

Map-a-THON

Granite Staters Drawing Fair Voting Maps



Analysis of Proposed Senate Election Law & Municipal Affairs NH Senate Map SB 240, as Amended (0565S)

updated March 27, 2022



What is this document?

- The New Hampshire Senate Election Law & Municipal Affairs Committee has proposed a 2020-2030 redistricting map for the NH Senate as SB 240, as amended (0565S)
- The NH Senate passed the proposal on Feb 16th, and it will now be voted on by the NH House
- The Map-a-Thon Citizen Mapping Project's Mapping and Technical Team analyzed SB 240, as amended, and compared the results to our proposed map and the minority proposed map
- Map analysis compares partisan lean, communities of interest, compactness, and other best practices

Map-a-Thon Glossary

Community of Interest (COI) Communities of interest can take many forms, but generally refer to groups of people united by shared interests. In the context of redistricting, communities of interest are those communities that share policy concerns, such as similar economic interests, a shared school system, or common resources. Our maps use boundaries of shared high school districts, shared water systems, and shared police and fire protection -- in addition to the boundaries of towns and city wards-- to inform the redistricting process. More information about communities of interest can be found by visiting NYU's Brennan Center

Compactness Compactness helps us measure the cohesiveness of a district. When drawing districts to represent a region, it is best practice to strive for a compact district, since non-compact districts are less likely to share communities of interests (2010's Executive Council & some 2020 NH Senate districts), and the wider area makes it harder for representatives to understand and serve the needs of constituents. Compactness is also used as a check against gerrymandering (see below), since gerrymandered districts tend to not be compact. The compactness scores reported in our analysis come from the DRA compactness calculation described here:

Contiguity Contiguity describes how municipalities in a voting district are geographically connected to each other. Contiguous districts are a requirement for all legislative districts in New Hampshire. This definition is sometimes stretched -- quite literally -- with the towns of Meredith and Gilford only connected in the middle of Lake Winnepesaukee, the towns of Strafford and New Durham connected in an inaccessible point in the woods, and the 2010 floterial district, Grafton 9, for which the elected rep has to travel out of the district to get to constituents on the other side of the district.

Dave's Redistricting Application (DRA) Dave's Redistricting Application, hosted at <https://davesredistricting.org> is a free online tool for creating, viewing, sharing, and analyzing redistricting maps. The mission of Dave's Redistricting is to, "empower civic organizations and citizen activists to advocate for fair congressional and egislative districts and increased transparency in the redistricting process." Map-a-Thon's maps and most supporting data are located there for public inspection.

Deviation Deviation refers to the degree to which districts have equal population. Ideally, every representative or other elected official in proportional representation will represent the same number of people, but a small amount of flexibility --deviation-- is permissible to account for unequal population distributions and compliance with other laws, such as the 1965 Voting Rights Act or the New Hampshire Constitution's mandate to keep town boundaries intact, and NH Supreme Court Rulings

Gerrymandering Gerrymandering is the practice of drawing district boundaries for partisan advantage. This leads to uncompetitive general elections and districts oriented toward party agendas rather than local interests. Gerrymandered districts often connect regions with little in common, leading to the splitting of cities, counties, and other communities of interest. The leading example of this in New Hampshire is 2010's Executive Council 2 and certain NH Senate districts

Splitting Because our maps are drawn with the goal of avoiding gerrymandering while keeping communities of interest intact, many parts of our analysis examine the number of communities of interest divided, or "splits," contained within a district. The ideal map minimizes the number of districts which cross other administrative boundaries to hold communities of interest intact. Our analyses examine the number of geographical splits necessary. For example, a state senator representing the towns of Dublin and Peterborough would split county lines while keeping a school district intact. Another way of examining splitting is to weight splits by population, the approach taken in the DRA county-splitting metric.

Partisan Lean Number of seats using past election data that are likely to be either Democrat seats, Republican seats, or Competitive seats.

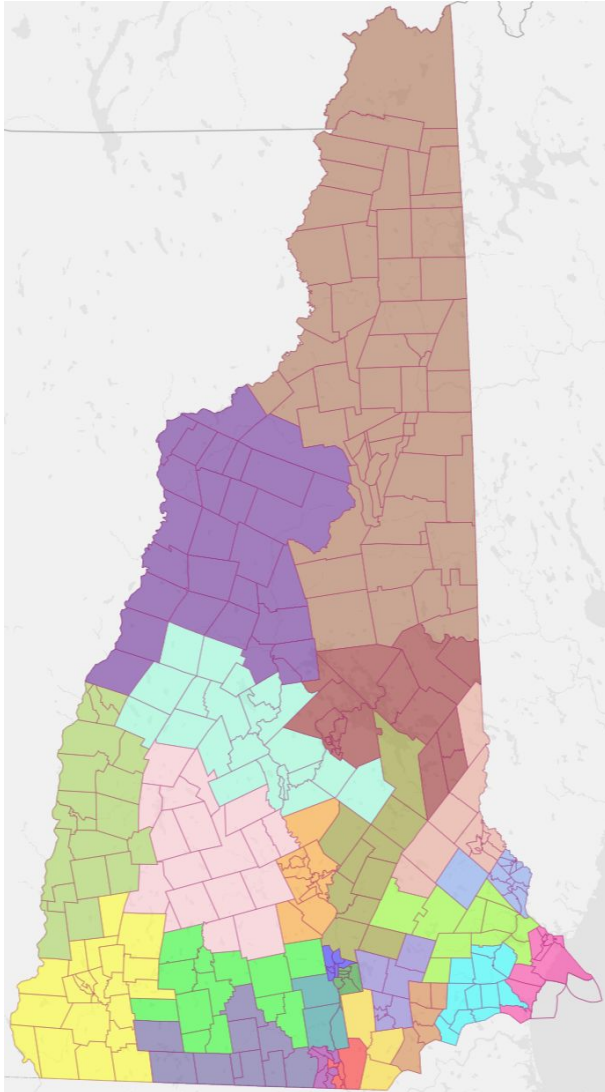


Takeaways on the NH Senate Proposal

- The 2010 NH Senate map was already gerrymandered for partisan advantage. Statewide vote totals in the 2020 election were 50-50 GOP and Democrat, but the seat split was 14 GOP vs 10 Democrat.
- The majority's 2020 map further gerrymanders to make districts safer for the majority party, if this map were used in the 2020 election there would have been a 15 GOP vs 9 Democrat split.
- The minority's 2020 map is significantly more competitive (13 GOP vs 11 Democrat), and its districts, while competitive, give a slight advantage to the majority.
- The majority's 2020 map has some sprawling districts, one with towns lined up end-to-end from Hinsdale, in the extreme southwest corner of the state, to Bedford, in central NH.
- The minority's map has more compact districts, but also protects incumbent districts. (map Tabled in Senate)
- **Neither minority nor SB 240 maps prioritize communities of interest.**

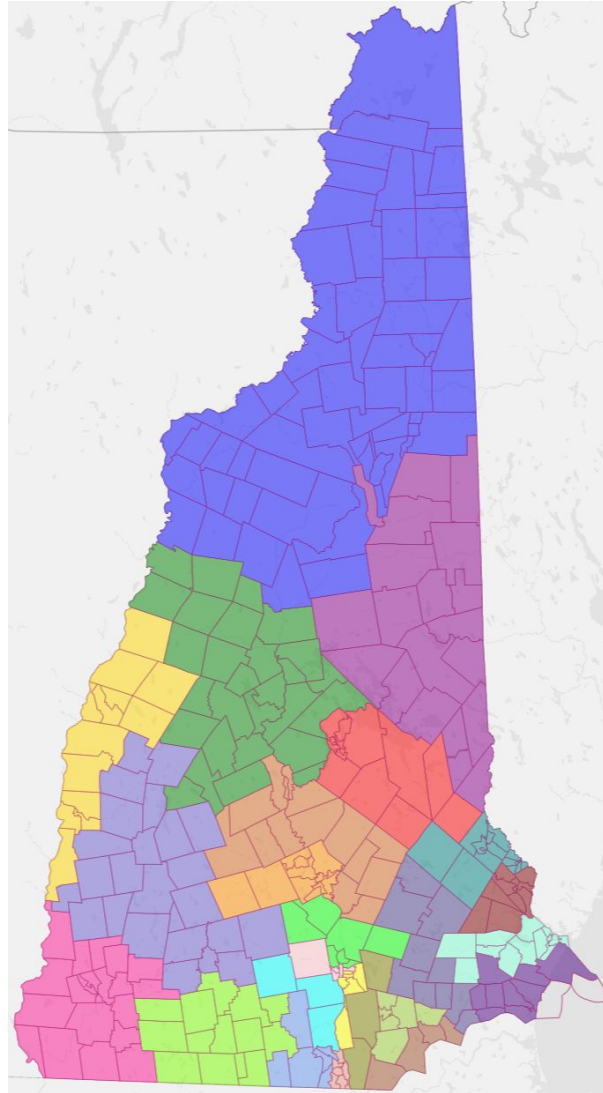
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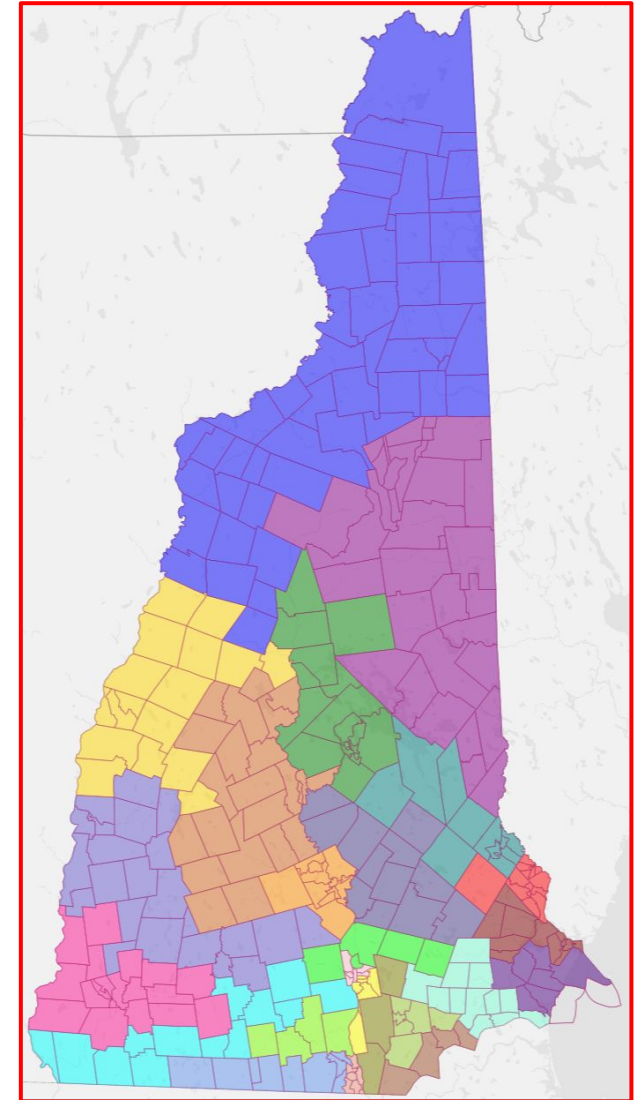
2020 NH Senate Map - Map-a-Thon Proposal

[Link to map on DRA mapping software](#)



2020 NH Senate Map - Minority Proposal - On table in Senate

[Link to map on DRA mapping software](#)



2020 NH Senate Map - Majority Proposal passed on Feb 16th

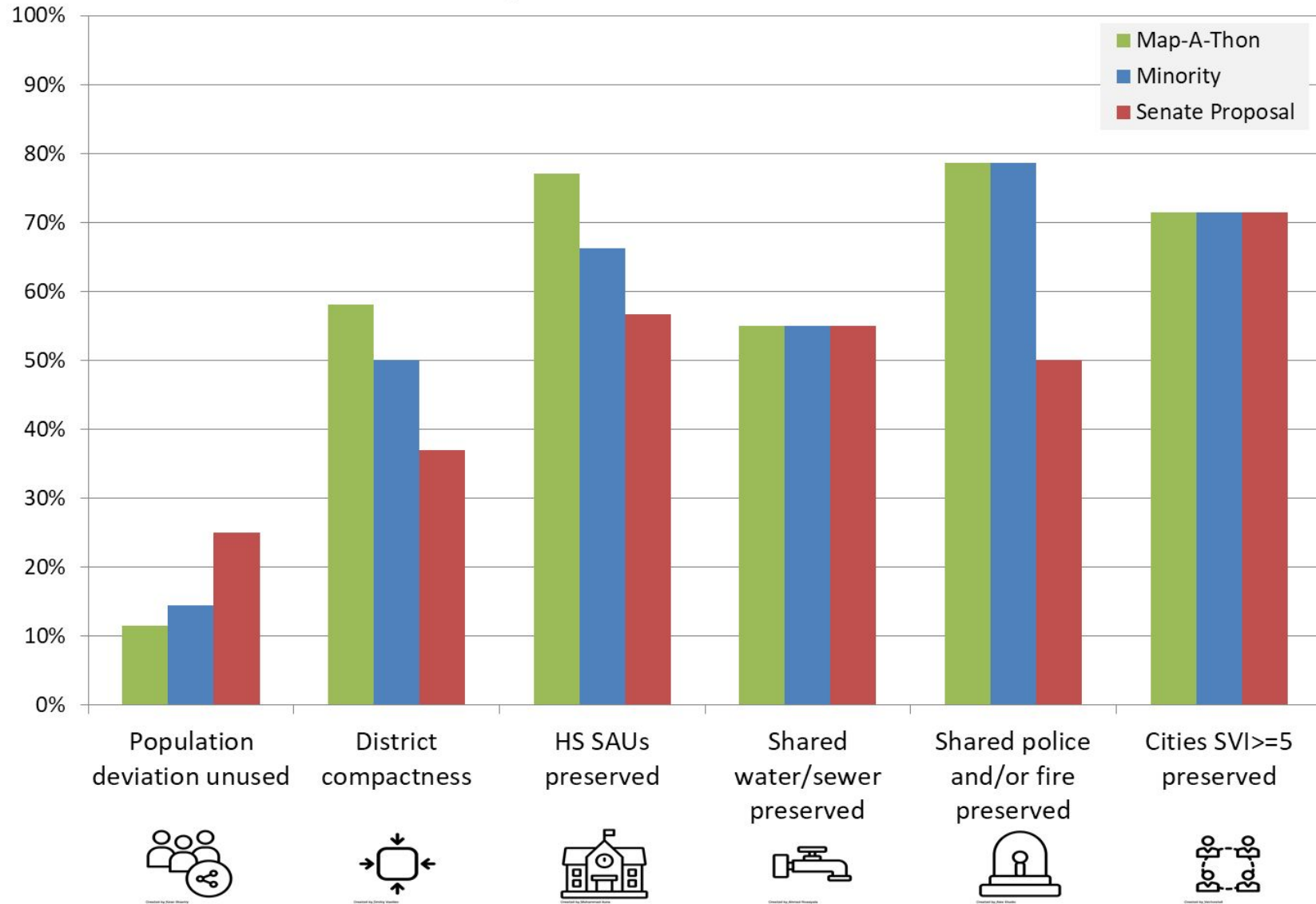
[Link to map on DRA mapping software](#)

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NH Senate Maps with Communities of Interest

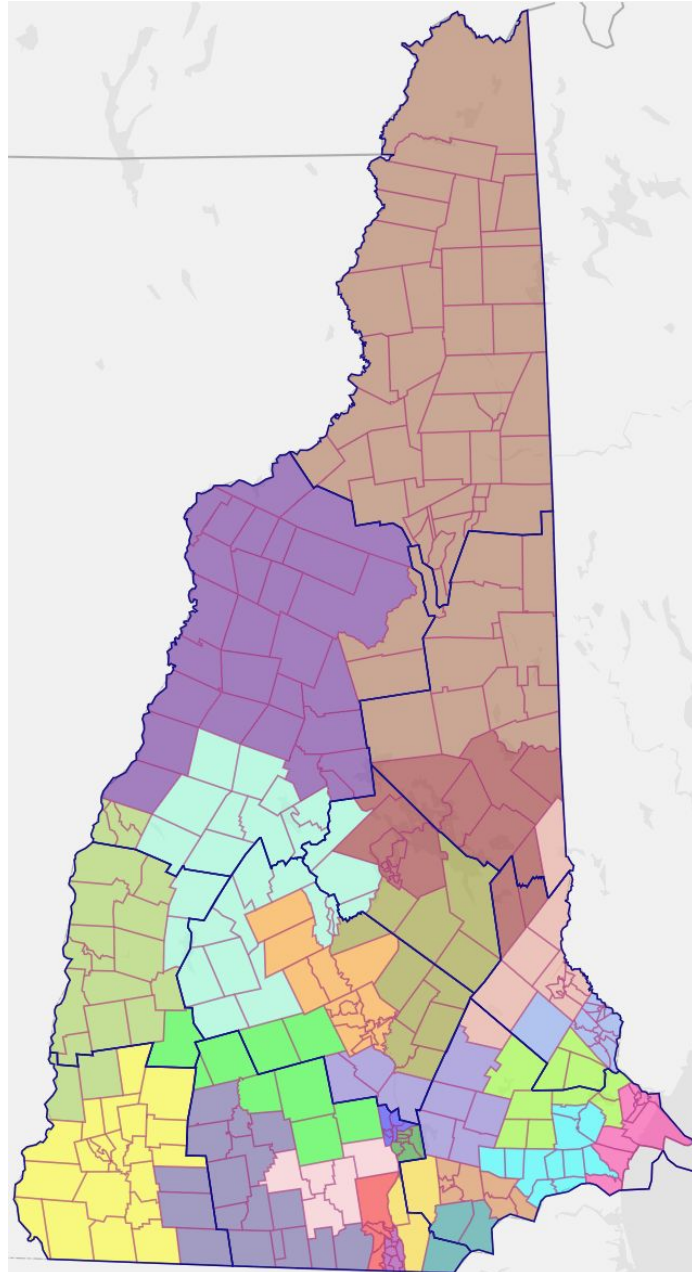


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2020 NH Senate Votes				
District	Democrat	Republican	Other	Competitiveness
1	59.2%	40.8%		Leans Democrat
2	57.9%	42.1%		Leans Democrat
3	58.6%	41.4%		Leans Democrat
4	51.2%	48.8%		Competitive
5	42.5%	57.5%		Leans Republican
6	36.2%	63.8%		Leans Republican
7	41.5%	58.5%		Leans Republican
8	41.8%	58.2%		Leans Republican
9	49.9%	50.1%		Competitive
10	58.5%	41.5%		Leans Democrat
11	57.0%	43.0%		Leans Democrat
12	61.4%	38.6%		Leans Democrat
13	42.6%	57.4%		Leans Republican
14	38.1%	61.9%		Leans Republican
15	59.7%	40.3%		Leans Democrat
16	47.9%	52.1%		Competitive
17	49.2%	50.8%		Competitive
18	60.5%	39.5%		Leans Democrat
19	55.8%	44.2%		Leans Democrat
20	48.3%	51.7%		Competitive
21	39.3%	60.7%		Leans Republican
22	42.9%	57.1%		Leans Republican
23	46.3%	53.7%		Competitive
24	56.1%	43.9%		Leans Democrat
Total Vote Share	49.8%	50.2%		
Seats Won	11	13		



NH Senate Map-a-Thon Proposal

[Link to map on DRA mapping software](#)

<<< Map-a-Thon Proposal

Pros:

- 2 very competitive and 4 competitive districts
- 58 Compactness score (DRA)

Cons:

- High deviation (8.85%)
- 19 split High School SAUs
- Oddly-shaped districts, but follow SAU boundaries

The Map-a-Thon's Senate map tries to keep Communities of Interest together while also keeping the map competitive and having compact districts. It has the lowest deviation of any of the proposed maps, has the highest compactness score, and only splits 19 High Schools SAUs compared to 28 in the minority proposal and 36 in the Majority proposal.

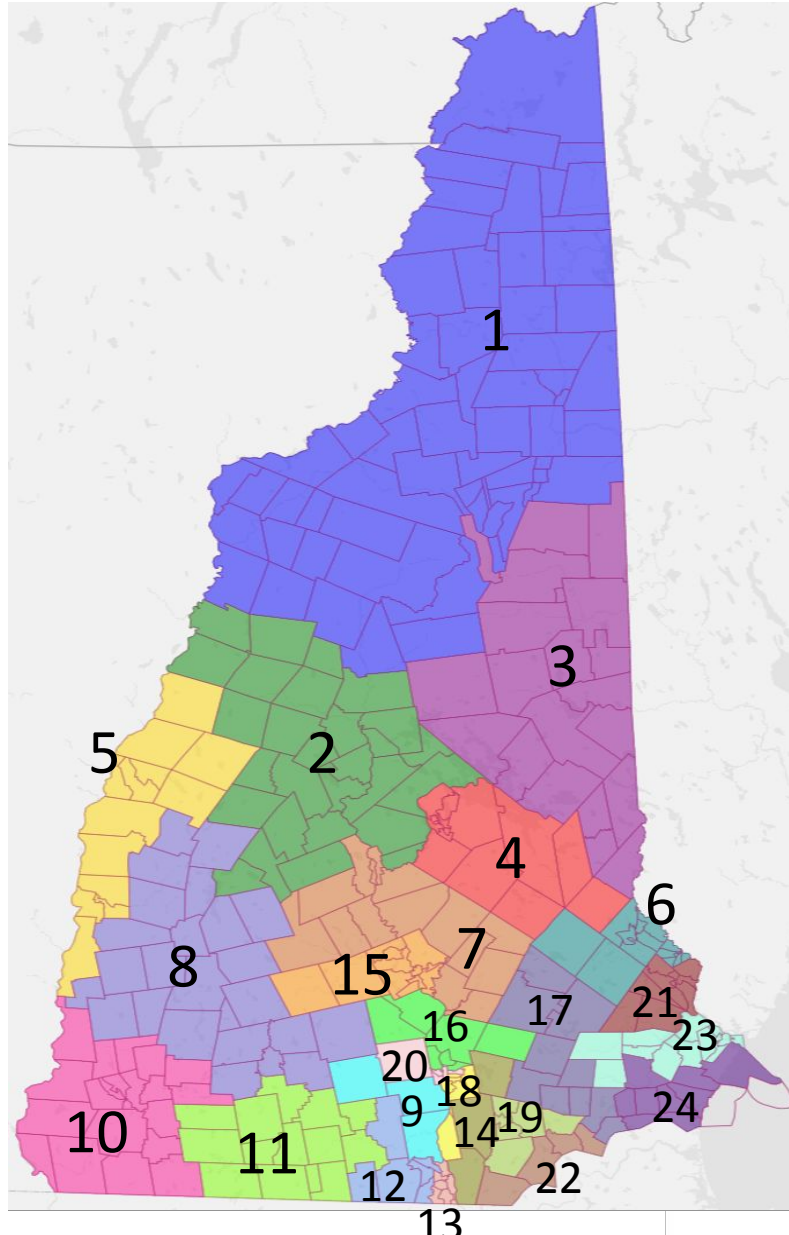
	Map-A-Thon	Minority	Senate Proposal
Population deviation	8.85%	8.56%	7.50%
District compactness	58%	50%	37%
HS SAUs preserved	19	28	36
Competitive districts (2020 election)	6	7	4

Map-a-Thon

Granite Staters Drawing Fair Voting Maps



District	2020 NH Senate Votes			Competitiveness
	Democrat	Republican	Other	
1	42.5%	57.5%		Leans Republican
2	45.9%	54.1%		Competitive
3	38.4%	61.6%		Leans Republican
4	39.9%	60.1%		Leans Republican
5	66.5%	33.5%		Leans Democrat
6	49.8%	50.2%		Competitive
7	41.0%	59.0%		Leans Republican
8	44.4%	55.6%		Leans Republican
9	46.1%	53.9%		Competitive
10	61.1%	38.9%		Leans Democrat
11	48.1%	51.9%		Competitive
12	53.6%	46.4%		Competitive
13	58.6%	41.4%		Leans Democrat
14	41.1%	58.9%		Leans Republican
15	64.0%	36.0%		Leans Democrat
16	51.8%	48.2%		Competitive
17	38.7%	61.3%		Leans Republican
18	55.4%	44.6%		Leans Democrat
19	42.5%	57.5%		Leans Republican
20	56.4%	43.6%		Leans Democrat
21	66.5%	33.5%		Leans Democrat
22	35.2%	64.8%		Leans Republican
23	60.3%	39.7%		Leans Democrat
24	54.0%	46.0%		Competitive
Total Vote Share	49.8%	50.2%		
Seats Won	11	13		



2020 NH Senate Map - Minority Proposal

[Link to map on DRA mapping software](#)

<<< Minority Proposal

Pros:

- 1 very competitive and 6 competitive districts
- 50 Compactness score (DRA)

Cons:

- Somewhat high deviation (8.56%)
- Manchester split into 3 districts
- 28 split High School SAUs

The minority's proposal for the NH Senate is an improvement on the current map but still prioritizes incumbents over Communities of Interest. It keeps Manchester split into 3 districts when it could have 2 districts just on its own. It does however do a better job than the Senate proposal in having competitive districts, compact districts, and doesn't split as many High School SAUs.

	Map-A-Thon	Minority	Senate Proposal
Population deviation	8.85%	8.56%	7.50%
District compactness	58%	50%	37%
HS SAUs preserved	19	28	36
Competitive districts (2020 election)	6	7	4

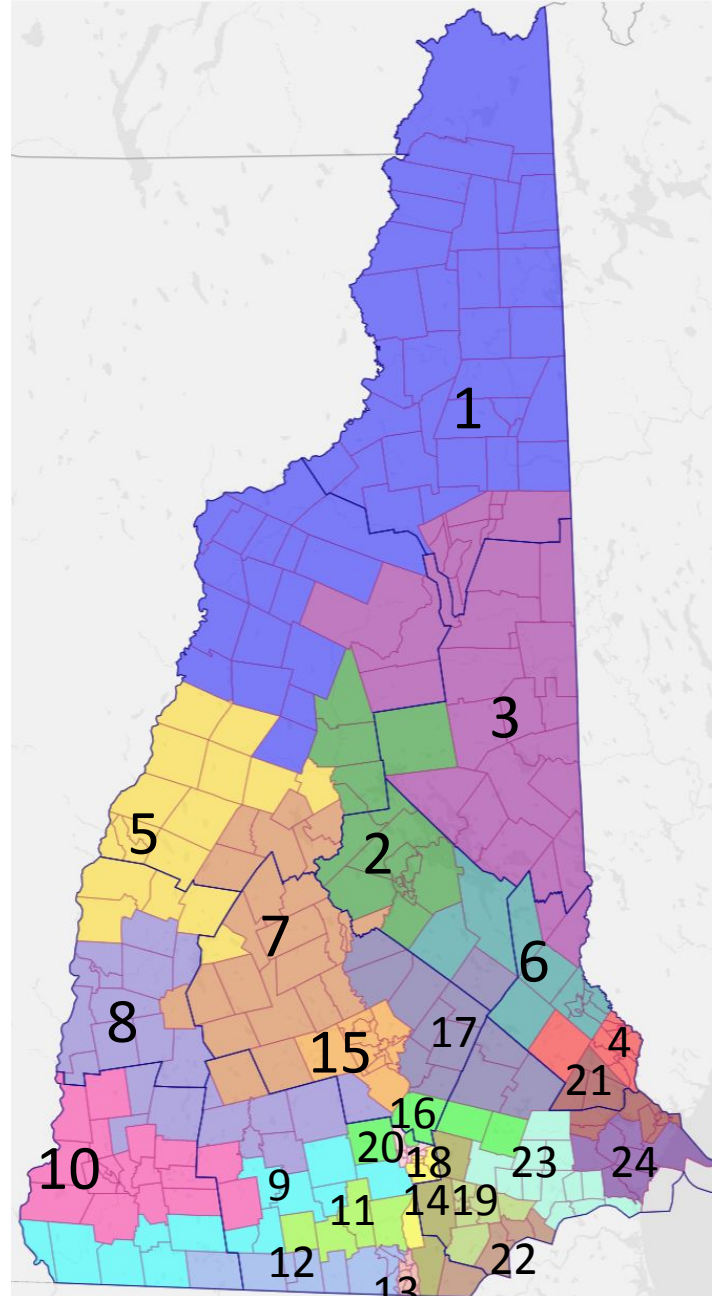
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District	2020 NH Senate Votes			Competitiveness
	Democrat	Republican	Other	
1	41.7%	58.3%		Leans Republican
2	43.7%	56.3%		Leans Republican
3	38.2%	61.8%		Leans Republican
4	61.4%	38.6%		Leans Democrat
5	67.7%	32.3%		Leans Democrat
6	42.7%	57.3%		Leans Republican
7	43.8%	56.2%		Leans Republican
8	41.7%	58.3%		Leans Republican
9	46.8%	53.2%		Competitive
10	64.2%	35.8%		Leans Democrat
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23	41.2%	58.8%		Leans Republican
24	57.1%	42.9%		Leans Democrat
Total Vote Share	49.8%	50.2%		
Seats Won	9	15		

The 2010 Executive Council map generally garners most of the attention in being a gerrymandered map in NH, but the 2010 NH Senate map wasn't much better. This 2020 proposed map makes the map worse. It packs Democrats into 9 districts (4, 5, 10, 13, 15, 18, 20, 21, and 24) while cracking them in the remaining 15. This leads to a very lopsided map. With a nearly 50/50 vote in 2020, this map would have yielded a 15/9 majority for Republicans.



2020 NH Senate Map - Senate Proposal passed on Feb 16th

[Link to map on DRA mapping software](#)

<<< Senate Proposal

Pros:

- Relatively low deviation (7.50%)

Cons:

- Only 4 competitive districts
- 37 Compactness score (DRA)
- Manchester split into 3 districts
- 36 split High School SAUs

This map keeps most of the incumbent Senators in their districts and only makes small adjustments to make them safer. It does not take any Communities of interest into account; an example of which is District 9, stretching over halfway across the state from Hinsdale to Bedford, crossing 9 different High School SAUs. In total, the map splits 36 High School SAUs, and needlessly splits Coos County.

	Map-A-Thon	Minority	Senate Proposal
Population deviation	8.85%	8.56%	7.50%
District compactness	58%	50%	37%
HS SAUs preserved	19	28	36
Competitive districts (2020 election)	6	7	4

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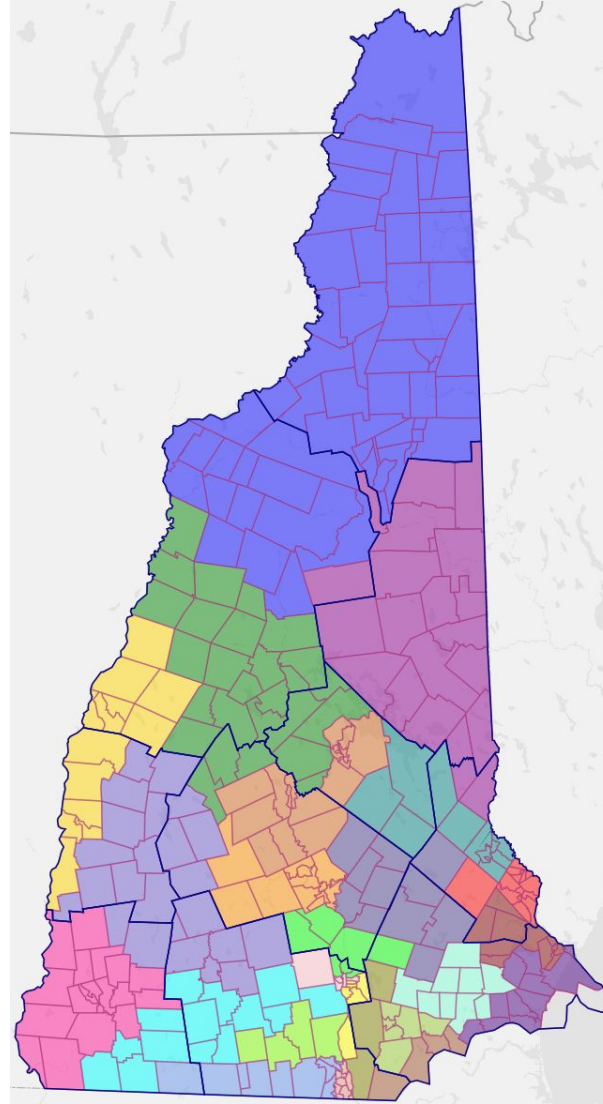
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Did the changes made by the Majority need to be made?

- Some changes needed to be made as the old map with 2020 population had a deviation of 13.47% which is over the allowable 10%
- Only 10 towns needed to be moved to get the deviation down to 7.46% which is better than the Majority's map.
- 15 of the districts would remain the same.
- To balance district 9 and 10 only Richmond needed to be moved from 9 to 10. Instead they packed Hancock and Peterborough in to district 10.
- Districts 16, 17, and 20 did not need to change at all but instead they moved towns around to create a new Republican district with district 16.
- Districts 23 and 24 did not need to change but they packed Democrats into district 24 so district 23 would not be lost to Democrats again as it had in 2018.

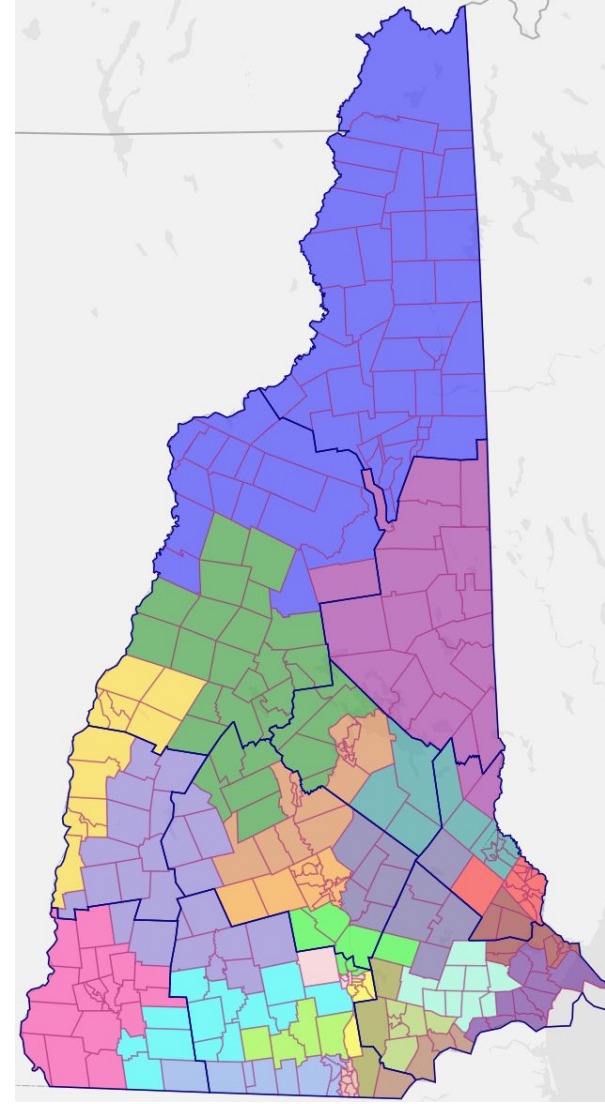
2010 Senate Map



2010 NH Senate Map

[Link to map on DRA mapping software](#)

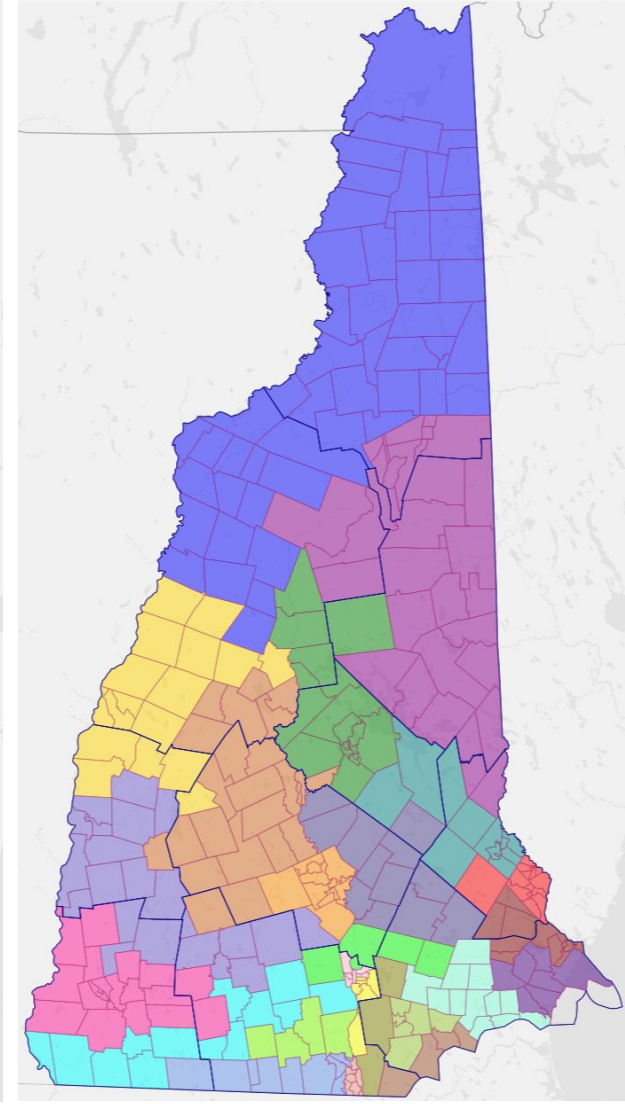
2020 Senate Map Least Changed



2020 NH Senate Map - Least Changed

[Link to map on DRA mapping software](#)

2020 Proposed Senate Map



2020 NH Senate Map - Majority Proposal

[Link to map on DRA mapping software](#)

Partisan Lean for Proposed NH Senate Maps

Comparison of **predicted** district partisan lean using *2020 NH Senate elections results*, which yielded an extremely competitive state level two-party vote share of **49.8% Democrat** and **50.2% Republican**.

District seats are assigned '**Lean Dem**', '**Lean Rep**', or '**Competitive**' depending on whether the predicted Democrat vote share is >55%, the predicted Republican vote share is >55%, or neither party is predicted >55% vote share, respectively (see previous slides for detailed assessment). Given the extremely competitive state level vote share, a representation map would be expected to either have a relatively even distribution of party lean among districts, or a relatively even distribution of party leaning and competitive districts.

Our prediction, tabulated below, indicates that the minority proposal deviates least, while **the Senate proposal deviates most**, from this 'ideal' voter representation.

2020 NH Senate Election		Partisan Lean of Proposed NH Senate Seats						
Dem (% of votes)	Rep (% of votes)	Map	Lean Dem (# seats)	Lean Dem (% seats)	Lean Rep (# seats)	Lean Rep (% seats)	Competitive (# seats)	Competitive (% seats)
49.8%	50.2%	Map-a-Thon	10	41.7%	8	33.3%	6	25.0%
		Minority	8	33.3%	9	37.5%	7	29.2%
		Senate Proposal passed on Feb16	9	37.5%	11	45.8%	4	16.7%

Note: The 'Lean Dem' and 'Lean Rep' seat count in this table correlates to the number of 'blue' and 'red' highlighted districts in the previous detailed slides, respectively. The 'Competitive' seat count correlates with districts in the previous slides that were not highlighted, i.e. did not have a 'strong' partisan lean.



Frequently-asked Questions

- **Why can't a redistricting satisfy all of the legal and other requirements?** It's a balancing act, since the objectives are not fully compatible with each other; for example, creating districts that both respect town and ward lines, and contain an equal number of residents.
- **Why are competitive districts better than ones with a predicted partisan lean?** In a competitive district, candidates must appeal to voters of both (or all) political parties, including independents. In districts with a clear partisan lean, candidates need only appeal to voters of their own party, as determined in the party primary elections.



What actions should I take?

- The NH House Special Committee on Redistricting has a hearing on **TBD** at the NH State House
- You may write or submit testimony to the committee here:
http://gencourt.state.nh.us/house/committees/committee_websites/Redistricting_2021/default.aspx
- We also suggest contacting and/or sending your testimony to your own NH House Rep: <http://www.gencourt.state.nh.us/house/members/>

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About the Map-a-Thon:

https://www.opendemocracynh.org/nh_map_a_thon

See this Report [on the Web via Google Slides](#)

Download our previously-released analysis on NH House and Congressional maps:

<https://www.opendemocracyaction.org/maps>