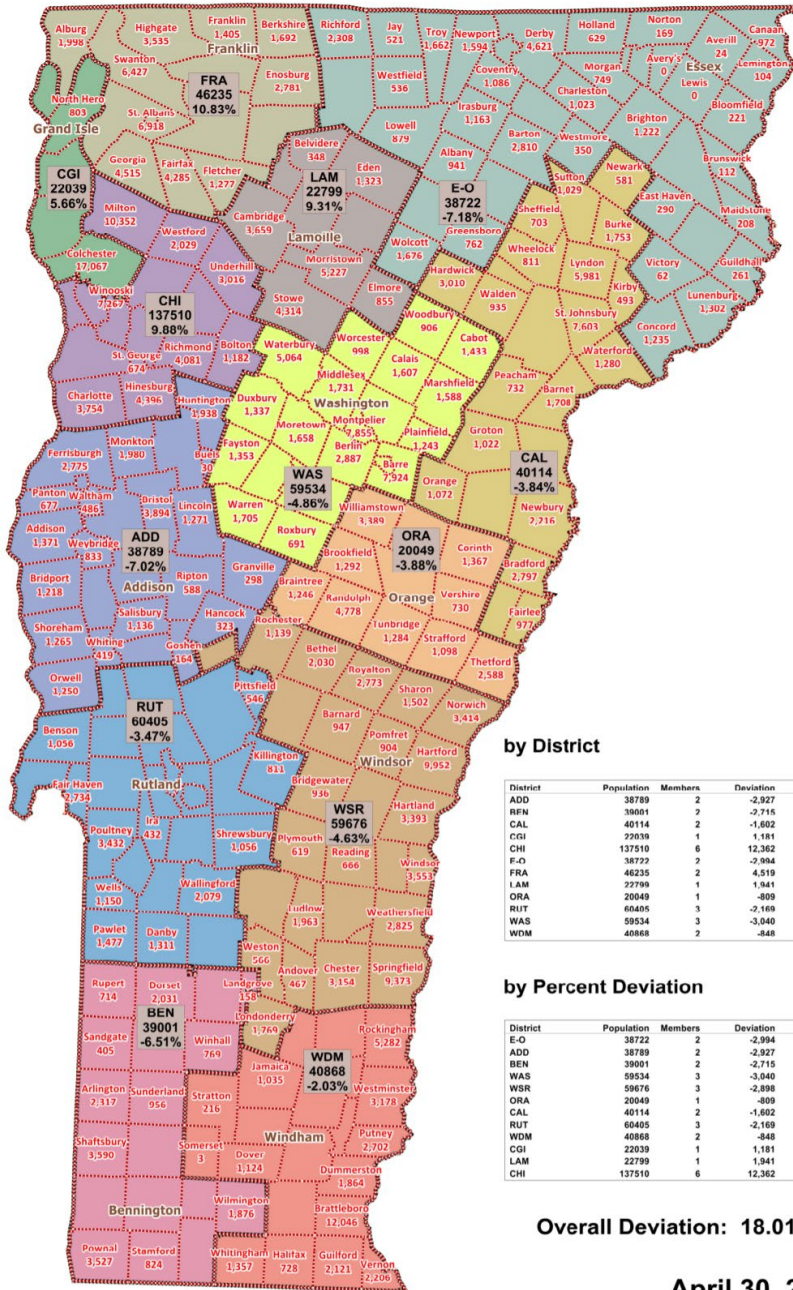


Vermont Senate Districts FINAL proposal as adopted by the Legislative Apportionment Board on 11/29/21

APPENDIX 4

Existing Senate District Maps (as adopted by the General Assembly in 2012)

<http://www.leg.state.vt.us/Reapportionment/H.789%20As%20Passed%20House%20and%20Senate-Senate%20Map.pdf>



by District

District	Population	Members	Deviation	% Deviation
ADD	38789	2	-2,927	-7.02%
RFN	39001	2	-2,715	-6.51%
CAL	40114	2	-1,802	-3.84%
CGI	22039	1	1,181	5.66%
CHI	137510	6	12,362	9.88%
F-O	38722	2	-2,984	-7.18%
FRA	46235	2	4,519	10.83%
LAM	22799	1	1,941	9.31%
ORA	20049	1	-809	-3.88%
RUT	60405	3	-2,169	-3.47%
WAS	59534	3	-3,040	-4.86%
WDM	40868	2	-848	-2.03%

by Percent Deviation

District	Population	Members	Deviation	% Deviation
E-O	38722	2	-2,994	-7.18%
ADD	38789	2	-2,927	-7.02%
BEN	39001	2	-2,715	-6.51%
WAS	59534	3	-3,040	-4.86%
WSR	59676	3	-2,898	-4.63%
ORA	20049	1	-809	-3.88%
CAL	40114	2	-1,802	-3.84%
RUT	60405	3	-2,169	-3.47%
WDM	40868	2	-848	-2.03%
CGI	22039	1	1,181	5.66%
LAM	22799	1	1,941	9.31%
CHI	137510	6	12,362	9.88%

Overall Deviation: 18.01%

April 30, 2012

APPENDIX 5 Apportionment Board Minority Report's Alternate Senate District Proposal

<https://outside.vermont.gov/dept/sos/Services/LAB/LAB%20Senate%20Map%20Alterna%20MMD%202021%201129.pdf>

