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**To:** [Senate Redistricting](#)  
**Subject:** INETMAIL: Redistricting Public Input  
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Date: 2023-03-23  
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Affirm public info: I agree

Regarding: Senate

Message:

My name is Andrea K. Barreiro, and I am an associate professor of mathematics at Southern Methodist University. I am making these comments on behalf of Math For Unbiased Maps TX (MUM\_TX), an interdisciplinary, nonpartisan coalition of Texas mathematicians, political scientists and philosophers working to ensure a fair and transparent redistricting process. In brief, we use Markov Chain Monte Carlo techniques to generate a large number of random, legally valid maps which can then be used as an unbiased baseline to understand what a typical map should look like. Conversely, when a proposed map is an outlier from the ensemble, this may be an indication of gerrymandering. During the special session on redistricting in 2021, we applied our methods to every Senate map that was made available by the Texas Legislative Council. For each map or amendment, we generated a table of two important statistics that are commonly used by political scientists to assess partisan gerrymandering: the mean-median score and partisan bias score. You can find the table at our webpage: [www.smu.edu/mumtx](http://www.smu.edu/mumtx). We also performed more detailed analysis for S2168, the map which was passed by the TX Senate as SB4 and used in the 2022 election. S2168 is a highly gerrymandered plan that significantly reduces competitiveness of its districts. Instead of enabling voters to choose their legislators, therefore, it serves to protect those legislators from accountability to their voters. Our analysis also shows that “cracking and packing” were used to favor the Republican party at the expense of Democratic voters. We show this by computing traditional metrics used by political scientists to assess partisan asymmetry. For example, we computed the percent of the statewide vote that each party would need, to win a majority. For the current plan, Republicans need only 44% of the vote; Democrats would need 56%: that’s a 12% difference! In contrast, the average difference was actually 1% in the opposite direction. Not a single random map we created was as biased as the one that was used last year. Cracking and packing was used to reduce the number of majority-minority districts as well. The actual map has 11 districts where Black or Hispanic potential voters are a majority; an unbiased map should have 12 or 13. The actual map has 15 districts in which non-white potential voters are a majority; an unbiased map would have 18. In summary, the plan currently being used by the TX Senate deliberately and artificially privileges some Texas voters over others: Republicans over Democrats, and white voters over non-white voters. It also privileges politicians over their voters, by artificially decreasing the competitiveness of elections so that voters can’t hold them accountable. We urge the Senate to adopt a plan that is fair to all Texas voters. I have submitted written comments with more details including figures, which you can also find at our website: [www.smu.edu/mumtx](http://www.smu.edu/mumtx)

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