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Essential Programs and Services Report of Findings:

Regional Adjustment Component Review

Report to Maine Department of Education

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EPS Regional Adjustment Component Report of Findings

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This report of findings is presented in three sections. The first section provides a description of the methodology used to calculate Maine's regional adjustment component, and the next two sections divide the findings of our analyses into two separate categories. Section two describes an updated calculation of the regional adjustment using the most recent available pre-pandemic salary data (FY2020). These updated regional adjustment calculations are compared to prior reviews and to the current EPS regional adjustment, which was based on 2004-05 salary data. Section three presents policy options in light of the updated calculations, which include keeping or removing the adjustment, updating or not updating the calculations, and adding a floor or ceiling to the adjustment. Cost estimates provided for several policy options to aid in evaluation and decision making regarding the EPS Regional Adjustment.

Method: Updating the Regional Adjustment Calculation

Geographic Regions in EPS Regional Adjustment: Labor Market Areas (LMAs)

The cost of providing an education varies from place to place depending on the local prices of necessary resources used in providing education services. The most significant input resource is personnel. To account for regional variation in local salary prices, an adjustment is made in the EPS cost model to school personnel salary allocations. Each Labor Market Area (LMA) in Maine has a regional adjustment factor which is applied to the school salary allocation in each SAU within the LMA.[1]

In the current review, regional adjustments were recalculated using updated teacher salary data for the same LMA groupings used in the original computation of the adjustment and in each of the past reviews, which are summarized in Box 1. The LMAs for the EPS regional adjustment were designated by the Maine Department of Labor. They were based on commuting

[1] The regional adjustment's underlying basis of *price* is distinctly different from a *cost of living* construct. Pricing uses actual salary data to reflect the current cost of educator labor in each area of the state. A cost of living basis would use an external index and may result in different patterns across the state. Some selected cost of living measures are provided by county in appendix Table A4 for general information.

patterns revealed in data from the 1990 US Census. Before calculating the regional adjustment, the geographic units needed to be modified in two ways. First, many Maine School Administrative Units (SAUs) such as RSUs (Regional School Units) and MSADs (Maine School Administrative Districts) contain towns in more than one LMA. Each SAU was assigned to the LMA where most of its resident students live. The second reason the geographic units needed to be modified is that the smallest LMAs did not have enough SAUs or full-time teachers to perform a reliable regression analysis of teacher salaries. Regression is a statistical method used in calculating the regional adjustment. Small LMAs were combined with each other or with a larger LMA to form an LMA group to use as a geographic unit. Twenty-five LMAs were held to be large enough to have their own regional adjustment. The other ten LMAs were combined into four LMA groups, two groups of two LMAs and two groups of three LMAs. A Regional Adjustment was calculated for each of these 29 LMAs and LMA groups during the initial calculation of the EPS Regional Adjustment and during each periodic review thereafter.

Box 1. Geographic LMAs and LMA Groups

LMAs and Groups in Current EPS Model
29 Modified LMA Groups
Based on 35 LMAs from 1990 Census
Modified due to: o Regional SAUs crossing LMA borders o Combined if too few SAUs or teachers

Maine has not updated the geographic units in the EPS Regional Adjustment following prior component reviews of the EPS Regional Adjustment. The US Department of Labor released updated LMAs following the decennial US Censuses of 2000 and 2010. MEPRI presented the estimated effects of using each of geographic region updates for the EPS Regional Adjustment. MEPRI recommends revisiting the possibility of updating the geographic units after LMA updates based on the 2020 US Census are released.

Updated Regional Adjustment Calculations Based on FY 2020 Salary Data

During the original computation and each subsequent review, a regional adjustment for each LMA or LMA group was calculated based on the salaries of full-time teachers in all SAUs within the LMA groups. Some LMAs have teachers with more experience and education than others, meaning they will be at different points on the local salary scales. The regional adjustment takes this into account by adjusting each LMA average salary to what it would be if the LMA had the same experience and education profile as the state as a whole. The adjusted average salary for each LMA or LMA group was calculated using regression analysis, based on the salaries of teachers within the LMA at different levels of experience and education. The detail calculations by LMA are available in Appendix Table A1.

Results: Updating the Regional Adjustment Calculation

The overall summary results of recalculating a regional adjustment for each LMA with 2019-20 teacher data are shown in Table 1. The highest and lowest average annual teacher salary is shown as a dollar amount as well as indexed to the state, where 1.00 represents the statewide average annual teacher salary. For example, the 1.20 index for the highest unadjusted LMA (Kittery-York LMA) means that the average teacher salary there was 20% higher than the statewide average teacher salary. The regional adjustment in the rightmost column is the adjusted average salary indexed to the state, where a 1.00 represents the state average teacher salary. The 1.15 in the regional adjustment column for the highest area (Kittery-York LMA) means that, after adjusting for the experience and education levels in the LMA, averages salaries are 15% higher than the state average. If the adjusted average salary is lower than the unadjusted average salary—such as in the Kittery-York LMA, $64,340 adjusted compared to $67,124 unadjusted — this means that the teachers in that LMA have on average more years of experience and/or a higher average educational attainment than in the state as a whole.

The calculated regional adjustments range from a low of 0.81 in the Lincoln-Howland LMA based on a $45,423 adjusted average salary to 1.15 in the Kittery-York LMA based on a $64,340 adjusted salary. This is a smaller range than the unadjusted average salaries, which range from a 0.76 index in the Machias-Eastport LMA based on a $42,280 average salary to 1.20 in the Kittery-York LMA at $67,124.

Note that the EPS cost allocation model also accounts for the teacher experience and education level within each individual SAU. This item is not included within the regional

adjustment component of EPS but rather in the teacher salary matrix component. The combination of the two components is designed to yield a sufficient allocation to pay for enough school staff, given local labor costs.

(See accompanying spreadsheet and Appendix for more details on the calculation of the EPS Regional Adjustment.) Table A2 in the Appendix provides average salaries and adjusted salaries for each LMA group.

Table 1. Unadjusted and Adjusted Average Teacher Salary Range by LMA

		Unadjusted	Adjusted
LMA	Lowest	Machias - Eastport LMA	Lincoln - Howland LMA
	Highest	Kittery - York LMA	Kittery - York LMA
Teacher Salary	Lowest	$ 42,280	$ 45,423
	Highest	$ 67,124	$ 64,340
	Gap	$ 24,843	$ 18,917
Index to State	Lowest	0.76	0.81
	Highest	1.20	1.15
	Gap	0.44	0.34

Comparison to Current EPS Regional Adjustment and to Prior Reviews

The EPS regional adjustment was initially calculated using 2004-05 data. The results of the original calculation are still used in computing SAU EPS allocations on the ED 279 reports which determine state subsidy. Since the initial calculation, the regional adjustment has been recalculated five times with newer data during periodic reviews, including the current review. The data for the recalculations were from 2006-07, 2008-09, 2013-14, 2016-17, and 2019-20. The results of the highest and lowest LMAs are shown in Table 2. Each time, the range of the adjustments has been greater than the 2004-05 data. The largest range, which was in the 2016-17 data, was a difference of 0.36 from a low of 0.80 to a high of 1.16. The difference reflected in the 2004-05 data was only 0.25, from a low a 0.84 to a high of 1.09. The most recent update closed the gap slightly from 2016-17 with a low of 0.81 and max of 1.15, a range of 0.34. It is likely that this modest narrowing is due to the statutory increase in the state minimum teacher salary that was partially implemented in that fiscal year, thus bringing up the lowest end of salaries.

The changes in the calculated regional adjustments for each review reflected actual changes in teacher salaries in different areas of the state. As a result of these calculations we can conclude that the differences in teacher salaries across different areas of Maine have indeed become larger since the date of the adoption of the EPS funding model. The results do not show that the changes were necessarily *because of* the EPS funding model; keeping the prior funding formula may have also resulted in increased salary disparity.

Table 2. Calculated Regional Adjustment Range 2004-05 to 2019-20

Data Year	Low	High	Gap	Lowest LMA	Highest LMA
2004-05	0.84	1.09	0.25	Machias - Eastport LMA	Biddeford LMA
2006-07	0.81	1.09	0.28	"	"
2008-09	0.83	1.09	0.26	"	Biddeford/Greater Portland
2013-14	0.77	1.13	0.35	"	Kittery - York LMA
2016-17	0.80	1.16	0.36	Lincoln - Howland LMA	"
2019-20	0.81	1.15	0.34	"	"

The calculated regional adjustment change from 2004-05 to 2019-20 for each LMA is provided in Appendix Table A3.

The EPS model has not been updated to reflect the newer data and the larger differences in actual salaries. This raises the concern that the formula is not providing adequate funding for all SAUs.

Policy Options and Estimated Costs

There are several policy options for the EPS Regional Adjustment: keep it as it is, eliminate it, or change it. Possible changes include the following.

- Update the regional adjustment based on recent salary data.
- Implement a minimum adjustment as a floor.
- Implement a maximum adjustment as ceiling.
- A floor or ceiling can be a fixed number, or a soft number that averages the actual adjustment with the target number.

Table 3 outlines several options for how these changes may be combined.

Table 3. Policy Options Analyzed

Option 1	Remove the Regional Adjustment from EPS
Option 2	Status Quo: No change
Option 3	Update Salary data
Modified Options	A. Add a floor
	B. Add a floor and a fixed ceiling
	C. Add a floor and a soft cap

Cost Estimates

Cost estimates for each policy option are provided in Table 4. The amounts were based on actual total full-time equivalent (FTE) teacher counts within each area and increased to estimate allocations for all EPS school staff positions. Increased cost allocations would be borne in part by the state through higher subsidies and in part by local governments through a higher property tax mill rate expectation and required local share. The state share is the estimated net increase (or decrease) in state subsidy assuming a 55% state share percentage. The local share is the estimated increase in local required amount assuming a 45% local share percentage. The numbers of LMAs with increases and decreases along with the estimated amounts are also shown, as is the range of regional adjustments under each policy option.

Option 2, the *status quo*, is listed as no cost, because it is the option to which the others were compared. Some of the options are estimated to lower the total allocation. Option 3, for example, updating the adjustment to reflect more recent salary data, would result in an estimated $7.3 million lower total allocation than the *status quo*. Assuming a 55% state share and a 45% local share, this would amount to a lower state share by $4.0 million and a lower local share by $3.3 million.

The options affect the allocations of each LMA differently, as shown in the columns of Table 4 showing LMA increases and decreases. Option 1 for example, eliminating the regional adjustment, has a modest estimated net cost reduction of $1.1 million. But figuring into that modest reduction are a substantial increase of $23.5 million in 19 LMAs along with a reduction of $24.6 million in 9 LMAs.

Table 4. Estimated Change in Cost Allocation ($millions)

Policy Option Simulation		Total Cost	State Share	Local Share	LMA Increases		LMA Decreases		Range
1. Remove Adjustment (all 1.00)		**-$ 1.1**	**-$ 0.6**	**-$ 0.5**	**19**	**$ 23.5**	**9**	**-$ 24.6**	**all 1.00**
2. *Status Quo* (no update)		**$ 0.0**	**$ 0.0**	**$ 0.0**	**0**	**$ 0.0**	**0**	**$ 0.0**	**0.84–1.09**
2A.1	Floor = 1.00	$ 23.5	$ 12.9	$ 10.6	19	$ 23.5	0	$ 0.0	1.00–1.09
2A.3	Floor = 0.93	$ 3.9	$ 2.1	$ 1.8	6	$ 3.9	0	$ 0.0	0.93–1.09
3. Update Salary Data, Old LMAs		**-$ 7.3**	**-$ 4.0**	**-$ 3.3**	**5**	**$ 9.6**	**21**	**-$ 17.0**	**0.81–1.15**
3A.1	Floor = 1.00	$ 30.2	$ 16.6	$ 13.6	23	$ 32.8	4	-$ 2.6	1.00–1.15
3A.3	Floor = 0.93	$ 2.2	$ 1.2	$ 1.0	11	$ 13.5	15	-$ 11.3	0.93–1.15
3B	Floor = 0.93, hard cap 1.09	-$ 2.9	-$ 1.6	-$ 1.3	11	$ 8.4	15	-$ 11.3	0.93–1.09
3C.1	Floor = 0.93, soft cap 1.07	-$ 2.9	-$ 1.6	-$ 1.3	11	$ 8.9	16	-$ 11.8	0.93–1.11
3C.2	Floor = 0.93, soft cap 1.09	-$ 0.3	-$ 0.2	-$ 0.2	11	$ 11.0	15	-$ 11.3	0.93–1.12

Note: To determine the cost with "hold harmless," read from the "SAUs with Increase" column.

Evaluation & Discussion of Policy Options

General Discussion

This analysis was conducted to aid in evaluation of the policy options, keeping in mind (1) that the purpose of the EPS funding model is to provide adequate educational resources to give every student an equitable opportunity to achieve the state learning standards and (2) that the purpose of the Regional Adjustment Component of EPS is to make sure that the allocation dollars are sufficient to purchase the necessary educational human resources for providing this equitable educational opportunity in all areas of the state.

One finding that is common to all reviews of the regional adjustment is that salary gaps across the state have generally grown wider over time. Two factors that may contribute to the divergence over time are changing underlying differences in labor markets and the differing ability of individual districts to raise funds to hire and retain highly-qualified teachers. Increases in the minimum teacher salary appear to moderate the trend of widening salary gaps, including both the previous increase to $30,000 in FY2008 and the increase to $40,000 that is in the process of being implemented.

The goal of the Essential Programs and Services funding model is to provide the resources necessary to provide equitable educational opportunity to all students. The challenge with accounting for regional differences is to establish a geographic index that adjusts for labor market realities without respect to community wealth. In districts where teacher salaries are lower (or higher) than what is needed to attract and retain enough qualified teachers, those actual salaries may not be valid estimates of a fair and adequate labor market. In that case, using them as indicators of labor market variation would introduce error, which may in turn exacerbate inequities based on ability to pay. However, there is no data source that exists to make it possible to readily identify whether the teachers that are paid by a given district's salaries are adequate. Anecdotal reports suggest that smaller, lower-income, and rural schools have a harder time retaining qualified teachers; these were corroborated by a recent MEPRI study of Maine teacher turnover (MEPRI, 2019), which discerned a pattern of teacher movement toward higher paying districts. If the salaries themselves are inadequate, then the regional adjustments that are calculated from them will not improve the situation.

A concept that has been discussed with increasing frequency (in the face of Maine's inability to implement updates to the regional adjustment indices despite growing regional wage differences) is the potential to switch to an external indicator such as cost of living as the underlying basis for regional adjustments. This is a topic that merits further analysis in a future review. At the time EPS was developed, an adjustment based upon cost of living data was not feasible due to numerous issues including quality of data, questionable assumptions about the relationship to salaries, and ability to calculate values for rural areas with few data points. It may be worthwhile to revisit those analyses to see whether those challenges have abated.

As noted in prior reviews, increasing the EPS cost allocation for salaries does not guarantee an increase in actual local salaries. Because the regional adjustment is determined by an LMA average salary, approximately half of the actual salaries are lower and half are higher. In SAUs where the allocation provides more funding than the district needs to cover its contractual salary commitments, it may choose to spend the surplus allocation on other local priorities. With those issues in mind, the following sections evaluate the results of each of the proposed policy options.

Option 1: Remove adjustment

Option 1 would set all regional adjustment factors to the state average of 1.00, effectively removing the regional adjustment. This option would bring more allocation and subsidy to the lower cost areas of the state, and has a slightly lower estimated cost than the *status quo*. Although the total net cost reduction is small, there would be a large reduction in cost allocations in the higher cost areas of the state ($24.6 million in 9 LMAs). The EPS cost allocation dollars would be insufficient to provide the EPS recommended level of staffing in higher cost geographic areas. This inadequacy is contrary to the purpose of the regional adjustment and the EPS cost model to provide equitable access to education resources for students in all areas of the state. Option 1 does not guarantee that additional funds are spent on raising salaries. Regional variation in actual salaries may continue to widen. MEPRI researchers do not recommend Option 1, as it undermines the goals of adequacy and efficiency for the EPS funding formula.

Option 2: Status quo

Option 2, keeping the status quo, is designated as the no-cost option, as the other options are evaluated relative to it. This option has been chosen by policymakers during each of the previous review cycles. The regional adjustment has not been updated since its initial inclusion in the original implementation of EPS for Fiscal Year 2005-06. The primary reason given for keeping the status quo has been the widening of the geographic variation in actual salaries and the resulting widening of the range of updated regional adjustment calculations. While retaining the *status quo* prevents widening the range of adjustments, this option does not reflect current reality of regional variation in teacher salaries. Salaries in some areas have increased more than the state average, and some less. The current regional adjustments based on Fiscal Year 2004-05 salaries do not reflect these changes.

Under Option 2A, a floor is added to the current model. Option 2A.1 is a floor of 1.00. All areas with an adjustment below 1.00 would be raised to 1.00, while those above 1.00 would receive their current adjustment. The advantage of this option is that it would provide increased allocation in all areas of the state with below-average salary costs. The drawback is the high cost estimated at $23.5 million, including a state subsidy increase of $12.9 million and an increased required mill rate resulting in a $10.6 million increase in the local required share.

Option 2A.2, a floor of 0.93, is a lower cost alternative to the floor of 1.00. At a total cost estimate of $3.9 million it would provide an estimated additional subsidy of $2.1 million to the lowest salary areas of the state with an increase of $1.8 million in the required local share.

MEPRI researchers do not recommend retaining the status quo permanently, due to concerns that widening pay disparities are resulting in inequities for teachers in the current funding system. Instituting a floor would mitigate the risk of underfunding in the areas of the state with below-average teacher salaries. Option 2.A.1, a floor of 1.00, is not recommended due to its higher cost and that it likely over-estimates adequate salary costs for much of the state. Options 2.A.2, a floor of 0.93, may be a preferred option in that it provides additional funding to the areas of the state with the lowest teacher salaries.

Option 3: Update Salary Data

Option 3, updating the indices to reflect recent salary data, has the advantage of reflecting current salary cost differences. It would result in an estimated cost reduction of $7.3 million, which is a net total of allocation increases of $9.6 million in 5 LMAs and decreases of $17.0 million in 21 LMAs. The updated regional adjustment would widen the regional adjustment a range of 0.81 to 1.15 as a result of the increasing actual geographic differences in salaries.

Several Option 3 modifications were examined, including floors as well as hard and soft caps. The lowest cost areas would receive an increased cost allocation from a floor. The caps are not intended to reduce the regional adjustments of higher cost areas but rather to limit the increases. Higher cost areas would still see an increased cost allocation compared to the current EPS regional adjustment but not as much as the actual salary increases.

Options 3A.1 and 3A.2 provide floors similar to those under Option 2A. The primary advantage of these options modifications is in providing increased subsidies to lower salary areas of the state. The main disadvantage of Option 3A.1, a floor of 1.00, is the cost of 30.2 million. Option 3A.1, a floor of 0.93 is a lower cost option at an estimated $2.2 million intended to provide more subsidy to lower cost areas of the state, where salaries are not keeping pace with the rest of the state.

Option 3B provides a minimum adjustment floor of 0.93 and caps the maximum adjustment at 1.09, which is equal to the highest current adjustment. Capping the adjustment lowers the total cost, resulting in an overall estimated allocation reduction of $2.9 million. The

advantages of this option are that a floor provides additional subsidy to the lowest cost areas of the state, and current reality of regional cost differences are better reflected among other areas. Necessarily, some areas will experience lower adjustments, including 15 LMAs with an estimated reduction of $11.3 million in allocation. As a caution, one possible drawback is that the cap may result in allocations that are inadequate to provide equitable educational resources in some of the highest cost areas. Compared to the status quo, however, the highest cost areas would see increases in their regional adjustment.

Option 3C.1 and 3C.2, which have a floor of 0.93 and a soft cap of 1.07 or 1.09, are an attempt to provide a balanced approach, recognizing the increasingly higher cost of labor in parts of the state, while at the same time acknowledging some portion of the salary increases may be due to the higher local ability to pay rather than strictly higher salary requirements of teachers. LMAs above the soft cap of 1.07 or 1.09 receive an adjustment halfway between the respective cap and the calculated adjustment. For example, the calculated adjustment for Kittery - York LMA is 1.15. Under Option 3C.1, it would receive an adjustment halfway between 1.07 and 1.15, which is 1.11. The result of option 3C.1 is a range of adjustments from 0.93 to 1.11 with an estimated cost savings of $2.9 million. For Option 3C.1, the estimated cost savings is $0.3 million. The advantages of these options is that the floor provides an increase to the lowest cost areas, and the cost is more reflective of actual salary. As in Option 3B, there are areas whose salaries have not kept pace with the state average, resulting in reduced adjustments under this option. They are the same 15 LMAs and $11.3 million as in Option 3B. It is possible that this option also provides inadequate resources in the highest cost areas. However, allocations in those areas would be higher than either Option 3B or the *status quo*.

Summary of MEPRI Recommendations

As detailed in the evaluation and discussion above, using salary data as a measure of regional differences in labor markets is imperfect. Salaries are influenced by labor market factors, e.g. cost of living differences, regional competition for jobs, etc. This is demonstrated by the finding that there are high-poverty districts in some parts of the state that pay at or above the state average, and low-poverty districts elsewhere that pay below the state average. Salaries also depend on each district's ability to raise taxpayer funds. This can be seen in the comparative salaries within each labor market area, with poorer districts generally paying lower salaries than

neighboring wealthy districts. Thus salaries at the lowest and highest ends of the spectrum can reasonably be presumed to be influenced by community wealth, and are not solely a reflection of regional differences. Accordingly, MEPRI recommends the following options.

1. In the spirit of an adequacy-based funding formula, we recommend retaining a regional adjustment index to promote equitable and adequate educational human resources statewide.
2. To counter the lesser ability of lower-income communities to raise funding adequate to attract teachers, it would be beneficial to institute a minimum floor. This floor should be less than 1.00 (where 1.00 is the state average), as regional labor market variation means that some districts can attract teachers with below-average salaries. Such communities should not be required to raise more taxpayer funds than are needed to provide adequate resources.
3. If the regional adjustment is updated with new salary data, it is also valid to institute a maximum adjustment cap. The communities at the top of the pay scales in any geographic area have a greater ability to raise taxpayer funds to pay higher salaries to attract and retain teachers, and thus incorporating the full amount of salary differences is an expenditure-based (rather than adequacy-based) methodology. This could be instituted as either a fixed or soft cap. If the regional adjustment is not updated to reflect recent salary data, a maximum cap is not necessary, only a floor.
4. MEPRI should continue to monitor geographic variation in teacher salaries during future periodic reviews of the EPS Regional Adjustment. When new labor market areas are generated based on 2020 Census data, changes to the geographic unit in the regional adjustment should be explored.
5. MEPRI may also investigate the feasibility and potential impacts of instituting a different methodology based on one or more external indices (such as cost of living, housing costs, etc.) to adjust for regional labor market variation. Appendix Table A4 provides example data using three such county-level measures.

Table A1. Regional Adjustment Calculation Detail by LMA Group
For 35 Labor Market Areas (2019-20 Staff Data)

Labor Market Area (LMA)		Intercept (First Year Bachelors Degree)	Experience Coefficient (First 20 Years)	Experience Coefficient (Beyond 20 Years)	Education Coefficient	Average Salary Adjusted for Education and Experience	Regional Adjustment (Updated Data)
1	Kittery - York LMA	$ 44,370	$ 1,326	$ 0	1.104	$ 64,340	1.15
2	Sanford LMA	36,832	1,363	217	0.517	55,854	1.00
3	Biddeford LMA	40,233	1,422	288	0.691	60,766	1.09
4	Greater Portland LMA	40,805	1,396	295	0.925	61,839	1.11
5	Bath - Brunswick LMA	35,964	1,191	690	1.124	56,265	1.01
6	Boothbay Harbor LMA	38,686	1,499	446	0.473	59,856	1.07
7/10	Sebago Lake LMA Norway - Paris LMA	34,944	936	317	0.934	50,455	0.90
8	Lewiston - Auburn LMA	36,921	979	477	0.841	53,074	0.95
9	Rockland LMA	38,891	1,271	320	0.835	58,156	1.04
11	Stonington LMA	35,530	762	564	0.899	49,479	0.89
12	Augusta LMA	34,237	1,146	621	0.476	51,593	0.92
13	Waterville LMA	36,239	939	839	0.420	51,480	0.92
14	Belfast LMA	34,907	1,390	0	0.555	53,782	0.96
15	Bucksport LMA	34,249	909	659	0.503	48,906	0.88
16	Jonesport - Milbridge LMA	34,900	649	338	0.484	45,423	0.81
17	Bangor LMA	34,297	1,509	234	1.008	56,822	1.02
18	Machias - Eastport LMA	32,860	759	184	0.872	45,626	0.82
19	Dexter - Pittsfield LMA	32,394	1,351	404	0.567	51,953	0.93
20	Ellsworth - Bar Harbor LMA	36,295	983	464	0.503	51,303	0.92
21	Outer Bangor LMA	33,711	1,052	438	0.168	48,357	0.87
22	Rumford LMA	35,472	1,144	526	0.554	52,806	0.95
23	Lincoln - Howland LMA	33,387	736	755	0.289	45,460	0.81
24	Farmington LMA	35,032	1,040	451	0.230	49,771	0.89
25	Calais LMA	35,024	1,110	151	0.723	51,471	0.92
26/27/28	Patten - Island Falls LMA Millinocket - East Millinocket LMA Houlton LMA	33,307	907	624	0.430	47,595	0.85
29	Skowhegan LMA	37,204	1,025	423	0.649	53,116	0.95
30/31	Greenville LMA Dover - Foxcroft LMA	34,381	1,022	410	0.480	49,640	0.89
32	Presque Isle - Caribou LMA	33,877	1,036	319	0.898	50,488	0.90
33/34/35	Van Buren LMA Fort Kent LMA Madawaska LMA	34,911	1,043	444	0.871	51,858	0.93
	Lowest	$ 32,394	$ 649	$ 0	0.168	$ 45,423	0.81
	Highest	$ 44,370	$ 1,509	$ 839	1.124	$ 64,340	1.15
	Maine	$ 34,044	$ 1,150	$ 347	1.000	$ 55,789	1.00

* Due to the small number of teachers in each of these LMAs, data was combined into the following groups: 7/10; 26/27/28; 30/31; and 33/34/35.

Table A2. Regional Adjustment Calculation by LMA Group
(2019-20 Teacher Salary Data)

Labor Market Area (LMA)		Average Teacher Salary	Indexed to State	Average Salary Adjusted for Education and Experience	Regional Adjustment
1	Kittery - York LMA	$ 67,124	1.20	$ 64,340	1.15
2	Sanford LMA	54,057	0.97	55,854	1.00
3	Biddeford LMA	61,619	1.10	60,766	1.09
4	Greater Portland LMA	63,521	1.14	61,839	1.11
5	Bath - Brunswick LMA	60,087	1.08	56,265	1.01
6	Boothbay Harbor LMA	59,477	1.07	59,856	1.07
7/10	Sebago Lake LMA Norway - Paris LMA	49,490	0.89	50,455	0.90
8	Lewiston - Auburn LMA	50,184	0.90	53,074	0.95
9	Rockland LMA	57,578	1.03	58,156	1.04
11	Stonington LMA	49,253	0.88	49,479	0.89
12	Augusta LMA	51,855	0.93	51,593	0.92
13	Waterville LMA	53,671	0.96	51,480	0.92
14	Belfast LMA	54,083	0.97	53,782	0.96
15	Bucksport LMA	50,501	0.91	48,906	0.88
16	Jonesport - Milbridge LMA	44,847	0.80	45,423	0.81
17	Bangor LMA	58,113	1.04	56,822	1.02
18	Machias - Eastport LMA	42,280	0.76	45,626	0.82
19	Dexter - Pittsfield LMA	50,998	0.91	51,953	0.93
20	Ellsworth - Bar Harbor LMA	49,643	0.89	51,303	0.92
21	Outer Bangor LMA	46,839	0.84	48,357	0.87
22	Rumford LMA	52,630	0.94	52,806	0.95
23	Lincoln - Howland LMA	44,896	0.80	45,460	0.81
24	Farmington LMA	50,211	0.90	49,771	0.89
25	Calais LMA	48,445	0.87	51,471	0.92
26/27/28	Patten - Island Falls LMA Millinocket - East Millinocket LMA Houlton LMA	46,529	0.83	47,595	0.85
29	Skowhegan LMA	53,269	0.95	53,116	0.95
30/31	Greenville LMA Dover - Foxcroft LMA	46,406	0.83	49,640	0.89
32	Presque Isle - Caribou LMA	50,346	0.90	50,488	0.90
33/34/35	Van Buren LMA Fort Kent LMA Madawaska LMA	52,143	0.93	51,858	0.93
	Lowest	$ 42,280	0.76	$ 45,423	0.81
	Highest	$ 67,124	1.20	$ 64,340	1.15
	Maine	$ 55,789	1.00	$ 55,789	1.00

Table A3. Calculated Regional Adjustment Change
By Labor Market Areas 2004-05 to 2019-20

Labor Market Area (LMA)		Regional Adjustment Calculations						Change 2004-05 to 2019-20
		2004-05 Data (Current EPS Model)	2006-07 Data	2008-09 Data	2013-14 Data	2016-17 Data	2019-20 Data	
1	Kittery - York LMA	1.06	1.07	1.06	1.13	1.16	1.15	+.09
2	Sanford LMA	1.03	1.04	1.02	1.00	0.99	1.00	-.03
3	Biddeford LMA	1.09	1.09	1.09	1.09	1.08	1.09	-.00
4	Greater Portland LMA	1.08	1.08	1.09	1.10	1.10	1.11	+.03
5	Bath - Brunswick LMA	1.02	1.04	1.03	1.05	1.02	1.01	-.01
6	Boothbay Harbor LMA	1.03	1.02	1.05	1.06	1.11	1.07	+.04
7/10	Sebago Lake LMA Norway - Paris LMA	0.94	0.94	0.93	0.91	0.90	0.90	-.04
8	Lewiston - Auburn LMA	0.98	0.97	0.96	0.95	0.96	0.95	-.03
9	Rockland LMA	1.00	1.01	1.00	0.97	1.04	1.04	+.04
11	Stonington LMA	0.95	0.98	0.94	0.94	0.92	0.89	-.06
12	Augusta LMA	0.95	0.96	0.94	0.93	0.92	0.92	-.03
13	Waterville LMA	0.97	0.97	0.96	0.94	0.92	0.92	-.05
14	Belfast LMA	1.01	1.01	0.99	0.98	0.97	0.96	-.05
15	Bucksport LMA	0.94	0.92	0.90	0.88	0.87	0.88	-.06
16	Jonesport - Milbridge LMA	0.84	0.84	0.83	0.81	0.82	0.81	-.03
17	Bangor LMA	1.02	0.99	1.02	1.04	1.02	1.02	-.00
18	Machias - Eastport LMA	0.84	0.81	0.83	0.77	0.84	0.82	-.02
19	Dexter - Pittsfield LMA	0.94	0.96	0.96	0.96	0.95	0.93	-.01
20	Ellsworth - Bar Harbor LMA	0.93	0.93	0.91	0.89	0.92	0.92	-.01
21	Outer Bangor LMA	0.89	0.89	0.89	0.88	0.87	0.87	-.02
22	Rumford LMA	0.93	0.92	0.92	0.94	0.94	0.95	+.02
23	Lincoln - Howland LMA	0.86	0.85	0.84	0.82	0.80	0.81	-.05
24	Farmington LMA	0.96	0.95	0.96	0.90	0.92	0.89	-.07
25	Calais LMA	0.96	0.97	0.98	0.95	0.90	0.92	-.04
26/27/28	Patten - Island Falls LMA Millinocket - East Millinocket LMA Houlton LMA	0.88	0.90	0.87	0.87	0.86	0.85	-.03
29	Skowhegan LMA	1.03	1.02	1.05	1.02	0.96	0.95	-.08
30/31	Greenville LMA Dover - Foxcroft LMA	0.95	0.95	0.94	0.92	0.91	0.89	-.06
32	Presque Isle - Caribou LMA	0.90	0.90	0.89	0.89	0.90	0.90	+.00
33/34/35	Van Buren LMA Fort Kent LMA Madawaska LMA	0.99	1.00	0.98	0.97	0.95	0.93	-.06
	Lowest	0.84	0.81	0.83	0.77	0.80	0.81	-.08
	Highest	1.09	1.09	1.09	1.13	1.16	1.15	+.09
	Maine	1.00	1.00	1.00	1.00	1.00	1.00	~

Table A4. Example Cost of Living Index Measures by Maine County

	Median Housing Cost Index		Living Wage Index		Family Budget Index	
County	Median Rent ($)[1]	Resulting Index	Living Hourly Wage ($)[2]	Resulting Index	Annual Family Budget[3]	Resulting Index
Androscoggin	915	0.94	20.66	0.98	78,029	0.98
Aroostook	762	0.78	18.71	0.89	77,180	0.97
Cumberland	1,096	1.12	23.58	1.12	92,425	1.16
Franklin	1,054	1.08	19.53	0.92	73,897	0.93
Hancock	984	1.01	20.47	0.97	83,702	1.05
Kennebec	919	0.94	20.14	0.95	74,033	0.93
Knox	974	1.00	20.38	0.96	80,240	1.01
Lincoln	831	0.85	21.16	1.00	81,053	1.02
Oxford	878	0.90	20.50	0.97	74,720	0.94
Penobscot	910	0.93	20.53	0.97	80,069	1.01
Piscataquis	1,110	1.14	19.64	0.93	74,737	0.94
Sagadahoc	925	0.95	21.48	1.02	82,548	1.04
Somerset	989	1.01	19.89	0.94	74,695	0.94
Waldo	968	0.99	20.33	0.96	78,375	0.99
Washington	911	0.93	20.05	0.95	79,273	1.00
York	1,053	1.08	22.47	1.06	85,865	1.08
Maine	*976*	*1.00*	*21.14*	*1.00*	*79,428*[4]	*1.00*

[1] Median cost of 2 bedroom apartment rental including utilities; 2017 data at https://www.mainehousing.org/policy-research/housing-data/affordability-indexes

[2] Hourly rate that an individual in a household needs to earn to help support a family of four (two working adults and two children); 2019 data at https://livingwage.mit.edu/states/23/locations

[3] Income that a household needs to support a family of four at a "modest yet adequate" standard of living; 2017 data at https://www.epi.org/resources/budget/

[4] An annual budget was not available for Maine overall. This base amount (79,428) is an average with each county weighted equally. This underestimates the denominator and thus produces index values that are artificially inflated to an unknown extent.