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3-2022

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**Essential Programs and Services (EPS) Component Review:  
Small and Geographically Isolated School Adjustment**

**Report to the Maine Department of Education**

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**March 2022**

## **Essential Programs and Services (EPS) Component Review: Small and Geographically Isolated School Adjustment**

### **Background**

The Essential Programs and Services (EPS) cost model provides an additional allocation to schools that are identified as small and geographically isolated. Such schools have less opportunity to achieve economies of scale by combining with nearby communities and may also have other additional costs inherent to geographic isolation. The form of the adjustment is a reduced student-to-teacher ratio for schools in lower size categories that meet the geographic isolation criteria, along with an additional per-pupil allocation amount for operation and maintenance of physical plant in island schools. Prior analyses of this adjustment were conducted in 2005, 2006, 2010 and 2018 as part of the ongoing review of components within the EPS funding formula.

### **Methods and Approach to Component Review**

The additional allocation for schools qualifying as small and isolated increases both the state subsidy and the local required contribution. In this review we examine whether the adjustment is having its intended effect and whether SAUs are able to raise the additional funds locally.

We draw on a number of datasets to conduct this review. We obtained the list of schools qualifying for the small and isolated adjustment for the school year 2019-20 from the Maine DOE. From the Maine DOE we also obtained total EPS allocation, local required contribution, state contribution, mil rate (General Purpose Aid for Local Schools, FY2019-20) and local additional share raised (Budget Revenue Reports: Over/Under EPS Budget Report by SAU FY2019-20) as well as state property valuation data for FY2019-20. We obtained town-level median income data from the Maine Housing Authority which we then aggregated up to the district level. We used district level estimates of child poverty for SY2020 from the Census Bureau's Small Area Income and Poverty Estimates (SAIPE) as an additional measure in case school FRPL data are becoming less reliable. We then used these data to compare per pupil EPS allocations and state and local required contributions. We also compare property valuation and

minimum receiver status, as well as other factors that indicate a district's ability to pay their local required contribution.

The latter analyses are relevant because property valuation in a given SAU directly impacts the amount of state subsidy they receive. The first step in allocating state subsidy is to determine the amount of funding that can be raised locally with a fixed mil rate expectation, typically around 7 to 8 mils. This method is intended to be equitable because it expects each property owner (residential or commercial) to pay an amount that is relative to the value of their property, based on the assumption that those with more valuable property have a greater ability to pay property tax. Once all property in a community has been taxed at the fixed statewide mil rate (which varies modestly from year to year), any remaining amount that must be raised to meet the total EPS allocation is provided through state subsidy. In most Maine communities the statewide mil expectation does not raise enough funds to cover the foundation amount determined by the EPS cost model, and the state share of school funding is substantial. Overall, state subsidies provide 55% of the total EPS funding model. However, some communities have high property valuation relative to the number of students that require an education, and the statewide mil rate would raise more funds than the EPS model requires. These communities instead are expected to raise 95% of the EPS foundation amount, and the remaining 5% is provided through state subsidy. These communities are termed "minimum receivers" and cover the cost of educating their resident pupils with lower mil rates than the statewide mil rate – sometimes substantially so (as low as 0.36 mils).

The approach taken in these analyses was to provide an overall description of the allocation and subsidy patterns in Maine's smallest school administrative units (SAUs). While state subsidy is determined at the town level and not on a per-pupil basis, our analyses rely on per-pupil amounts. This provides a scaled depiction of funding that allows more valid comparisons between SAUs, as otherwise the vast differences in student enrollments among Maine SAUs makes it difficult (if not impossible) to compare differences in their dollar amounts.

## Analysis and Findings

In our analysis we focused on typical-cost public school districts. We exclude Maine Indian districts, schools in unorganized territories, 3 districts that did not have enrollment data and districts with zero attending students (i.e., those that do not operate schools and instead send their resident students to schools in other SAUs).

Of 191 public districts with attending students, 53 had at least one school that was designated as small and isolated in SY2020. The vast majority (50 districts) had one small and isolated school, and three districts had two small and isolated schools. See Appendix A for the list of geographically isolated small schools and the districts in which they are located.

**Table 1. Description of SAUs with Geographically-Isolated Small Schools, Compared to Other Districts**

	SAUs w/ small and isolated school(s) (n=53)	All other public SAUs (n=138)
Minimum receiver, % (n)	72% (38)	34% (47)
Avg. (median) per pupil Property valuation	\$2,745,604 (\$1,508,523)	\$1,276,242 (\$788,487)
Avg. (median, range) Adjusted local mil rate	5.62 (6.26, 0.36-8.28)	7.45 (8.28, 0.73-8.28)
Avg. (median) Per pupil EPS allocation	\$12,073 (\$11,921)	\$11,650 (\$11,597)
Avg. (median) Adjusted State Share Percentage	29.6% (21.8%)	44.1% (48.6%)
Avg. (median) Per pupil State subsidy	\$3,629 (\$2,660)	\$5,169 (\$5,826)
Avg. (median) Required local contribution per pupil	\$8,444 (\$9,099)	\$6,471 (\$5,949)

\*SY2020. Sample excludes tribal districts and schools in unorganized territories.

Importantly, the finding that the total EPS allocation in FY2020 was on average \$433 more per student for SAUs with small and isolated schools compared to all other districts (\$12,073 versus \$11,640, respectively). This likely is a reflection of additional funding directed to these units through the small and isolated school adjustment. The EPS adjustment can thus be seen as meeting its intent of ensuring that additional funds are made available to operate schools in these unique circumstances.

However, the additional funds that are allocated through the EPS formula to meet increased costs are disproportionately paid by local taxpayers and not through state subsidy. The SAUs with at least one small and isolated school are more than twice as likely to be a minimum receiver (72% compared to 34%). On average, the per pupil property valuation is higher among SAUs with at least one small and isolated schools (\$2,745,604 vs \$1,276,242) and therefore the local adjusted mil rate is lower (5.6 vs 7.5), as is the state share of the total allocation (29.6% vs 44.1%).

As described in the introduction, the proportionately higher property valuation in SAUs with small isolated schools has an impact on the amount of state subsidy they receive. The median per student state subsidy is \$2,660 for SAUs with at least one small and isolated school, compared to \$5,826—more than twice as much per pupil—among SAUs without any small and isolated schools.

The difference between the median per student local required contribution is \$3,150, with SAUs with small and isolated schools needing to raise \$9,099 per student compared to the \$5,949 that has to be raised by SAUs without small and isolated schools. This is the flip side of the subsidy story and corroborates that communities receiving less state subsidy must raise more from local funds.

The finding that local property values are higher (when scaled per pupil) among districts with at least one small and isolated school does not necessarily reflect local ability and/or willingness to pay property taxes. Districts with small and isolated schools tend to have, on average, slightly higher child poverty rates and lower median incomes compared to other districts (see Table 2).

Approximately the same percentage of districts with and without small and isolated school(s) raised no additional funds beyond the local required share (9% vs 11%, respectively). Among the remaining districts that did raise optional additional local funds, those with at least one small and isolated school raised on average over twice as much in additional funds compared to other districts (\$6,725 vs \$3,007, respectively). There is a moderately strong positive correlation between the median income and the amount of additional funds raised locally per student ( $r=0.470$ ,  $p < 0.01$ ). In other words, communities with higher incomes are more likely to budget additional education funding above and beyond the EPS foundation amount.

**Table 2. Comparison of Income and Funds Raised for Education in SAUs with and without Small and Isolated Schools**

	SAUs w/small and isolated school(s) (n=53)	All other public SAUs (n=138)
Avg rate (range) economically disadvantaged students (FRPL measure), 2018	51.0% (12%-100%)	46.9% (6%-100%)
Avg child poverty rate (range), SAIPE data	14.0% (5%-26%)	12.9% (2%-33%)
Avg median income, FY2020 (range)	\$54,473 (24,697-77,239)	\$61,384 (32,750-120,159)
% (#) that raised additional funds, above local required	91% (48)	89% (123)
Avg additional local raised, per pupil (median, range)	\$6,725 (\$4,540, \$0-43,974)	\$3,007 (\$2,476, \$0-12,412)

\* Sample excludes tribal districts and schools in unorganized territories. Child poverty rate data come from SAIPE. Median income data was obtained from the Maine Housing Authority, with town level median income aggregated up to the district level. Additional local raised came from MDOE budget reports, 2019-20. <https://www.maine.gov/doe/funding/reports/budget>

### Summary

The EPS model adjusts the total allocation for districts with small and isolated schools upwards, increasing the total allocation per student. This is an affirmation that the cost side of the funding formula is working as intended to provide these districts with additional funds to be able to operate their small and isolated schools. However, these districts are twice as likely to be minimum receivers, which means they must raise the additional dollars per student locally. SAUs with small and isolated schools need to raise \$9,099 per student locally compared to the \$5,949 that has to be raised on average by SAUs without small and isolated schools. These districts also have slightly higher rates of poverty and lower median incomes, which raises the concern as to whether they may struggle in terms of ability to pay. Analysis of additional optional funds raised locally in SY2020 demonstrates that many of these districts are able and willing to support education at a level over and above the required EPS foundation amount. This is encouraging, yet also raises questions about whether the current system for allocation of state subsidy is as equitable as possible for our rural communities.

In light of these analysis as well as similar themes raised in other component reviews, MEPRI recommends additional exploration of Maine’s subsidy distribution system. Specifically, we wish to further examine the pros and cons of our methodology of using resident pupil counts

as the scaling factor for comparing variables between SAUs. Other scaling factors (e.g. number of resident households contributing to local property taxes) may be more useful for evaluating whether Maine's system is equitable and fair to communities and individual residents.



## Appendix A

**Table 1: Schools Designated as Small and Isolated in SY2020**

School	Grades	Enrollment	SAU
Adams School	k-8	51	Castine Public Schools
Airline Community School	Pk-8	43	Airline CSD
Albion Elementary School	Pk-6	109	RSU 49/MSAD 49
Alexander Elementary	k-8	40	Alexander Public Schools
Alton Elementary School	Pk-4	56	RSU 34
Andover Elementary School	Pk-4	34	Andover Public Schools
Bay Ridge Elementary	Pk-8	67	Cutler Public Schools
Beech Hill School	Pk-8	90	Otis Public Schools
Brooklin School	Pk-8	59	Brooklin Public Schools
Brooksville Elementary School	Pk-8	59	Brooksville Public Schools
Cape Cod Hill Elem School	Pk-5	171	RSU 09
Cave Hill School	Pk-8	83	RSU 24
Chebeague Island School	K-5	21	Chebeague Island Public Schools
Cliff Island School	K, 2, 3, 5	5	Portland Public Schools
Cranberry Isles School	1,2,4,5,6,8	10	Cranberry Isles Public Schools
Denmark Elementary School	k-4	85	RSU 72/MSAD 72
Dr Levesque Elementary School	Pk-6	137	RSU 33/MSAD 33
East Grand School	Pk-12	133	RSU 84/MSAD 14
East Range II CSD School	k-8	23	East Range CSD
Easton Elementary School	Pk-6	128	Easton Public Schools
Edgecomb Eddy School	Pk-6	104	Edgecomb Public Schools
Edna Drinkwater School	k-8	114	Northport Public Schools
Forest Hills Consolidated School	k-12	149	RSU 82/MSAD 12
Fort Street School	Pk-6	193	RSU 42/MSAD 42
Frenchboro Elementary School	4,7	3	Frenchboro Public Schools
Friendship Village School	k-6	83	RSU 40/MSAD 40
Georgetown Central School	Pk-6	46	Georgetown Public Schools
Greenville Consolidated School	k-12	192	Greenville Public Schools
Harmony Elementary	Pk-8	51	Harmony Public Schools
Hebron Station School	K-6	130	RSU 17/MSAD 17
Isle au Haut Rural School	K, 1, 3,4,6	6	Isle Au Haut Public Schools
Islesboro Central School	k-12	85	Islesboro Public Schools
Jonesboro Elementary School	Pk-8	55	Jonesboro Public Schools

School	Grades	Enrollment	SAU
Katahdin Elementary School	Pk-5	141	RSU 89
Katahdin Middle/High School	6-12	166	RSU 89
Lee/Winn School	Pk-4	84	RSU 30/MSAD 30
Leeds Central School	Pk-6	193	RSU 52/MSAD 52
Long Island Elementary School	k-5	12	Long Island Public Schools
Lubec Consolidated School	Pk-8	76	RSU 85/MSAD 19
Monhegan Island School	1,3,5,8	5	Monhegan Plt School Dept
Moscow Elementary	Pk-4	74	RSU 83/MSAD 13
Mt Jefferson Jr High School	5-8	82	RSU 30/MSAD 30
North Haven Community School	k-12	55	RSU 07/MSAD 07
Peaks Island School	Pk-5	40	Portland Public Schools
Penobscot Elementary School	Pk-8	69	Penobscot Public Schools
Phippsburg Elementary School	Pk-5	99	RSU 01 - LKRSU
Rangeley Lakes Regional School	Pk-12	209	RSU 78
Solon Elementary School	Pk-5	85	RSU 74/MSAD 74
Stratton Elementary School	Pk-8	88	Eustis Public Schools
Swans Island Elementary School	k-8	32	MSAD 76
Vinalhaven School	Pk-12	174	RSU 08/MSAD 08
Walker Memorial School	Pk-5	90	RSU 03/MSAD 03
Wesley Elementary School	1,3,4,6	7	Wesley Public Schools
Whiting Village School	Pk-8	32	Whiting Public Schools
Woodland Elementary School	Pk-6	138	Baileyville Public Schools
Woodstock School	k-5	69	RSU 44/MSAD 44

\*List of schools obtained from Maine DOE finance team in January 2022. Enrollment and grade information obtained from the MDOE website.

**Appendix B. Per-Pupil Data Elements for SAUs containing Small Isolated Schools (FY2020)**

SAU	SAU enrollment	PP EPS allocation	PP state subsidy	PP required local contribution	PP additional local raised	FY20 Mil rate*	Child Poverty rate	Avg Median Income
Airline CSD	43	9348	3151	6197	4681	<b>4.74</b>	12.7	NA
Alexander Public Schools	40	11975	3947	8029	4148	8.28	15.5	47702
Andover Public Schools	34	10285	1142	9143	2143	8.28	20.0	50833
Baileyville Public Schools	336	10523	2660	7863	5289	8.28	19.9	NA
Brooklin Public Schools	59	11876	721	11154	9298	<b>2.76</b>	11.8	50000
Brooksville Public Schools	59	11150	897	10253	8561	<b>2.35</b>	15.7	72500
Castine Public Schools	51	10000	727	9273	7194	<b>2.23</b>	8.9	62500
Chebeague Island Public Schools	21	13887	1477	12410	12971	<b>3.22</b>	8.3	NA
Cranberry Isles Public Schools	10	14346	2517	11829	25338	<b>0.90</b>	15.8	NA
Cutler Public Schools	67	8282	2998	5285	2934	8.28	13.2	NA
East Range CSD	23	24861	9198	15663	0	<b>6.84</b>	23.1	NA
Easton Public Schools	243	11497	780	10717	7190	<b>7.31</b>	13.6	NA
Edgecomb Public Schools	104	11506	1337	10169	5727	<b>7.77</b>	15.4	63250
Eustis Public Schools	88	11802	975	10827	0	<b>4.38</b>	13.3	24697
Frenchboro Public Schools	3	13550	2959	10592	43974	<b>2.54</b>	14.3	NA
Georgetown Public Schools	46	12656	1178	11478	9337	<b>2.66</b>	13.4	77239
Greenville Public Schools	192	13615	2067	11548	7913	<b>6.08</b>	16.5	49394
Harmony Public Schools	51	13788	8835	4954	1333	8.28	7.4	34935
Isle Au Haut Public Schools	6	13380	777	12604	23745	<b>0.91</b>	NA	NA
Islesboro Public Schools	85	10277	1178	9099	16598	<b>1.99</b>	4.5	70573
Jonesboro Public Schools	55	10763	3250	7513	2429	8.28	15.5	NA

\*Mil rates below 8.28 indicate the SAU is a minimum receiver.

\*\*SAU has two small and isolated schools; all other SAUs have one small and isolated school.

NA = not available.

<b>(Appendix B, Cont.)</b>								
SAU	SAU enrollment	PP EPS allocation	PP state subsidy	PP required local contribution	PP additional local raised	FY20 Mil rate*	Child Poverty rate	Avg Median Income
Long Island Public Schools	12	9891	998	8892	7063	<b>1.44</b>	6.1	NA
Monhegan Plt School Dept	5	6764	785	5980	0	<b>0.36</b>	16.7	NA
MSAD 76	32	15549	2343	13206	12885	<b>3.99</b>	14.6	NA
Northport Public Schools	114	12108	822	11286	7029	<b>5.59</b>	8.7	70074
Otis Public Schools	90	10672	1391	9282	5457	<b>4.54</b>	13.8	NA
Penobscot Public Schools	69	11967	1506	10461	3803	<b>5.79</b>	14.4	56061
Portland Public Schools**	6,779	12558	2109	10449	3025	8.28	13.6	62178
RSU 01 - LKRSU	1,849	14952	6841	8110	2286	<b>6.66</b>	12.1	71022
RSU 03/MSAD 03	1,235	13800	8395	5405	1601	8.28	17.5	49581
RSU 07/MSAD 07	55	13525	855	12669	25921	<b>2.14</b>	8.7	NA
RSU 08/MSAD 08	174	14044	3407	10637	8499	<b>3.92</b>	14.1	59559
RSU 09	2,423	12763	8425	4338	0	<b>7.84</b>	15.0	52003
RSU 17/MSAD 17	3,428	10695	5250	5444	858	<b>7.71</b>	14.6	56334
RSU 24	846	12192	3006	9185	4271	<b>6.26</b>	17.4	52077
RSU 30/MSAD 30**	166	11566	7856	3711	2468	8.28	15.1	47773
RSU 33/MSAD 33	243	11183	6757	4427	0	8.28	15.2	NA
RSU 34	1,522	11356	7660	3696	1269	8.28	12.1	50990
RSU 40/MSAD 40	1,890	11921	5861	6060	2784	<b>8.07</b>	14.4	59935
RSU 42/MSAD 42	391	10270	6542	3728	1759	8.28	10.9	NA
RSU 44/MSAD 44	710	11294	1213	10081	4827	<b>4.61</b>	11.7	61421
RSU 49/MSAD 49	2,091	10722	7156	3565	1612	8.28	14.3	52128

\*Mil rates below 8.28 (bold font) indicate the SAU is a minimum receiver.

\*\*SAU has two small and isolated schools; all other SAUs have one small and isolated school.

NA = not available.

<b>(Appendix B, Cont.)</b>								
SAU	SAU enrollment	PP EPS allocation	PP state subsidy	PP required local contribution	PP additional local raised	FY20 Mil rate*	Child Poverty rate	Avg Median Income
RSU 52/MSAD 52	2,017	11117	7108	4009	1951	8.28	7.7	65124
RSU 72/MSAD 72	770	12937	5060	7877	3072	<b>6.16</b>	11.4	58375
RSU 74/MSAD 74	629	13436	7218	6219	3046	<b>7.57</b>	16.5	54047
RSU 78	209	12801	1080	11721	7950	<b>2.45</b>	10.0	57679
RSU 82/MSAD 12	149	12083	4743	7339	3517	8.28	10.5	40270
RSU 83/MSAD 13	181	12226	4965	7261	5427	<b>7.39</b>	16.7	36881
RSU 84/MSAD 14	133	13446	7275	6171	4540	<b>6.89</b>	17.1	NA
RSU 85/MSAD 19	76	11724	2094	9630	5589	<b>6.38</b>	25.9	40987
RSU 89**	307	12378	8501	3877	2762	<b>2.06</b>	23.5	39476
Wesley Public Schools	7	10556	1454	9103	13851	<b>4.00</b>	16.7	NA
Whiting Public Schools	32	8007	914	7094	6478	<b>5.37</b>	12.5	NA

\*Mil rates below 8.28 indicate the SAU is a minimum receiver.

\*\*SAU has two small and isolated schools; all other SAUs have one small and isolated school.

NA = not available.

SY2020. All financial data and student counts received directly from MDOE or from the MDOE website, including <https://www.maine.gov/doe/funding/reports/budget> . Per pupil calculations use responsible student counts. Enrollment counts are attending students. Child poverty rate data were obtained from SAIPE. Median income data were obtained through the Maine Housing Authority and aggregated up from the town level.