



**Options  
for  
General Education  
Formula Changes  
to  
Limit Revenue  
Disparities**

**Report to the  
Legislature**

**January 2007**

**As Required by  
Minnesota Statutes,  
Section 127A.51**

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## **ESTIMATED COST OF PREPARING THIS REPORT**

This report provides information that the Department of Education already collects as part of its normal business functions. The cost information reported below does not include the cost of gathering and analyzing the data but rather is limited to the estimated cost of actual preparing this report document.

Special funding was not appropriated for the costs of preparing this report.

The estimated cost incurred by the Minnesota Department of Education in preparing this report is \$2,211.00.

## OPTIONS FOR GENERAL EDUCATION FORMULA CHANGES TO LIMIT REVENUE DISPARITIES

### Statutory Directive

Minnesota Statutes 2006, Section 127A.51, reads as follows:

#### **Section 127A.51 Statewide average revenue.**

By October 1 of each year the commissioner must estimate the statewide average adjusted general revenue per adjusted marginal cost pupil unit and the disparity in adjusted general revenue among pupils and districts by computing the ratio of the 95th percentile to the fifth percentile of adjusted general revenue. The commissioner must provide that information to all districts.

*If the disparity in adjusted general revenue as measured by the ratio of the 95th percentile to the fifth percentile increases in any year, the commissioner shall recommend to the legislature options for change in the general education formula that will limit the disparity in adjusted general revenue to no more than the disparity for the previous school year. The commissioner must submit the recommended options to the education committees of the legislature by January 15. (emphasis added)*

For purposes of this section and section [126C.10](#), adjusted general revenue means:

(1) for fiscal year 2002, the sum of basic revenue under section [126C.10](#), subdivision 2; supplemental revenue under section [126C.10](#), subdivisions 9 and 12; transition revenue under section [126C.10](#), subdivision 20; referendum revenue under section [126C.17](#); and equity revenue under section [126C.10](#), subdivisions 24a and 24b; and

(2) for fiscal year 2003 and later, the sum of basic revenue under section [126C.10](#), subdivision 2; referendum revenue under section [126C.17](#); and equity revenue under section [126C.10](#), subdivisions 24a and 24b.

### Background

The October 2006 calculations under Minnesota Statutes 2006, Section 127A.51, given in the table below, show an increase in the projected ratio of the 95th percentile to the fifth percentile of adjusted general revenue from 1.202 in FY 2006 to 1.242 in FY 2007. While the 1.242 ratio projected for FY 2007 is lower than in any year between FY 1992, when these calculations were initiated, and FY 2001, it exceeds the ratio computed for FY 2006 and therefore triggers the statutory requirement for the commissioner to “recommend to the legislature options for change in the general education formula that will limit the disparity in adjusted general revenue to no more than the disparity for the previous school year.” Preliminary calculations for FY 2008, based on November 2006 forecast data, (reflecting November 2006 operating referendum results), show a further increase in the projected ratio of the 95<sup>th</sup> percentile to the 5<sup>th</sup> percentile

MINNESOTA DEPARTMENT OF EDUCATION														OCTOBER_2006_DISPARITY_REPORT			
Program Finance Division														09/15/06			
OCTOBER 2006														GENERAL EDUCATION REVENUE DISPARITY REPORT, M.S. 127A.51			
Estimated General Education Revenue Per Weighted ADM																	
BASIC + SUPPLEMENTAL + TRANSITION + REFERENDUM + EQUITY REVENUE																	
TRANSITION REVENUE IS EXCLUDED AFTER FY 2003																	
		FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY	FY
		1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
STATE AVERAGES:		3,390	3,398	3,416	3,476	3,541	3,891	4,003	3,980	4,247	4,511	4,688	4,942	5,088	5,185	5,411	5,715
PERCENTILES:	1ST	3,050	3,050	3,050	3,150	3,205	3,440	3,550	3,530	3,740	3,964	4,078	4,604	4,611	4,614	4,820	5,057
	5TH	3,050	3,050	3,050	3,150	3,205	3,469	3,577	3,530	3,740	3,964	4,309	4,604	4,611	4,614	4,856	5,108
	10TH	3,050	3,050	3,050	3,150	3,205	3,488	3,591	3,530	3,762	4,029	4,418	4,611	4,644	4,693	4,930	5,209
	20TH	3,050	3,050	3,054	3,150	3,222	3,570	3,717	3,744	4,029	4,302	4,465	4,643	4,715	4,863	5,129	5,385
	30TH	3,056	3,070	3,154	3,182	3,329	3,727	3,828	3,845	4,101	4,343	4,518	4,715	4,845	4,997	5,246	5,522
	40TH	3,177	3,174	3,189	3,349	3,453	3,814	3,913	3,879	4,140	4,404	4,569	4,792	4,968	5,103	5,339	5,641
	50TH	3,244	3,257	3,303	3,428	3,507	3,860	3,953	3,897	4,194	4,487	4,635	4,874	5,051	5,194	5,419	5,775
	60TH	3,373	3,383	3,377	3,471	3,526	3,893	4,001	3,972	4,271	4,525	4,688	4,971	5,137	5,304	5,544	5,805
	70TH	3,552	3,561	3,561	3,537	3,583	3,949	4,093	4,060	4,418	4,651	4,825	5,096	5,333	5,403	5,624	5,903
	80TH	3,611	3,626	3,637	3,628	3,645	4,074	4,217	4,203	4,473	4,719	4,873	5,209	5,434	5,484	5,690	5,961
	90TH	3,901	3,930	3,972	3,960	4,009	4,326	4,402	4,334	4,579	4,926	5,071	5,356	5,478	5,519	5,742	6,183
	95TH	4,181	4,124	4,124	4,109	4,162	4,502	4,684	4,611	4,805	5,025	5,191	5,462	5,570	5,603	5,837	6,343
	99TH	4,839	4,797	4,686	4,676	4,724	5,058	5,131	5,057	5,260	5,471	5,559	5,893	5,977	5,967	6,138	6,596
DOLLAR GAPS:	90TH TO 10TH	851	880	922	810	804	838	811	804	817	897	653	745	834	826	811	974
	95TH TO 5TH	1,131	1,074	1,074	959	957	1,033	1,108	1,081	1,065	1,061	882	858	959	989	981	1,234
	99TH TO 1ST	1,789	1,747	1,636	1,526	1,519	1,617	1,581	1,527	1,520	1,507	1,481	1,290	1,366	1,353	1,319	1,539
RATIOS:	90TH TO 10TH	1.279	1.289	1.302	1.257	1.251	1.240	1.226	1.228	1.217	1.223	1.148	1.162	1.179	1.176	1.165	1.187
	95TH TO 5TH	1.371	1.352	1.352	1.304	1.299	1.298	1.310	1.306	1.285	1.268	1.205	1.186	1.208	1.214	1.202	1.242
	99TH TO 1ST	1.587	1.573	1.536	1.484	1.474	1.470	1.445	1.433	1.406	1.380	1.363	1.280	1.296	1.293	1.274	1.304

of adjusted general revenue to 1.254. The increases in the ratio of the 95<sup>th</sup> percentile to the 5<sup>th</sup> percentile of adjusted general revenue for FY 2006 and FY 2007 are attributable to the increase in the referendum allowance limit from 18.6 percent to 26 percent of the general education formula allowance enacted by the 2005 Legislature, which, together with annual inflationary increases in referendum allowance limits and new referendum elections, have increased the high end of the revenue distribution more rapidly than the low end has been increased through changes in the basic formula and the equity revenue formula. Because the projected ratio of the 95<sup>th</sup> percentile to the 5<sup>th</sup> percentile of adjusted general revenue is higher in FY 2008 than in FY 2007 and because FY 2007 will be nearly completed before any potential changes could be enacted, the options prepared for this report were analyzed using the funding formulas in effect for FY 2008 and later, and data as of the November 2006 budget forecast.

### **Current Equity Revenue Formula**

The current equity revenue formula for FY 2006 and later has five components:

- 1) a flat allowance of \$13 per pupil unit for districts whose referendum revenue per pupil unit falls below the regional (metro or nonmetro) 95<sup>th</sup> percentile,
- 2) a variable amount, ranging up to \$75 per pupil unit on a sliding scale, depending on the gap between the district's referendum revenue per pupil unit and the regional 95<sup>th</sup> percentile (all districts without any referendum revenue are ineligible for this component of the equity revenue);
- 3) an additional amount for districts with low referendum revenue per pupil unit (below 10% of the state average referendum revenue per pupil unit - estimated at \$67 for FY 2008), equal to the amount by which the district's referendum allowance falls below 10% of the state average, but not to exceed \$100,000 per district;
- 4) an additional amount for districts in the 7 county metro area, equal to 25% of the amount computed for the three components above; and
- 5) a flat allowance of \$46 per pupil unit for districts whose referendum revenue per pupil unit falls below the regional 95<sup>th</sup> percentile or \$23 per pupil unit for districts whose referendum revenue per pupil unit falls at or above the regional 95<sup>th</sup> percentile.

Minneapolis, Saint Paul and Duluth are ineligible for the first four components of equity revenue, but are eligible for the fifth component. School districts with no referendum revenue are ineligible for the sliding scale component of equity revenue (#2 above), but are eligible for the other four components. The exclusion of Minneapolis, Saint Paul and Duluth from receiving the first four components of equity revenue does not contribute to the gap between the 95<sup>th</sup> and 5<sup>th</sup> percentiles of adjusted general revenue, because all three districts have moderate referendum revenue allowances, falling in between the 95<sup>th</sup> and 5<sup>th</sup> percentiles. The exclusion of districts with no referendum revenue from receiving the sliding scale component of equity revenue directly does contribute to the gap between the 95<sup>th</sup> and 5<sup>th</sup> percentiles of adjusted general revenue, and has also stimulated several districts to hold referendum elections seeking a \$1 per pupil unit referendum allowance in order to qualify for an additional \$75 per pupil unit of equity revenue.

## Options to Limit Revenue Disparities

The simplest and most cost-effective method of reducing the disparity among districts in adjusted general revenue, without reducing revenue for districts at the 95<sup>th</sup> percentile or above, is to adjust the equity revenue formula to target additional funds to the lowest revenue districts.

Six options for modifying the equity revenue formula were considered. All six options would begin by targeting additional revenue to the districts with the lowest adjusted general revenue per pupil unit by allowing districts with no referendum authority to receive the sliding scale revenue. However, because that would not be sufficient to reduce the disparity ratio to the FY 2006 level, further changes would be needed to target additional revenue to low revenue districts. Three approaches were considered to do this:

1. increasing the referendum allowance used to drive the low referendum revenue component while leaving the sliding scale component essentially unchanged;
2. increasing the maximum allowance for the sliding scale component while leaving the referendum allowance used to drive the low referendum revenue component essentially unchanged; and
3. increasing the maximum allowance for the sliding scale component and eliminating the low referendum revenue component.

Two variations were simulated for each of these three approaches. The first variation would retain most of the current equity formula structure, including the references to the 5th and 95th percentiles of referendum authority per Adjusted Marginal Cost Pupil Unit (AMCPU), the calculation of the low referendum component based on a percent of state average referendum authority per RMCPU, and the "per AMCPU" basis for calculating sliding scale and flat grant revenues. of the equity formula, and adjust the formula parameters and eligibility for revenue.

The second variation would restructure the formula to make the calculations simpler and more predictable by making the following changes:

- Sliding scale and flat grant revenues are based on referendum authority per RMCPU rather than referendum authority per AMCPU.
- The 5th percentile of referendum revenue per AMCPU is replaced with zero.
- The 95th percentile of referendum revenue per AMCPU is replaced with 29% of the basic formula allowance, without regard to region.
- The low referendum basis is changed from 10% of state average referendum authority per RMCPU to a percent of the basic formula allowance.

In addition, all of the options considered would:

- calculate low referendum revenue before sliding scale revenue to eliminate a quirk in the current formula that causes referendum plus equity revenue per pupil to decrease slightly as referendum authority increases from \$1 to about \$60 per pupil unit,
- eliminate the \$100,000 cap on low referendum revenue, and
- provide hold harmless revenue to districts that would otherwise receive less than they do under current law.

## Options Summary

In summary, all options considered would:

- eliminate the penalty for having no referendum authority,
- calculate low referendum revenue before sliding scale revenue,
- eliminate the \$100,000 cap on low referendum revenue, and
- provide hold harmless revenue to districts that would otherwise receive less than they do under current law.

Options 1.1 to 1.3 retain the current-law references to the 5th and 95th percentiles of referendum authority per AMCPU, the current-law reference to a percent of state average referendum authority per RMCPU, and the "per AMCPU" basis for calculating sliding scale and flat grant revenues.

Options 2.1 to 2.3 all include these changes from current law:

- sliding scale and flat grant revenues are based on referendum authority per RMCPU rather than referendum authority per AMCPU.
- the 5th percentile of referendum revenue per AMCPU is replaced with zero
- the 95th percentile of referendum revenue per AMCPU is replaced with 29% of the basic formula allowance, without regard to region.
- the low referendum basis is changed from 10% of state average referendum authority per RMCPU to a percent of the basic formula allowance.

The additional changes from current law for each option are as follows:

*Option 1.1*--The low referendum guarantee is increased from 10% of the state average referendum allowance to \$241 per RMCPU.

*Option 1.2* --The low referendum guarantee is left at 10% of the state average referendum allowance, but maximum sliding scale revenue per AMCPU is increased from \$75 to \$259.

*Option 1.3*--The low referendum guarantee is eliminated, and maximum sliding scale revenue per AMCPU is increased from \$75 to \$319.

*Option 2.1*--The low referendum guarantee is set at 4.3% of the basic formula allowance.

*Option 2.2*--The low referendum guarantee is set at 1.5% of the basic formula allowance, and maximum sliding scale revenue per AMCPU is increased from \$75 to \$213.

*Option 2.3*--The low referendum guarantee is eliminated, and maximum sliding scale revenue per AMCPU is increased from \$75 to \$280.



## Summary Statistics and District By District Impacts

The table below shows the FY 2008 statewide impact of each of the six options discussed above. The appendix provides a district-by-district spreadsheet showing the FY 2008 current law general education revenue per adjusted marginal cost pupil unit (AMCPU), and the change in general education revenue per AMCPU for each district under each of the six options.

	Current Law	Option 1.1	Option 1.2	Option 1.3	Option 2.1	Option 2.2	Option 2.3
Low Referendum Guarantee	67.46	241.23	67.46	0.00	214.90	74.61	0.00
Maximum Sliding Scale Revenue/AMCPU	75.00	75.00	258.52	318.81	75.00	213.10	279.95
Metro Bottom of Sliding Scale Range	179.18	179.18	179.18	179.18	0.00	0.00	0.00
Metro Top of Sliding Scale Range	1,443.72	1,443.72	1,443.72	1,443.72	1,442.46	1,442.46	1,442.46
Nonmetro Bottom of Sliding Scale Range	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nonmetro Top of Sliding Scale Range	1,616.35	1,616.35	1,616.35	1,616.35	1,442.46	1,442.46	1,442.46
Disparity Ratio Basis: 5th Percentile	5,115.49	5,337.92	5,348.19	5,351.86	5,303.54	5,309.90	5,313.00
Disparity Ratio Basis: 95th Percentile	6,416.67	6,416.36	6,428.82	6,432.92	6,374.85	6,382.51	6,386.22
Disparity Ratio:	1.254	1.202	1.202	1.202	1.202	1.202	1.202
Equity Revenue	91,270,151	113,880,882	188,319,870	214,640,676	105,274,238	155,538,645	182,073,485
Hold Harmless Revenue	0	69,286	376	3	4,403,495	1,690,804	1,690,089
Equity Revenue Plus Hold Harmless	91,270,151	113,950,169	188,320,246	214,640,679	109,677,733	157,229,448	183,763,574
Revenue Increase Over Current Law	0	22,680,018	97,050,095	123,370,528	18,407,582	65,959,298	92,493,423

All six of the options reduce the disparity ratio to the FY 2006 level of 1.202. The first three options, based on the current formula structure, have higher cost than the last three options because the 95th percentiles are higher than 29% of the formula allowance, especially for the non-metro region. As a result, only 15 districts receive minimum equity revenue under the first 3 options, while 26 districts receive minimum equity revenue under the last 3 options. More districts with minimum equity revenue leads to lower 95th percentile revenue levels for calculating the disparity ratio. There are no “losers” under any option because of the hold-harmless provision.

Note that the first three options use different combinations of a) the low referendum guarantee and b) maximum sliding scale revenue per AMCPU. Comparing these approaches, option 1.1 has the highest low referendum guarantee, the lowest sliding scale revenue, and the lowest revenue increase over current law. Revenue increases under option 1.1 are relatively small because they are concentrated on districts with low referendum revenues. Under options 1.2 and 1.3, more equity revenue goes to districts with moderate levels of referendum revenue.

The same relationships exist when we compare the last three options.









APPENDIX -- OPTIONS FOR GENERAL EDUCATION FORMULA CHANGES TO LIMIT REVENUE DISPARITIES																				OCT_2006_FOLLOWUP_APPEND		
REPORT TO THE LEGISLATURE																				1/12/2007		
JANUARY 2007																						
		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	
										OPTION 1.1	OPTION 1.2	OPTION 1.3	OPTION 2.1	OPTION 2.2	OPTION 2.3							
				OPTION 1.1	OPTION 1.2	OPTION 1.3	OPTION 2.1	OPTION 2.2	OPTION 2.3	INCREASE	INCREASE	INCREASE	INCREASE	INCREASE	INCREASE							
		CURRENT	EQUITY	EQUITY	EQUITY	EQUITY	EQUITY	EQUITY	EQUITY	FROM	FROM	FROM	FROM	FROM	FROM	OPTION 1.1	OPTION 1.2	OPTION 1.3	OPTION 2.1	OPTION 2.2		
		LAW	PLUS	PLUS	PLUS	PLUS	PLUS	PLUS	PLUS	CURRENT	CURRENT	CURRENT	CURRENT	CURRENT	CURRENT	INCREASE	INCREASE	INCREASE	INCREASE	INCREASE		
		EQUITY	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	HOLD	LAW	LAW	LAW	LAW	LAW	LAW	/AMCPU	/AMCPU	/AMCPU	/AMCPU	/AMCPU		
		AMCPU	REVENUE	HARMLESS	HARMLESS	HARMLESS	HARMLESS	HARMLESS	HARMLESS	= C-B	= D-B	= E-B	= F-B	= G-B	= H-B	= I/A	= J/A	= K/A	= L/A	= M/A		
2886	1	GLENVILLE-EMMON	464	42,589	42,640	79,941	92,195	42,589	65,849	77,912	51	37,352	49,606	0	23,260	35,323	0	80	107	0	50	76
2887	1	MCLEOD WEST SCH	462	44,178	44,228	85,772	99,418	44,995	77,677	93,497	50	41,594	55,240	817	33,499	49,319	0	90	120	2	73	107
2888	1	CLINTON-GRACEVIL	449	33,942	34,010	52,397	58,437	34,469	49,148	56,253	68	18,455	24,495	527	15,206	22,311	0	41	55	1	34	50
2889	1	LAKE PARK-AUDUB	775	85,740	85,786	183,761	215,942	85,740	153,305	187,045	46	98,021	130,202	0	67,565	101,305	0	126	168	0	87	131
2890	1	DRSH	682	44,990	45,115	57,037	60,958	48,696	64,268	71,806	125	12,047	15,968	3,706	19,278	26,816	0	18	23	5	28	39
2895	1	JACKSON COUNTY	1,341	200,225	420,766	434,177	493,053	391,526	383,718	441,502	220,541	233,952	292,828	191,301	183,492	241,277	164	174	218	143	137	180
2897	1	REDWOOD AREA S	1,505	164,670	164,763	350,671	411,742	164,670	298,333	364,066	93	186,001	247,072	0	133,663	199,396	0	124	164	0	89	132
2898	1	WESTBROOK-WALN	644	71,627	71,666	154,026	181,082	71,627	127,700	155,837	39	82,399	109,455	0	56,073	84,210	0	128	170	0	87	131
2899	1	PLAINVIEW-ELGIN	1,779	214,902	214,966	484,136	572,566	214,902	407,047	501,813	64	269,234	357,664	0	192,145	286,911	0	151	201	0	108	161
2902	1	RUSSELL-TYLER-R	648	65,880	65,935	133,742	156,016	65,880	108,384	130,393	55	67,862	90,136	0	42,504	64,513	0	105	139	0	66	100