

School Director Region Reapportionment Options for Consideration

Narrative

I am submitting two plans (Plan X and Plan Y) for consideration along with District Plans A and B. I am also offering a methodology for quantitative comparison of these and any other submitted plans. I provide my personal scoring of the four plans as an illustration of how the Committee and Board might arrive at a consensus recommendation.

Plan X is an evolution of District Plan A, designed to address the failure of that plan to meet the 10% maximum deviation for all scenarios. It also keeps more of the Devon neighborhood together and is arguably more compact. Plan Y is designed to maintain a low maximum deviation for all development scenarios, while also meeting the other Committee criteria.

The listing of the precincts included in each plan and the maximum deviation associated with each development scenario is provided in Table 1 on the next page.

I am proposing that all submitted plans be compared as objectively as possible. One such approach for the two district plans, A and B, and my options, X and Y, is described here. (The plans are depicted in Appendices 1-4).

The evaluation criteria are weighted according to the votes received at the October 7th Reapportionment Committee meeting. Since there is some overlap in the criteria, I made the decision to combine the votes for some. Thus Sustainable (10 votes) and Consider New Developments (3) equal 13 weight; Least Disruption (4) and Keep Simple (3) equal a weight of 7. All Possible Plans is not an evaluation criterion (although a good process requirement). None of the plans meet the 2% or less variance for all development scenarios, although arguably the one vote for this criterion could be included in the Sustainability weight.

Each plan is assigned a score on the resulting four criteria, ranging from 0 to 5, where 0 indicates that the plan fails to meet that criterion, while 5 indicates my assessment that the plan is an excellent fit with the criterion. While there is inevitably judgment involved, I attempted objective measurement for the criteria. Thus: the lower the maximum deviation under all development scenarios, the higher the Sustainability score; the lower the diameter of a region, the higher the Compactness score; the fewer precincts in new regions, the higher the Minimize Disruption score. For the Neighborhood criterion, I made a judgment on how well the plan maintained intact the following neighborhoods: Malvern, Chesterbrook, Paoli, Daylesford, Berwyn, Strafford, Devon, Wayne, Walker Road/Glenhardie, Leopard. (This is a criterion where broader community knowledge may improve the scoring.)

For each plan, multiplying the score for each criterion by its weight gives a “Value” for that criterion. Summing all scores for each plan generates a Total Value for each plan. This data is presented in the tables on Page 3.

On my scoring, Plan Y has the highest value. Although it presents significant change, it scores extremely well on the more highly weighted Sustainability criterion, and although Eastown is divided, the similar western communities of Tredyffrin and Eastown are combined. It is an excellent option to ensure sustainable, fair and balanced representation.

Table 1 - Plan Data

Precincts Included	Plan X	Plan Y
Region 1	TE1, TE2, TE3, TE4, TE5 TM2, TM6 E7	TE4 TM2, TM3, TM4, TM5, TM6, TM7
Region 2	TM3, TM4, TM7 TW1, TW2, TW5	TM1 TW1, TW2, TW3, TW4 E1, E2
Region 3	TM1, TM5 TW3, TW4 E1, E2, E3, E4, E5, E6	TE1, TE2, TE3, TE5 E3, E4, E5, E6, E7

Maximum Deviation	Plan X	Plan Y
“2010 Census”	1.76%	1.45%
“Broke Ground” Developments	1.68%	2.10%
“Approved” Developments	2.72%	3.69%
“All” Developments	8.10%	3.21%

Notes:

Plan X = “Census Generated Plan #2” on <http://anestad.com>

Plan Y = “Census Generated Plan #40” on <http://anestad.com>

Precinct Abbreviations:

“TE_x” = Tredyffrin East x

“TM_x” = Tredyffrin Middle x

“TW_x” = Tredyffrin West x

“E_x” = Easttown x

Maximum Deviation data from <http://anestad.com> , based on population assumptions given there.

Important Note: “All” developments do not include the apartments slated for Station Square, adjacent to Paoli train station, which will add population to Tredyffrin W2 and threaten the sustainability of Plans B and X.

Table 2 - Plan Deviations, Four Plans

Plan	Maximum Deviation			
	Current Pop'n	Broke Ground	All Dev'ts, ex-Atwater	All Dev'ts
A	4.50%	4.49%	6.22%	10.70%
B	1.90%	1.78%	2.62%	8.00%
X	1.76%	1.68%	2.72%	8.10%
Y	1.45%	2.10%	3.69%	3.21%

Source: <http://anestad.com>

Table 3 - Plan Comparison, Four Plans

	Sustainable/New Developments	Neighborhoods Together	Compact	Minimize Disruption/ Simple	
Weight	13	5	4	7	
Plan	Score				
A	0	3	4	3	
B	3	5	3	4	
X	3	5	5	3	
Y	5	3	4	2	
	Value				TOTAL VALUE
A	0	15	16	21	52
B	39	25	12	28	104
X	39	25	20	21	105
Y	65	15	16	14	110

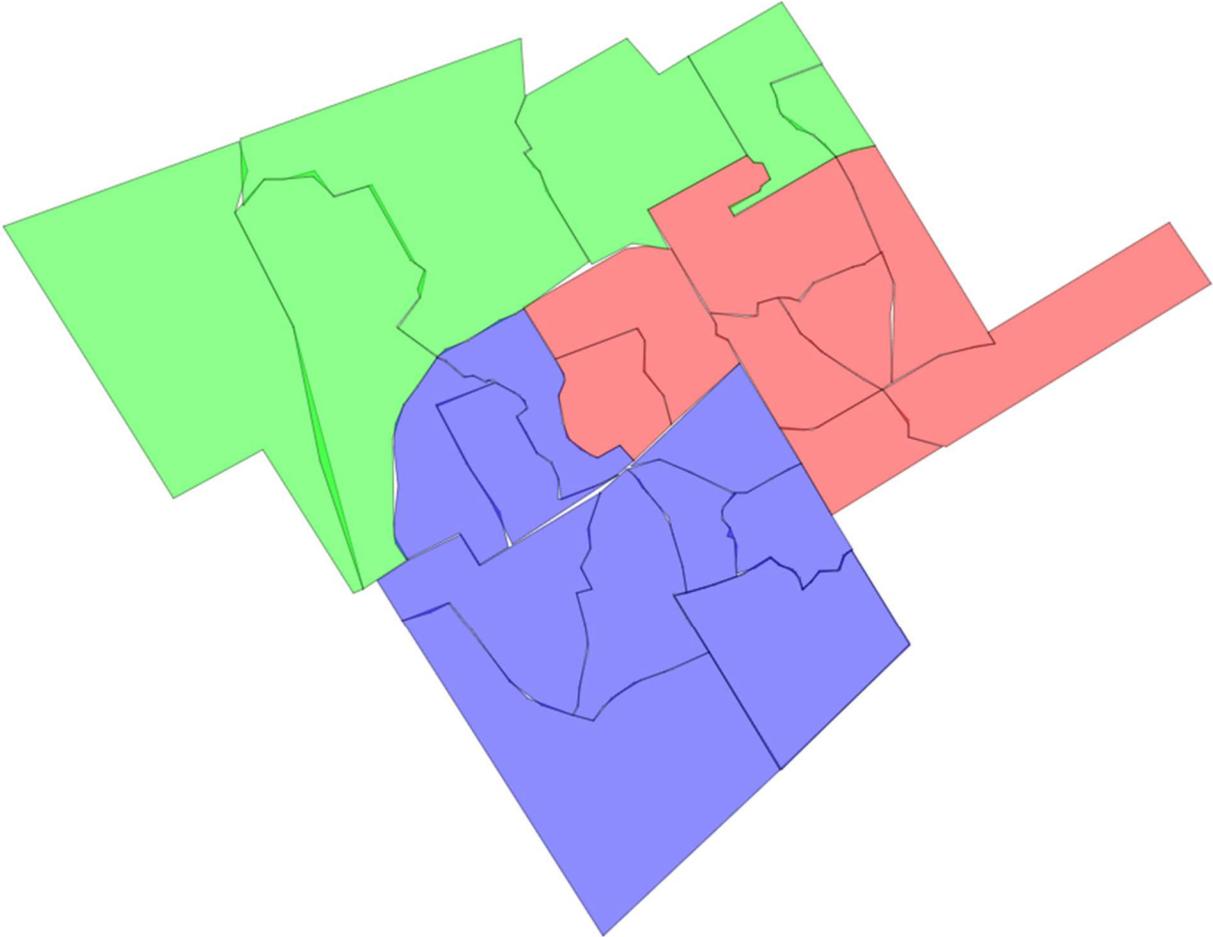
Illustration of Calculation:

Plan A Value for “Compact” = Weight of 4 times score of 4 = 16

Plan A “Total Score” = Sustainable 0 + Neighborhoods 25 + Compact 16 + Simple 21 = 52

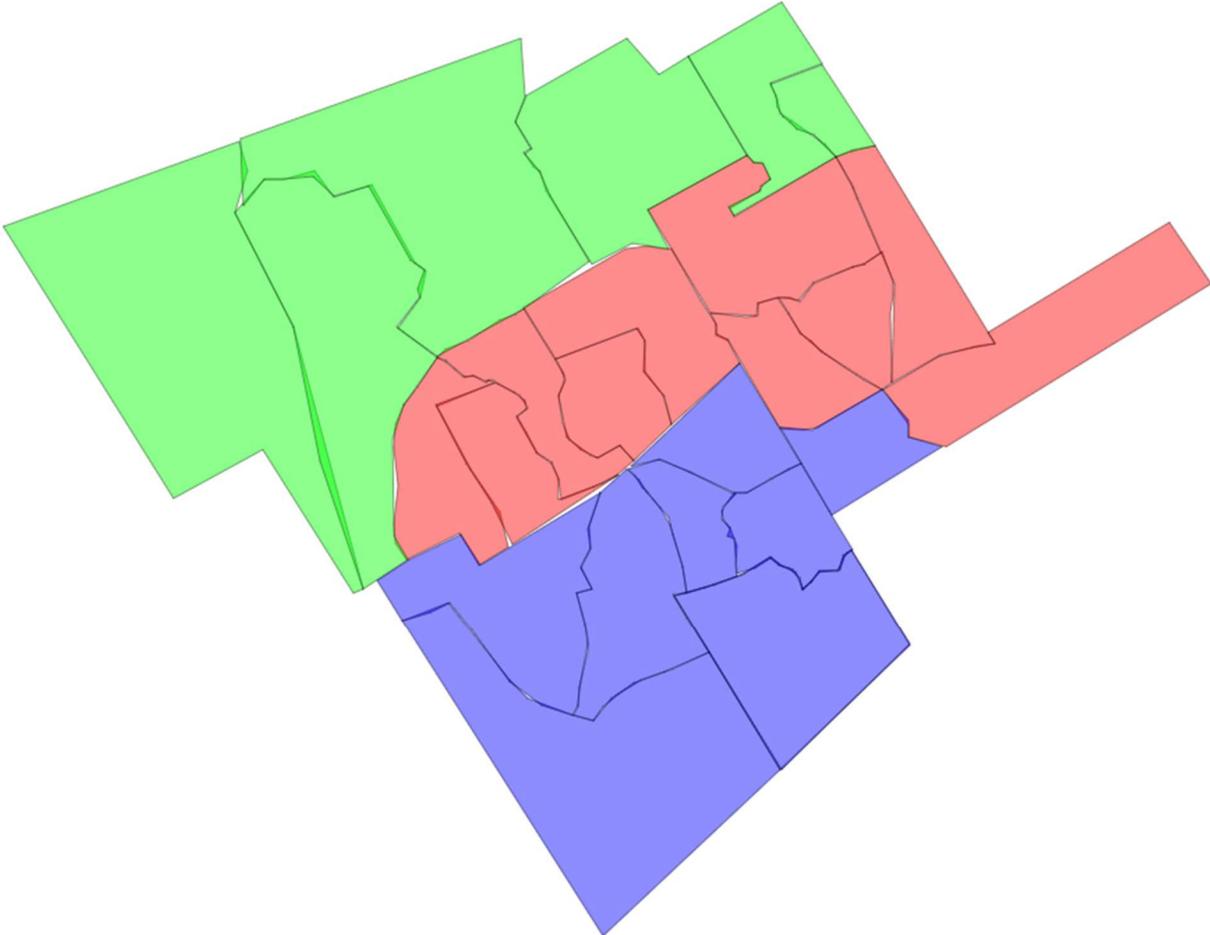
Source: Excel spreadsheet “Reapportionment Analysis.xlsx”, attached.

Appendix 1 - Plan A



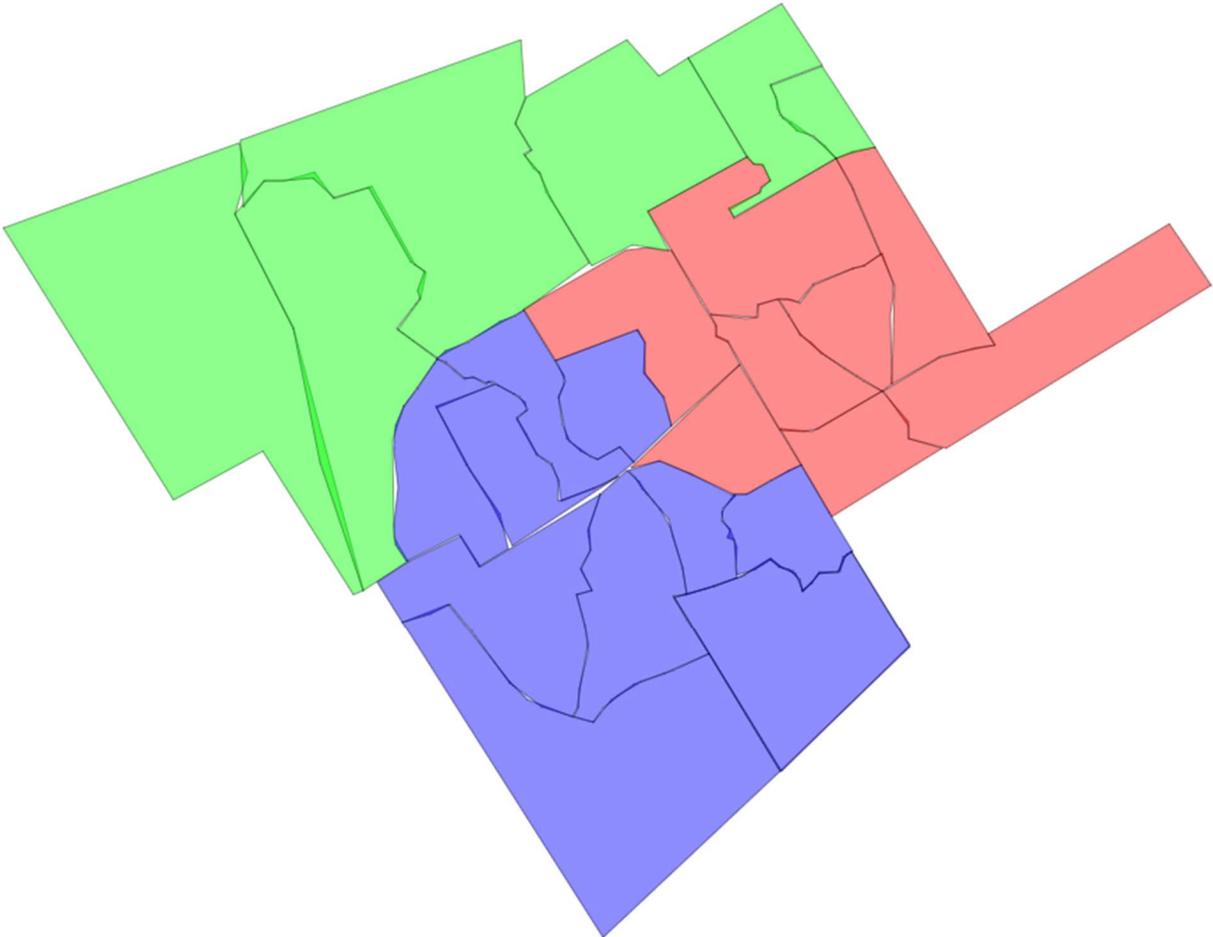
Source: <http://anestad.com> T/E Reapportionment Plan A

Appendix 2 - Plan B



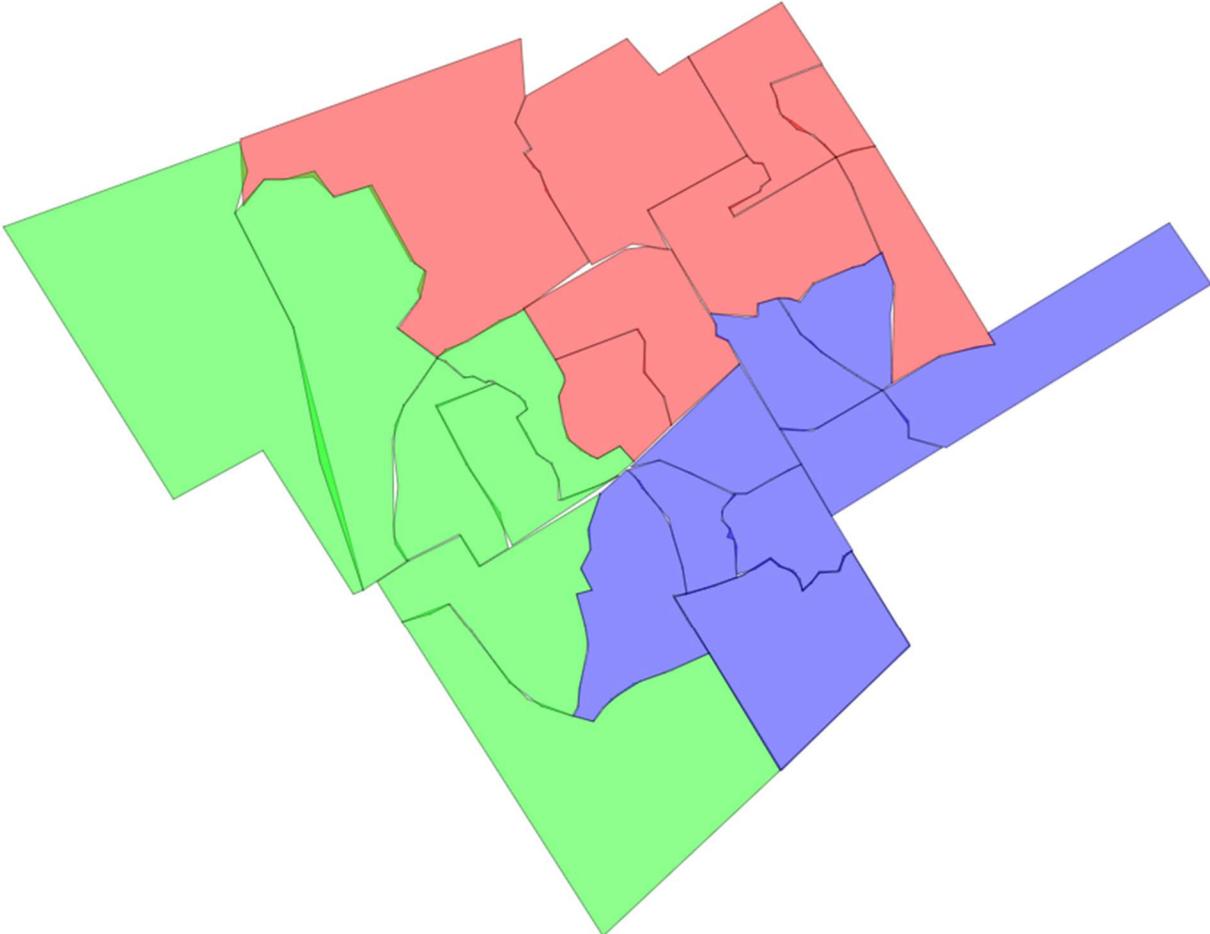
Source: <http://anestad.com> T/E Reapportionment Plan B

Appendix 3 - Plan X



Source: <http://anestad.com>, Census Generated Plan #2

Appendix 4 - Plan Y



Source: <http://anestad.com> Census Generated Plan #40