

Millersburg Area  
And  
Upper Dauphin Area  
**School District Combination Feasibility Report**



PENNSYLVANIA  
ECONOMY LEAGUE  
Information, Insight, Integrity.

&

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## EXECUTIVE SUMMARY

At a joint board meeting on April 15, 2019, the Millersburg Area School District and the Upper Dauphin Area School District Boards voted to engage the Pennsylvania Economy League, Inc. (PEL) and Thompson and Associates Architects & Planners (Thompson) to provide a comprehensive feasibility report on the possibilities of a merger between the two districts. The work was funded by a grant from the Pennsylvania Department of Education and equal contributions from each district. PEL and Thompson assembled a team of subject matter experts to complete the study.

After conducting a careful study of finances, curriculum and facilities and a preliminary review of transportation, and meeting with representatives from both districts, the consulting team identified five merger options. These options were outlined in *Millersburg Area and Upper Dauphin Area School District Combination Feasibility Report* and presented at a joint meeting of school boards of Millersburg Area and Upper Dauphin Area school districts on November 21, 2019. Both boards approved identical resolutions "...that the Joint Boards ... authorize [PEL] to proceed with Phase II of the Feasibility Study with a focus on Merger Option Five and cost estimates of Merger Options Two and Three as outlined in the Phase I Study."

The Feasibility Report recommended that the combined school district organize under Merger Option 5: grades K to 5 at the Loyaltown campus of the Upper Dauphin Area School District, grades 6 to 8 at the Millersburg Area Middle School/High School campus, and grades 9 to 12 at the Upper Dauphin Area High School. The Joint Boards requested that PEL also do a review and comparison of Options 2 and 3. Under Merger Option 2, all students would attend the Upper Dauphin Area Elementary, Middle and High School buildings. Under Merger Option 3, grades K to 8 would be in two attendance areas and grades 9 to 12 would be consolidated at the Upper Dauphin Area High School.

In brief, a review of the three options under consideration indicates that Option 5 would best provide for an educational model that includes the principles of equity in education and potential for success for all students that will be served by the merged district. This configuration provides for the best use of existing buildings and the greatest opportunity for economies of scale. The merged district will be able to provide more diverse instructional content and maintain and enhance K-12 course offerings.

Note, the following study does not take into account any impacts of the COVID-19 pandemic, such as increased cleaning costs, enrollment fluctuation, or impacts on transportation services.

### Chapter 1: Evaluation of Merger Options 2, 3 and 5

Options 2, 3, and 5 were reviewed for net cost reductions. In order to calculate the net cost reductions, estimates of future staffing needs, curriculum requirements, facility capacity and adaptability, and estimated one-time costs for renovation and adaptation were considered and compared. Cost reductions were estimated for staffing, facilities and other items as required to implement the respective options. Estimated annual recurring cost reductions are \$3.4 million for Option 2, \$1.8 million for Option 3, and \$3.3 million for Option 5.

Options 2, 3 and 5 were reviewed for suitability for investment in an educational model that includes the principles of equity in education and potential for success for all students that will

be served by the merged district. A look at enrollment projections through 2028-2029 demonstrates insufficient facility capacity under Option 2. Additionally, this option would impact state subsidy for debt service. Option 3 would require the district to replicate programs and resources in two separate facilities. The district would have to allocate federal funds based on economic need of the students and would potentially reduce equity across the district. Under Option 3 the basic elementary grade configurations would be different in the same district, K to 5 in one facility and K to 4 in another facility. Option 5 represents the best option for the district to ensure equity by keeping grade levels together and a continued commitment to middle school philosophy.

In sum, a review of the three options under consideration indicates that Option 5 would best provide for an educational model that includes the principles of equity in education and potential for success for all students that will be served by the merged district. This configuration provides for the best use of existing buildings and the greatest opportunity for economies of scale. The merged district will be able to provide more diverse instructional content and maintain and enhance K-12 course offerings.

## Chapter 2: Historical Finances and Financial Projections of Individual Districts

Historically, Millersburg Area and Upper Dauphin Area school districts experienced at least one deficit in the review period from 2013-14 to 2017-18. In terms of historical revenues, the main local source for both districts were local property taxes, and both districts enacted property tax increases during the historical review period. Upper Dauphin Area experienced a larger increase in its state Basic Education Funding of 6 percent compared to 3 percent for Millersburg Area. On the historical expenditure side, overall costs in Millersburg Area increased by 14.8 percent compared to 12.1 percent in Upper Dauphin Area. The largest absolute growth for both was retirement costs, which rose by \$1.3 million in Upper Dauphin Area and \$875,227 in Millersburg Area. Both districts generally remained within best practice recommendations concerning debt levels.

Financial projections for the school districts, with the status quo, indicate that both are likely to experience growing annual deficits starting with the 2019-20 budget as revenues are anticipated to stagnate while expenditures are expected to increase. For Millersburg Area, the 2019-20 budget deficit of \$472,000 is projected to grow to a \$1.7 million deficit in 2023-24. For Upper Dauphin Area, the 2019-20 budget deficit of \$337,000 is projected to grow to a \$1.9 million deficit in 2023-24.

## Chapter 3: Curriculum Analysis of Option 5

The curriculum analysis of the merger involved a systemic review, which will allow the new district to incorporate the best of the two present districts, as well as incorporate best practices for curriculum development, instructional strategies and educational opportunities. In focusing on Option 5 (grades Pre-K to 5, 6 to 8, 9 to 12) as recommended in the Feasibility Study, one of the advantages of that option is that the grade configuration better promotes systemic implementation than other options. Another is that it affords the most effective and efficient use of resources. The combination of primary, elementary, middle and high school staff, students and resources under Option 5 allows for a synergy, where the whole is greater than the sum of the parts.

As part of the review process, members of the study team met with teachers and administrators from both districts. Meetings were held with representatives of the social studies, math, English, science, physical education, computer/business, art and music departments. During these meetings, representatives from each district were able to explain how their curriculum is set up and were able to talk about the similarities and differences that presently exist in their respective areas. For the most part, there are far more similarities than differences. In the context of the curriculum analysis, the chapter involves an examination of facilities, staffing, scheduling, special education, professional development, equity of resources and programming, technology infrastructure and instructional support.

For grades Pre-K to 5 and 6 through 8, having students of elementary school age in one building and students of middle school age in a separate building allows the schools to focus on developing an age-appropriate environment to permeate the entire school. The school would be able to establish and promote academic expectations, behavioral expectations and personal expectations in a building wide environment.

In addition, the integration and support of special education students with the appropriate age cohorts could be more efficiently and uniformly done when those grade level classes are all in the appropriate age and grade facility. With the increased number of classes at a given grade level in Option 5, special needs students can be integrated in a variety of classrooms, providing age appropriate academic and social interactions without putting an inordinate number of special needs students in any one class.

Upon the merger implementation all high school students will be attending the high school at Elizabethville. This will have implications on costs related to meeting the needs of the combined student body, particularly related to programming, staffing and facilities.

The enrollment of the grades 9 to 12 building will remain relatively stable, according to projections from the Pennsylvania Department of Education. Class size, however, will fluctuate, which will impact the schedule of classes and facilities, especially the specialized rooms such as science laboratories, art and music rooms, special education rooms and computer labs.

Chapter 3 is offered as a guideline for discussions and decisions related to curriculum. The recommendations will be impacted by priorities of the district and factors beyond the scope of this analysis. Nevertheless, the recommendation is that Option 5 is the most cost-effective and the most educationally sound option for merging the two school districts.

#### Chapter 4: Facilities

Upon careful consideration of the benefits and challenges of the available options, Option 5 is recommended as the preferred facility solution. The merged district would operate a grades Pre-K to 5 elementary school at the Loyaltown campus, taking into consideration grade level clusters, classroom modifications, multiple gym and cafeteria options, wall modifications, and bus and traffic recommendations. The combined district would adapt the existing Millersburg secondary building for grades 6 to 8 middle school, taking into consideration multidisciplinary teams, grade-level distribution, art and technical education, extracurricular and community access, and

Dauphin County Library recommendations. All options considered, including Option 5, would consolidate all high school students at the current Upper Dauphin Area High School facility.

Advantages of Option 5 identified in the facilities analysis are as follows.

- The district could capitalize on the grade 4 to 8 certification of teachers.
- Fifth graders would benefit from one more year of robust, elementary-level math and literacy pupil supports services to better prepare them for secondary school.
- Organizing the district in grade-level buildings promotes class section size equity.
- The district can more efficiently address unforeseen changes in needed special education services in grade-level buildings.
- Faculty can conduct face-to-face grade-level planning.
- Science classrooms are available as sign-out labs for elementary science instruction and projects.
- Facilities in this configuration provide ample space to accommodate unforeseeable enrollment “bubble”.
- Facilities in this configuration also provide ample space to accommodate special education and pupil support services.

Modest suggested adaptation costs related to Option 5, estimated at \$133,000, would provide for adaptive use of Millersburg Area High School building trades shop for a middle school technical education lab, separate Millersburg bus and parent/visitor traffic, toilet rooms in four kindergarten classrooms, and modified openings between the existing Upper Dauphin Area Elementary School and Upper Dauphin Area Middle School.

## Chapter 5: Transportation Impact

An analysis of the impact of a merger of the two school districts on transportation involves two primary areas: transportation cost and student transportation times. To understand the potential impact on transportation cost, the consulting team evaluated the annual transportation miles of the combined district based on a preliminary, conservative model route schedule of a new merged district. Additionally, the team evaluated state subsidy of a new merged district. The same route information was used to analyze potential impact on student transportation times.

The merger of the two school districts will necessitate a larger overall transportation network with more routes and annual transportation miles than combined pre-merger district totals. The larger transportation network will lead to higher expenditures and larger state subsidies. The net cost of post-merger transportation services is estimated to be similar to the combined pre-merger district totals, with the potential for net cost savings in the range of \$50,000 to \$100,000 annually. However, the merger will see a year-one net cost increase of approximately \$360,000 because of the one-year lag in state subsidies, a cost that may be able to be offset through one-time financial assistance for the merger from the state

Based on preliminary post-merger route analyses, 90 percent of students are calculated as having morning and afternoon post-merger transportation trips of 60 minutes or less, and travel times are relatively uniform across grade levels. Millersburg Area elementary students, Upper Dauphin Area middle school students, and Millersburg Area high school students exhibit greater pre-merger-to-post-merger transportation time changes due to the facility arrangement of Option 5.



The analysis and routes described are preliminary, conservative estimates; the districts can consider adding additional routes to balance cost and travel times. The districts also can consider seeking vendor assistance to review the preliminary routes for further efficiency.

### Chapter 6: Financial Impacts of a Combined District

Both districts will face significant deficits over the next several years regardless of whether they combine. Combining the districts involves equalizing the property tax millage rates, realigning the administration, and adjusting the salary and benefits schedules for professional and support staff. Chapter 6 looks at the estimated financial effects of combining the districts.

As shown in the districts' individual projections, expenditure increases are inevitable. Growth in healthcare and pensions are two of the biggest increases. Those costs will continue to grow regardless of whether the districts combine.

When districts combine, they are required to develop a combined budget and related financial plan. Typically, the individual districts' financial information from the prior year is used as a starting point. Using data from the year prior to the actual combination creates a base for adjusting taxes, if necessary, and equalizes taxes between the two districts for the first year of the combined district. Chapter 6 analysis uses the 2021-22 budget year estimates for the individual districts as the basis for financial data.

For the 2021-22 school year, the deficits for each of the districts were estimated at over \$1.0 million. Real estate tax increases are inevitable as both districts show deficits into the future regardless of the merger outcome.

The financials show a surplus of \$115,705 in the first year of the merger. This projection reflects the real estate millage of 18.8775 (Upper Dauphin Area's current rate) for all property owners of the merged district as well as the increase net transportation costs in the first year.

When combined, the earned income tax and real estate tax bases should provide adequate and larger natural growth, which will create more budget flexibility and reduce pressure for real estate tax increases that may be necessary under Act 1 limitations. The combined district should be able to slow expenditure growth through economies of scale and elimination of duplicative services while providing enhanced educational opportunities to students of both districts.

### Chapter 7: Pennsylvania Department of Education Submission Information

Chapter 7 has not been included in the draft report. This information is not required yet.

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## CHAPTER 1 EVALUATION OF MERGER OPTIONS

On November 21, 2019, the school boards of Millersburg Area and Upper Dauphin Area met in a joint meeting regarding merger options as presented in the *Millersburg Area and Upper Dauphin Area School District Combination Feasibility Report* prepared by the Pennsylvania Economy League and Thompson Associates (Feasibility Report). At this meeting, an identical motion was approved by both boards:

*It is recommended that the Joint Boards of the Millersburg Area And Upper Dauphin Area School Districts authorize the Pennsylvania Economy League to proceed with Phase II of the Feasibility Study with a focus on Merger Option Five and cost estimates of Merger Options Two and Three as outlined in the Phase I Study.*

These options are:

1. **Merger Option 2:** All students attend the Upper Dauphin Area Elementary, Middle, and High School Buildings
2. **Merger Option 3:** Grades K-8 Two Attendance Areas with Grades 9-12 Consolidated
3. **Merger Option 5:** Grades K-5, 6-8, with Grades 9-12 Consolidated

The Feasibility Report recommended that the combined school district organize under Option 5: K through 5 at the Loyalton campus of the Upper Dauphin Area School District, Grades 6<sup>th</sup> to 8<sup>th</sup> at the Millersburg Area Middle School/High School campus and Grades 9 to 12 at the Upper Dauphin Area High School (Elizabethville). Options 2, 3, and 5 would require all students to attend a common high school situated at the current Upper Dauphin Area High School facility.

### **Summary of Cost Estimates of Options 2, 3 and 5**

Options 2, 3, and 5 were reviewed for net cost reductions and suitability for investment in an educational model that includes the principles of equity in education and potential for success for all students that will be served by the merged district. In order to calculate the net cost reductions, estimates of future staffing needs, curriculum requirements, facility capacity and adaptability, and estimated one-time costs for renovation and adaptation were considered and compared for this report. Cost reductions were estimated for staffing, facilities and other items as required to implement the respective options. (Table 1-1)

**Table 1-1: Staffing, Cost Reductions and Annual Net Cost Reduction  
Options 2, 3 and 5**

	Current	Option 2		Option 3		Option 5	
		Proposed	Change	Proposed	Change	Proposed	Change
<b>Staffing</b>							
Administrative	18	15	-3	15	-3	15	-3
Professional	166	138	-28	151	-15	138	-28
Support	49	30	-19	46	-3	40	-9
Total	233	183	-50	211	-2	193	-40
Paraprofessional	49	TBD	TBD	TBD	TBD	TBD	TBD
<b>Cost Reductions</b>							
Administrative			\$240,000		\$240,000		\$240,000
Professional Staff			1,764,000		945,000		1,764,000
Support Staff			511,528		82,257		243,156
Paraprofessionals			=		=		=
Total			<b>\$2,667,540</b>		<b>\$1,348,692</b>		<b>\$2,399,168</b>
Healthcare			387,093		131,963		351,902
Net Employer Share			<u>580,584</u>		<u>292,483</u>		<u>518,644</u>
<b>Subtotal</b>			<b>\$3,483,205</b>		<b>\$1,691,704</b>		<b>\$3,117,702</b>
<b>Other Adjustments</b>							
Debt Service Subsidy			(250,000)		-		-
<b>Recurring Savings</b>			<b>\$3,233,205</b>		<b>\$1,691,704</b>		<b>\$3,117,702</b>
<b>Est. Facilities Costs</b>							
<b>One-time</b>			<b>(1,600,000)</b>		<b>(600,000)</b>		<b>(133,000)</b>
<b>Net Cost Reduction</b>			<b>\$1,633,205</b>		<b>\$1,091,704</b>		<b>\$2,984,702</b>

Estimated annual recurring cost reductions are: Option 2, \$3.2 million; Option 3, \$1.7 million; and Option 5, \$3.1 million. Estimates of the change in transportation costs and duplication of curricular materials were not directly considered in the cost analysis due to the variability of costs that will depend upon policy decisions that might be necessary to fully implement that option. The annual recurring cost reductions for these options also do not necessarily reflect the ultimate practicality of either option. Transportation times and costs for Option 5 are discussed in detail in Chapter 5 of this report. One-time costs for renovation, building capacity for enlarged enrollment, and other consideration must also be reviewed to determine the most appropriate option that provides the most efficient and practical utilization of facilities with the best educational resources for the students now and into the future.

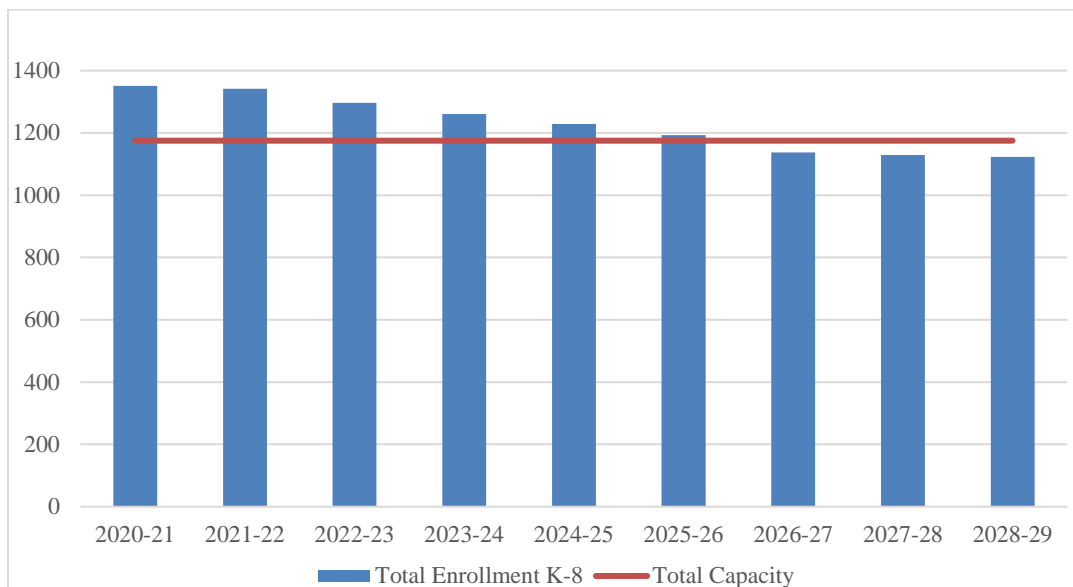
**Merger Option 2: All students attend the Upper Dauphin Area Elementary, Middle, and High School Buildings**

Option 2 would result in the combination of the enrollments of both Millersburg Area and Upper Dauphin Area student bodies on the Upper Dauphin Area campus and the closing of the Millersburg Area buildings. Projected enrollments through school years 2028-29 from the PA Department of Education were used to gauge the current and expected classroom capacity for the combined enrollment. Using an average class size of 22 students, the elementary school side has insufficient capacity to house the projected combined K to 4 enrollments of 633 in fall 2021. (Table 1-2 and Graphs 1-1 to 1-3) By fall 2028, enrollment projections indicate that the combined enrollment will be 556 students in the elementary side (105.3 percent of capacity) and 510 students at the middle school (78.8 percent of capacity) for a total of 1,066 students at an overall capacity of 90.7 percent. (Table 1-2 and Graphs 1-1 through 1-3)

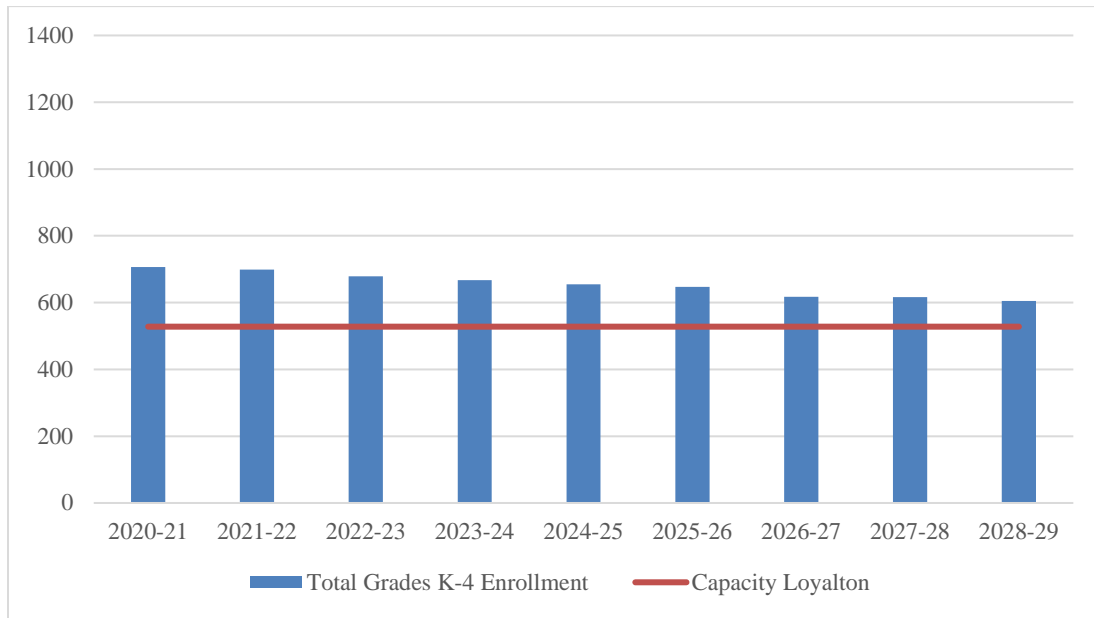
**Table 1-2: Elementary and Middle School Enrollment versus Capacity  
Based on 22 Students per Section**

	Capacity at 22 Students per Section	2021-22 Projected Enrollment	% of Capacity	2028-29 Projected Enrollment	% of Capacity
Loyalton Elementary School (PK-4)	528	633	119.9%	556	105.3%
Loyalton Middle School (5-8)	647	611	90.3%	510	78.8%
Total Loyalton	1175	1217	103.6%	1066	90.7%

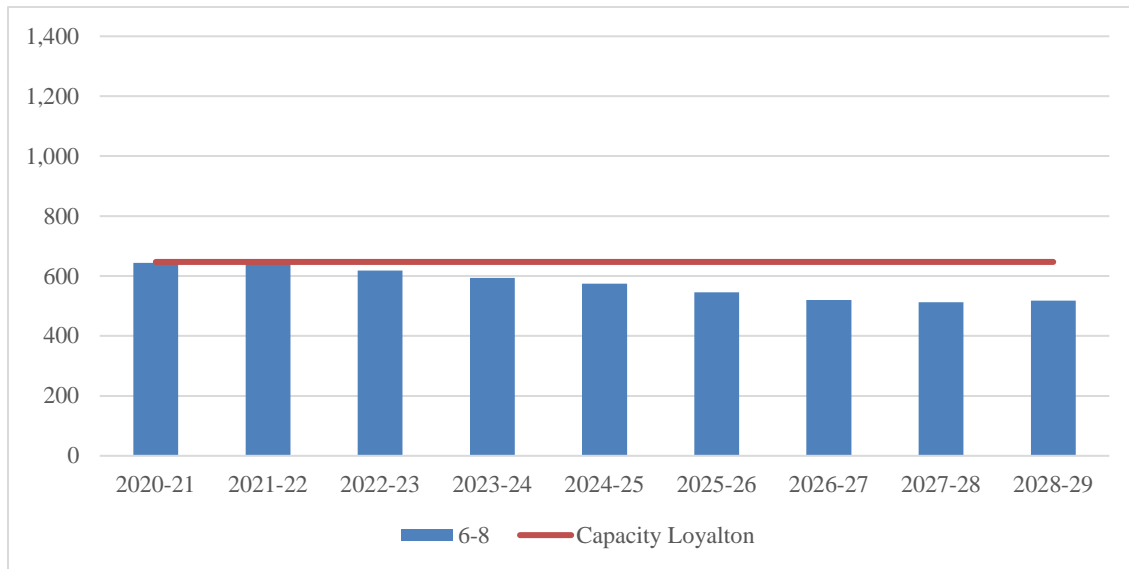
**Graph 1-1: Grades K-8 Projected Enrollment versus Capacity  
Option 2**



**Graph 1-2: Grades K-4 Projected Enrollment versus Capacity Option 2**



**Graph 1- 3: Grades 5-8 Projected Enrollment versus Capacity Option 2**



Organizing the district in grade-level buildings promotes class section size equity. The district can more efficiently address unforeseen changes in needed special education services, in grade-level buildings. Faculty can conduct face-to-face, grade-level planning, without coordinating technology and schedules.

Class section size can be affected by the current district philosophy of push-in type special education and pupil support services, which require extra space within individual classroom sections (for example, a wheelchair-bound student with a full-time aide). In these circumstances, Upper Dauphin Area assigns 20 students or less to a class section.

Although Upper Dauphin Area Elementary and Middle School share a campus, the two schools operate independently, with a secured wall between. Students do not currently circulate between the two separate schools. As a result, combining the capacity of the two schools (1,175 students) is not a practical solution to ease overcrowding in the elementary K to 4 grades.

In addition, we calculate that any excess capacity in the middle school in Fall 2021 will be in existing related arts program space. We recommend adapting a cluster of related arts (music and family and consumer science) spaces to regular classrooms, just to accommodate the need for regular classrooms in the middle school.

Considering all these factors, combined capacity of the elementary and middle schools will be insufficient in the long-term (up to ten years) to meet the projected enrollment. In order to increase capacity, permanent or temporary (modular) construction of classrooms must be considered, subject to PDE requirements and at additional costs.

### **Out of District Students Potential Impact on Loyaltown Enrollment**

In a discussion of future building capacity in Option 2, consider those students that are presently not in the district but could return to the district in the future if all or any of these non-district facilities close for any reason. There are currently 91 students that attend out of district schools. These schools include charter and cyber charter along with special education facilities and other schools. These students are not included in PDE enrollment projections and capacity projections used above. The enrollment of these students into a merged district would be a consideration for enrollment capacity under any option considered. However, the capacity for absorbing increased enrollments under Option 2 is uniquely limited and lacks the excess capacity to accommodate future enrollment “bubbles” or increased enrollment demand from out of district students. The other options under review do provide “excess” capacity that would absorb an unforeseen enrollment increase.

The current projection shows that Loyaltown in a combined grades K to 8 is at 90.7% of capacity in 2028-29; the K to 4 grade range is higher at 105.3% of capacity in 2028-29. Adding unforeseen additional students at any time in the next ten years will severely stress the capacity of a single Loyaltown campus. There are 367 students that attend Amish schools in the district. While the Amish students are not likely to impact district enrollment, trends in charter and cyber charter students are an important consideration in any future capacity discussion.

### *Loss of State Subsidy for Debt Service Due to Discontinuation of Building Use*

In addition to the capacity issues, the combined district would be required to continue the debt service payments due on the Millersburg Area building renovations. Millersburg Area receives \$250,000 in annual Pennsylvania Department of Education reimbursement subsidies toward this debt service. Discontinuing the use of Millersburg Area Middle and High School in Millersburg Area would result in the loss of this funding. Required on-going debt service for the debt financing of approximately \$713,000 annually continues through 2033-34. Under Option 2, the district will be paying the total debt service on unused buildings without any state subsidy.

### **Merger Option 3:**

#### **Grades K-8 Two Attendance Areas with Grades 9-12 Consolidated Facilities at Elizabethville**

##### **Curriculum**

Under Option 3, the merged district will continue to operate a K to 8 campus at Loyalton, in the existing K to 4 elementary school and 5 to 8 middle school configurations. The district will adapt the existing Millersburg Area secondary building for a K to 8 Millersburg facility attendance area. The district will organize elementary grades K to 4 with stand-alone regular classroom sections, and middle school grades 5 to 8 in multi-disciplinary teams (of English, reading, math, social studies, and science).

At the Loyalton campus, a secured wall separates K to 4 elementary functions from 5 to 8 secondary functions (both regular classrooms and related arts). At the Millersburg campus, elementary and middle schools are clustered by grade level and segregated into separate wings, but generally intermixed, particularly in the cafeteria, nurse office, library, and toilet rooms.

At Millersburg, grades K to 3 would locate in the two-story wing, grades 4 to 8 would be in the one-story wing thus creating an isolated cluster of stand-alone 4<sup>th</sup> grade classrooms among middle school students. The challenge is to create a consistent curricular model in two very different school configurations at Loyalton and Millersburg post-merger.

Under Option 3, with teachers at different sites, grade level collaboration as part of the teacher's schedule is possible but challenging. Daily or weekly scheduling of the collaboration times must accommodate teachers from multiple sites with common planning times and connection via technology. The scope and sequence of the curriculum will be addressed with greater consistency and fidelity if done by staff in the same building. Common assessments are more effective when they are given and analyzed by staff that can communicate and collaborate daily.

#### **Federal Funding and Equity of Resources and Programs<sup>1</sup>**

Title I of the *Elementary and Secondary Education Act of 1965* requires equity in school programs and resources, including staffing resources. Presently, both school districts allocate their Title I funding to each of their elementary schools. Title I requires an equity of resources

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<sup>1</sup> According to The USDOE Fact Sheet on Equal Access to Educational Resources, issued in 2014, the following resources may be considered to ensure Equal Access is provided: 1) Courses, Academic Programs, Extracurricular Activities; 2) Teachers and Leaders; 3) Other School Personnel; 4) School Facilities; 5) Technology and Instructional Materials.



for Title I students across the district. Presently both districts use a district-wide model to ensure all students in the districts can access resources purchased through Title I funds. It would be wise to continue that model. The resources purchased through Title I funding for one building must be comparably available at the other building to maintain an equity of resources.

Under Title I, Option 3 would require the district to allocate the federal funds to two elementary schools dependent upon the economic need of the students. By necessity, this would split the funds between two schools and would require purchase of necessary resources for each building, even if the purchase is redundant to resources already bought at the other school. To ensure equity, the district would also be responsible to purchase any materials or resources provided to one school through Title I funds, even if district funds were necessary to accomplish equity of programs and services. Title I requires a review of teacher assignments to ensure that there is equity between the two buildings for access to veteran, experienced instructors. This might require re-assignment of teachers to create the necessary equity.

### **Importance of Maintaining Equity under Option 3**

Just like the equity required for Title 1, operating two K-8 building requires equity in all programs and facilities. The equity in the K-8 programs creates a common educational foundation upon entry into 9<sup>th</sup> grade. Equal educational experiences and learning opportunities provide the educational foundation for high school. This requires identical textbooks, supplemental resources, as well as equal facilities and faculty preparation. While both districts are successful in their current elementary and middle school programs, a single high school necessitates the same preparation from both buildings as a solid starting point for high school success.

A realignment of boundaries might be required to equalize the student enrollment in each building. A change of attendance areas would have an impact on transportation costs.

### **Curriculum Program Materials**

In Option 3, the district would need to replicate the same materials and resources at both buildings to ensure consistency and fidelity in classroom instruction. Since there would be more classrooms in Option 3, particularly in duplicated space in related arts, more classroom sets of materials and equipment would be required. The supplemental materials, especially reading materials, would have to be duplicated at both buildings. The cost of district and site licenses for web-based support and instructional programs could vary. If purchased by classroom, then more licenses would be needed in Option 3 to serve the same number of students.

Materials and resources, particularly for enrichment at the elementary level must be replicated for separate K to 8 sites. Professional development and collaboration to ensure consistency and fidelity might be more costly for faculty at two sites.

### **Other Program Considerations**

To ensure that both schools have access to comparable vocational-technical opportunities, the merged district would have to ensure both buildings have comparable facilities and resources to provide programs that match, particularly adapting high school building trades lab for tech ed instruction at Millersburg. Option 3 would require the district to decide whether to duplicate the Life Skills program and instructional space at both schools for elementary and secondary level

students, or to transport the Life Skills students to one school. A similar decision would need to be made for multiple disabilities students. These decisions would have an impact on staffing and transportation costs.

### **Staffing and Technology Costs**

Option 3 would require two administrators at each building (K to 8), as well as two guidance counselors at each building. The building administrator must develop a building schedule using two significantly different formats of time blocks. Therefore, the scheduling process is more complex and time consuming, especially at Millersburg where the elementary and middle school students share one café, one library, and certain toilet rooms.

Loyalton would need to upgrade technology resources to provide its students the same access to technology as presently available in Millersburg Area (e.g. new (2019) CAD/Graphic Design wired computer lab with 24 high capacity computers, AutoDesk Suite 2019, Adobe Creative Cloud Suite, an Epilog Laser Cutter/Engraver, Fablicator 3D Printer, and a Titan 3 vinyl cutter). Licenses for programs and resources would be necessary at both schools in Option 3 for those programs and resources used for grades K-8.

Loyalton has wi-fi access points, but a review of the needs in large-group areas, such as auditorium, cafeteria, etc. needs to be evaluated along with cost of equipment to ensure wi-fi access points in large-group areas. Loyalton would have to update all its classroom instructional technology (e.g. “smartboards”) to provide comparable classroom technology to Millersburg. Presently, Upper Dauphin Area has smartboards and interactive projectors in each classroom, but the smartboards need replacement. In addition, Upper Dauphin Area presently has limited student technology in classrooms (approximately five iPads per class and two computer labs in the building: one in the library and one for classroom use.) Option 3 would require an immediate cost to ensure a comparable number of computer labs are available at both buildings, and to provide 1:1 capability via computers or classroom carts at Loyalton.

## **Merger Option 5: Grades K-5 in Loyaltown, 6-8 in Millersburg, with Grades 9-12 Consolidated High School in Elizabethville**

### **Best Use of Existing Buildings and the Greatest Opportunity for Curriculum Fidelity**

#### **Facilities**

Option 5 provides the best natural fit of grades K to 5 to the existing Upper Dauphin Area Elementary and Middle School, and a better fit for the multi-disciplinary teaming for grades 6 to 8 in the existing Millersburg Area Middle and High School. Option 5 provides vacant space between the Upper Dauphin Area District Administration Office and the middle school cafeteria, which might be adapted for a future combined and consolidated District Administration Office.

Under Option 5, the merged district will operate a K to 5 elementary school at Loyaltown. It is recommended to organize the building in grade-level clusters, concentrating the youngest students in the existing Upper Dauphin Area Elementary School side. It is recommended to modify the classrooms that are used for pre-school and kindergarten with in-classroom toilets. This campus offers separate gym and cafeteria facilities, and an additional multi-purpose room (suitable for either food service or physical education).

We recommend modifications to the wall that divides the existing PK to 4 Upper Dauphin Area Elementary School from the 5 to 8 Upper Dauphin Area Middle School. The wall openings can be modified to promote the free flow of students while maintaining building Code compliance, for safety.

We recommend separating bus from parent traffic. The existing middle school entrance would be the bus drop-off and an after-hours activity entrance. The existing elementary school entrance is better suited for parent drop-off and visitor entry, as it features a passive security vestibule into the Principal's office.

The district will adapt the existing Millersburg Area secondary building for a 6 to 8 Middle School, organized in grade-level, multi-disciplinary teams (of English, reading, math, social studies, and science). It is recommended to locate 6<sup>th</sup> grade in the two-story wing with 7<sup>th</sup> and 8<sup>th</sup> grade sharing the one-story wing. This facility already has secondary related arts program spaces. It is recommended the district adapt and upgrade the existing building trades shop for tech ed programming.

The Millersburg Area campus offers two gyms, a state-of-the-art weight room, and auditorium that would be valuable to ease pressure on the consolidated high school's facilities for extra-curricular activities (and for community use). In addition, the Millersburg Area campus features a community use Dauphin County Library branch, which would remain in use for any of the Options.

#### **Program Materials**

Instructional materials that the district presently owns and plans to continue using would be consolidated. Supplemental materials would be available to the entire student body at the

elementary level. Option 5 presents opportunities for regular, weekly collaboration for instructional planning, data analysis, and development of common assessments among teachers for collaborative work and professional development. Under Option 5, it will be easier to utilize enrichment materials and resources that have proven successful from each district, especially at the elementary level. The materials and expertise that have proven successful can most easily be leveraged with everyone in one site.

### **Other Program Considerations**

We recommend the K to 5 elementary configuration in Option 5 over the K to 4 configuration in Options 2 and 3. Elementary faculty would benefit from sign-out science labs. The district could capitalize on middle school science teacher certifications, using science team-teaching for 4<sup>th</sup> and 5<sup>th</sup> grades. Option 5 features two dedicated sign-out science labs. In addition, 5<sup>th</sup> graders would benefit from one more year of robust, elementary level math and literacy pupil supports services, to better prepare for secondary school.

The cost of upkeep and supplying the facilities and resources to support vocational-technical type electives would be less on a single middle school site versus two sites under Option 3. Changes in enrollment in special education (particularly in costly primary disabilities) would have less impact on the capacity of a classroom with students in grades K to 5 and 6 to 8 in respective buildings. Having all grade-level special education students in the district attending one site, the district would be better positioned to address annual changes in needs for these students.

One of the strengths of both districts currently is their commitment to the middle school philosophy. That philosophy is that the middle school is focused on student growth in all areas – emotionally, intellectually, socially, and physically. Using resources, communication strategies, and materials that promote age-appropriate expectations for behavior and academic performance is most cost-effectively done in a single site.

There would be fewer classrooms to upgrade with classroom technology. Cost of licenses for computer apps or programs used for instructional or academic support could be less if charged by the room or site. Any computer program used for classroom instruction or academic support would require professional development for teachers who have not used it before. With all teachers of a grade level at a single site, those already familiar can support those new to the system, thus reducing the cost of professional development and onboarding time.

### **Summary**

A review of the three options under consideration by the Millersburg Area and Upper Dauphin Area School Boards indicates that Option 5 would best provide for an educational model that includes the principles of equity in education and potential for success for all students that will be served by the merged district. This configuration provides for the best use of existing buildings and the greatest opportunity for economies of scale. The merged district will be able to provide more diverse instructional content and maintain and enhance K-12 course offerings.

**CHAPTER 2**  
**HISTORICAL FINANCES AND FINANCIAL PROJECTIONS**  
**OF INDIVIDUAL DISTRICTS**

Financial projections for the Millersburg Area and Upper Dauphin Area School Districts indicate that both districts are likely to experience growing, annual deficits starting with the 2019-20 budget as revenues are anticipated to stagnate while expenditures are expected to increase.

Historically, both districts experienced at least one deficit in the review period from 2013-14 to 2017-18. In terms of historical revenues, the main local source for both districts were local property taxes, and both districts enacted property tax increases during the historical review period. Upper Dauphin Area experienced a larger increase in its state Basic Education Funding of 6 percent compared to 3 percent for Millersburg Area. On the historical expenditure side, overall costs in Millersburg Area increased by 14.8 percent compared to 12.1 percent in Upper Dauphin Area. The largest absolute growth for both was retirement costs, which rose by \$1.3 million in Upper Dauphin Area and \$875,227 in Millersburg Area. Both districts generally remained within best practice recommendations concerning debt levels.

**Millersburg Area School District**

**Historical Review**

Revenues exceeded expenditures in Millersburg Area for three of the five years in the review period. The District experienced an operating deficit of \$50,426 in 2015-16 and a recorded deficit of \$198,425 as a result of a budget transfer of \$500,000 to the capital reserve in 2017-18. The District also budgeted a \$472,294 deficit for 2018-19. Revenues grew by \$1.6 million or 12.0 percent during the historical review period, while expenditures increased by \$1.8 million (14.8 percent). (Table 2-1)

**Table 2-1: Millersburg Area School District Surplus/ (Deficit)**

	Actual	Actual	Actual	Actual	Actual	Change 2013-14 to 2017-18	
	2013-14	2014-15	2015-16	2016-17	2017-18	\$	%
Revenues	\$12,967,267	\$13,598,472	\$13,419,823	\$14,306,445	\$14,526,701	1,559,434	12.0
Expenditures	12,831,135	13,423,393	13,470,248	14,024,611	14,725,126	1,893,992	14.8
<b>Surplus/(Deficit)</b>	<b>\$136,133</b>	<b>\$175,080</b>	<b>-\$50,426</b>	<b>\$281,834</b>	<b>-\$198,425</b>		

**Millersburg Area Revenues**

Gains during the review period on the local level came in real estate, earned income and real estate transfer taxes. Property taxes, which are the largest source of local revenue, rose during that time from 18.02 mills in 2013-14 to 20.24 in 2017-18, resulting in an increase of \$637,632 or 14.7 percent. Earned income taxes (EIT) spiked in 2016-17 to \$778,203, ending the five-year period at \$673,264, an overall growth of 7.7 percent. (Table 2-2)

**Table 2-2: Millersburg Area School District Local Revenue by Source**

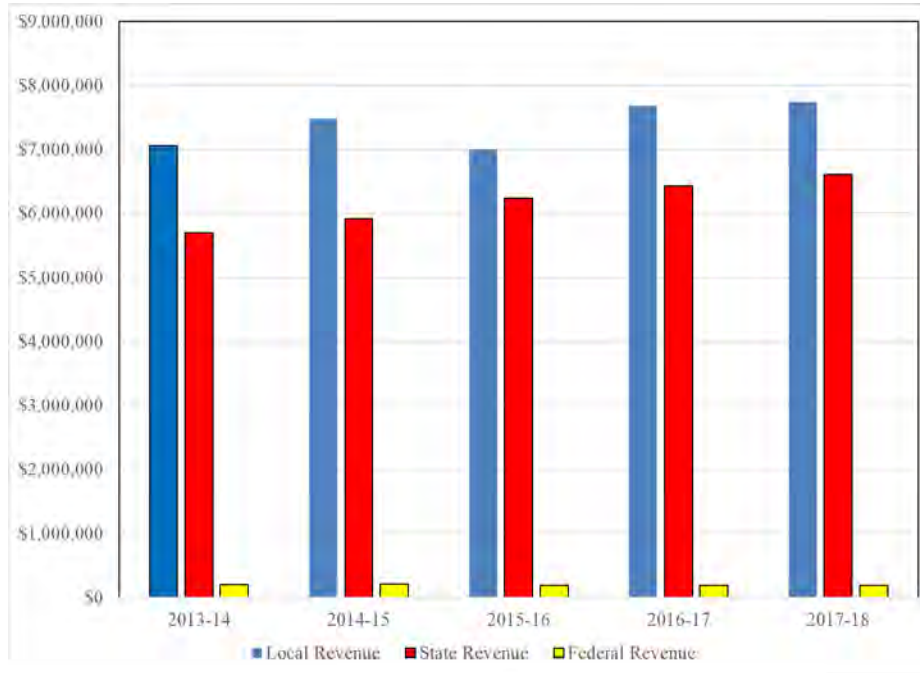
<u>Description</u>	<u>Actual 2013-14</u>	<u>Actual 2014-15</u>	<u>Actual 2015-16</u>	<u>Actual 2016-17</u>	<u>Actual 2017-18</u>	Change 2013-14 to 2017-18	
						<u>\$</u>	<u>%</u>
Cur Real Estate Taxes	\$4,333,876	\$4,455,022	\$4,586,222	\$4,727,528	\$4,971,508	637,632	14.7
Interim RE Taxes	10,767	8,746	7,294	9,665	18,944	8,177	75.9
Public Utility Realty Tax	7,538	7,590	7,173	7,091	6,466	-1,072	-14.2
PILOTS	20,312	20,312	20,312	20,312	20,312	0	0.0
Per Capita, Section 679	17,711	17,611	17,746	17,329	17,199	-512	-2.9
Per Capita Taxes	17,711	17,611	17,746	17,329	17,199	-512	-2.9
Earned Income Taxes	625,228	628,871	647,222	778,203	673,264	48,035	7.7
Occupation Taxes	552,859	548,250	546,720	527,675	533,015	-19,844	-3.6
RE Transfer Taxes	64,769	64,415	43,215	66,302	81,910	17,141	26.5
Delinquent Taxes	541,959	573,071	412,370	637,786	527,518	-14,441	-2.7
Other Local Revenue	<u>871,777</u>	<u>1,135,535</u>	<u>690,982</u>	<u>875,111</u>	<u>862,416</u>	<u>-9,362</u>	<u>-1.1</u>
<b>Total Local Revenue</b>	<b>7,064,508</b>	<b>7,477,034</b>	<b>6,997,001</b>	<b>7,684,331</b>	<b>7,729,752</b>	<b>665,244</b>	<b>9.4</b>

State revenue during the historical period increased by \$907,864 or 15.9 percent, with the District receiving \$116,765 or 3.0 percent more in basic education subsidy. State retirement contributions grew by \$403,796 or 72.6 percent. Millersburg Area also received rental and sinking fund/building reimbursements from the state for the last two years of the review period, as well as a Ready to Learn Block Grant starting in 2014-15. Federal revenues decreased from \$203,783 in 2013-14 to \$190,109 or 6.7 percent in 2017-18 with a high of \$210,061 in 2014-2015. (Table 2-3 and Graph 2-1)

**Table 2-3: Millersburg Area School District State Revenue by Source**

<u>Description</u>	<u>Actual 2013-14</u>	<u>Actual 2014-15</u>	<u>Actual 2015-16</u>	<u>Actual 2016-17</u>	<u>Actual 2017-18</u>	Change 2013-14 to 2017-18	
						<u>\$</u>	<u>%</u>
Basic Education Funding	3,871,690	3,871,725	3,904,188	3,946,747	3,988,485	116,795	3.0
Vocational Education	0	0	0	0	0	0	0.0
Special Education Funding	540,283	551,156	566,015	570,419	576,037	35,755	6.6
Pupil Transportation	161,697	158,829	162,475	161,235	173,659	11,962	7.4
R&SF/Bldg. Reimburse	0	0	0	138,775	196,805	196,805	100.0
Property Tax Reduce Alloca	251,215	251,459	251,043	251,010	250,972	-243	-0.1
Ready to Learn Block Grant	0	99,046	111,356	144,110	127,733	127,733	0.0
Share of SS & Medicare	253,232	265,794	249,118	254,573	220,565	-32,667	-12.9
State Share of Retirement	555,845	691,960	945,744	943,007	959,641	403,796	72.6
Other State Revenue	65,015	21,408	45,218	21,893	112,943	47,929	73.7
<b>Total State Revenue</b>	<b>5,698,977</b>	<b>5,911,377</b>	<b>6,235,158</b>	<b>6,431,769</b>	<b>6,606,840</b>	<b>907,864</b>	<b>15.9</b>

**Graph 2-1: Millersburg Area School District Revenue by Source**



**Millersburg Area Expenditures**

Expenditures for Millersburg Area rose by \$1.9 million or almost 14.8 percent from 2013-14 to 2017-18. Millersburg Area spends the bulk of its resources on instruction, including regular and special education students (Table 2-4). Teacher salaries and benefits are also in the instruction category. Instruction costs for the District increased by \$1.1 million or 14.5 percent over the review period.

Administrative costs such as tax collection, legal services, business services, superintendent and building administration are listed under Support Services. Support Services also include transportation, library and school nurse costs. Spending on Support Services increased by \$114,524 or 2.9 percent from 2013-14 to 2017-18. Facilities Acquisition, Construction, and Improvement Services and Other Financing Sources and Uses increased during the 2016-17 school year. The District financed the costs of planning, designing, acquiring, constructing, furnishing and equipping alterations, additions, renovations and/or other improvements to the Millersburg Area Middle School/High School and the Lenkerville Elementary School and to pay the costs of issuing and insuring the bonds. The total amount financed was \$9,988,407 including \$9,925,000 in proceeds and \$73,407 in premium. Debt service on that project will continue through 2033-34 at approximately \$717,000 annually.

**Table 2-4: Millersburg Area School District Expenditures by Function**

	Actual <u>2013-14</u>	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18	Change 2013-14 to 2017-18	
						\$	%
Instruction	\$7,841,773	\$8,685,612	\$8,746,422	\$8,575,283	\$8,977,824	1,136,052	14.5
Support Services	3,961,465	4,365,458	4,350,214	3,978,622	4,075,989	114,524	2.9
Operation of Noninstructional Services	295,624	331,473	315,127	314,790	319,707	24,083	8.1
Fac Acq, Construct and Impr Services	12,055	19,720	37,621	126,896	113,900	101,846	844.9
Other Expenditures and Financing Uses	720,219	21,130	20,863	1,029,020	1,237,706	517,487	71.9
<b>Total Expenditures</b>	<b>\$12,831,135</b>	<b>\$13,423,393</b>	<b>\$13,470,248</b>	<b>\$14,024,611</b>	<b>\$14,725,126</b>	<b>1,893,992</b>	<b>14.8</b>
	<u>Percent of Total</u>						
Instruction	61.1	64.7	64.9	61.1	61.0		
Support Services	30.9	32.5	32.3	28.4	27.7		
Operation of Noninstructional Services	2.3	2.5	2.3	2.2	2.2		
Fac Acq, Construct and Impr Services	0.1	0.1	0.3	0.9	0.8		
Other Expenditures and Financing Uses	5.6	0.2	0.2	7.3	8.4		
<b>Total Expenditures</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>		

Expenditures by object include personnel services such as salaries & benefits; purchased technical services; purchased property services; supplies; and debt and other uses. The major objects of expenditure for most districts are personnel services, personnel benefits, and debt and other financing uses. Retirement benefits show the largest increase during the historical period, growing by \$875,227 or 83.9 percent. Other Benefits (primarily healthcare) grew by \$278,631, while Salaries decreased by \$252,592 or 4.0 percent. Purchased Services Other, which includes tuition payments to other districts, vo-techs, colleges and charter schools, increased by \$286,631 or 25.6 percent. (Table 2-5)



**Table 2-5: Millersburg Area School District Expenditures by Object**

	<u>Actual 2013-14</u>	<u>Actual 2014-15</u>	<u>Actual 2015-16</u>	<u>Actual 2016-17</u>	<u>Actual 2017-18</u>	Change 2013-14 to 2017-18	
						\$	%
Salaries	6,310,176	6,712,495	6,509,689	5,846,578	6,057,584	-252,592	-4.0
Social Security	476,514	502,444	490,768	442,270	448,945	-27,569	-5.8
Retirement	1,043,056	1,401,622	1,652,546	1,721,845	1,918,284	875,227	83.9
Other Benefits	1,717,709	1,997,252	2,170,219	2,053,229	1,996,300	278,590	16.2
PS - Prof & Tech	572,037	706,376	686,785	762,424	706,974	134,936	23.6
PS - Property Services	254,844	306,087	247,624	281,003	286,949	32,105	12.6
PS - Other	1,120,063	1,104,877	1,153,980	1,298,311	1,406,694	286,631	25.6
Supplies	383,141	409,493	363,717	305,757	448,223	65,082	17.0
Property	215,635	243,313	153,505	265,187	197,382	-18,253	-8.5
Other Objects	23,784	24,694	26,078	276,543	270,674	246,889	1,038.0
Other Uses of Funds	<u>714,173</u>	<u>14,741</u>	<u>15,336</u>	<u>771,466</u>	<u>987,118</u>	<u>272,945</u>	<u>38.2</u>
<b>Total Expenditures</b>	<b>12,831,135</b>	<b>13,423,393</b>	<b>13,470,248</b>	<b>14,024,611</b>	<b>14,725,126</b>	<b>1,893,992</b>	<b>14.8</b>
Salaries	49.2	50.0	48.3	41.7	41.1		
Social Security	3.7	3.7	3.6	3.2	3.0		
Retirement	8.1	10.4	12.3	12.3	13.0		
Other Benefits	13.4	14.9	16.1	14.6	13.6		
PS - Prof & Tech	4.5	5.3	5.1	5.4	4.8		
PS - Property Services	2.0	2.3	1.8	2.0	1.9		
PS - Other	8.7	8.2	8.6	9.3	9.6		
Supplies	3.0	3.1	2.7	2.2	3.0		
Property	1.7	1.8	1.1	1.9	1.3		
Other Objects	0.2	0.2	0.2	2.0	1.8		
Other Uses of Funds	<u>5.6</u>	<u>0.1</u>	<u>0.1</u>	<u>5.5</u>	<u>6.7</u>		
<b>Total Expenditures</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>		

**Millersburg Area Existing Debt Levels and Time Frames to Retire Debt**

Millersburg Area’s outstanding debt includes \$8,190,000 remaining from the principal amount of its Series of 2020 General Obligation Bonds (Table 2-6). The proceeds of the bonds were used to refinance the Series 2015 Bond which was used to pay costs for improvements at the Millersburg Area Middle School/High School and the Lenkerville Elementary School and to pay the costs of issuing and insuring the bonds.

Millersburg Area’s debt service payments increased from \$18,000 in 2013-14 to \$52,181 in 2016-17 to \$735,716 in 2017-18 due to the borrowing. Debt service as a percentage of total expenditures ranged from a low of less than one percent in 2013-14 to a high of 5.0 percent in 2017-18.

Millersburg Area’s debt service as a percentage of general fund expenditures was below the state average of 7.0 percent in 2013-14 and 6.2 percent in 2017-18. Millersburg Area was also well within best practice recommendations, which advise that debt service as a percentage of general fund expenditures remain under 10 percent. A range of 10 to 15 percent of general fund expenditures is considered cause for concern. A range of 15 to 20 percent of general fund expenditures may be viewed as an excessive burden. (Table 2-7)

**Table 2-6: Millersburg Area School District General Obligation Debt  
Principal Amount Outstanding as of January 9, 2020**

Series	Outstanding	Date of Maturity
Series of 2020	\$8,190,000	2034

Source: Official Bond Statements

**Table 2-7: Millersburg Area School District General Obligation Debt  
Debt Service as a Percentage of Total Expenditures**

	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18
Debt Service	\$18,000	\$18,000	\$18,000	\$526,181	\$735,716
State Reimbursement	0	0	0	-138,775	-196,805
Net Debt Service	\$18,000	\$18,000	\$18,000	\$387,406	\$538,911
Expenditures	\$12,831,135	\$13,423,393	\$13,470,248	\$14,024,611	\$14,725,126
DS % of Expenditures	0.1%	0.1%	0.1%	2.8%	3.7%

Source: District AFR

**Millersburg Area 2018-19 and 2019 -20 Budgets**

At the time of the initial report, actual numbers for the 2018-19 FY were not available. Summary numbers are now included. Millersburg Area budgeted deficits of \$675,276 for the 2018-19 FY and \$558,944 for the 2019-20 FY, however the district report a surplus of \$288,455 for the 2018-19 FY. Other Financing Uses includes an \$800,000 transfer to Capital Reserve. (Table 2-8).

**Table 2-8: Millersburg Area School District Budgets**

Revenue	Budget 2018-19	Reported 2018-19	Budget 2019-2020
Local Taxes	\$6,914,897	\$7,132,775	\$7,036,853
Local Other Revenue	613,175	1,085,607	648,175
State Revenue	6,583,771	6,840,838	6,746,990
Fed Revenue	211,876	233,839	212,233
Other Revenue	0	0	0
<b>Total Revenue</b>	<b>\$14,323,719</b>	<b>\$15,293,059</b>	<b>\$14,644,251</b>
<b>Expenditures</b>			
Instruction	9,462,811	8,829,000	9,513,278
Support Services	4,360,324	4,296,056	4,508,043
Non-Instructional	334,860	321,324	339,854
Fac,Acq & Cons	30,500	20,400	50,500
Other Fin Use	810,500	1,537,824	791,520
<b>Total Expenditures</b>	<b>\$14,998,995</b>	<b>\$15,004,604</b>	<b>\$15,203,195</b>
<b>Surplus/(Deficit)</b>	<b>-\$675,276</b>	<b>\$288,455</b>	<b>-\$558,944</b>

**Millersburg Area Projected Revenues**

Using the historical figures along with the 2018-19 and 2019-20 budgets as a basis, revenue projections were developed for 2020-21 through 2023-24 using the following assumptions:

- No tax rate increases.
- No increase in the assessed value of properties.
- Collection rates remain constant.
- Earned income tax revenue shows moderate growth (1.25 percent annually) as local income increases.
- Basic Education Funding is increased by 0.5 percent annually.
- State Special Education Funding is increased by 2.0 percent annually.
- State aid for pensions is increased at the same percentages at which PSERS contributions are expected to grow.
- State share for Social Security taxes and Medicare is increased at the same rate as employee salaries.
- Other state revenues remain at 2019-20 budgeted levels or increase by two percent.
- Federal and Other Revenues remain at 2019-20 budgeted levels.
- Based on these assumptions, Millersburg Area’s projected revenue as shown in Table 2-9 is anticipated to grow by \$497,361 or 4.9 percent through 2023-24. Most of the growth is expected in state revenue, which is projected to rise by \$276,288 or 4.9 percent. Local revenue is likely to remain relatively flat, with only a slight increase of 5.1 percent anticipated in earned income taxes.

**Table 2-9: Millersburg Area School District Projected Revenue by Source**

							Change 2019-20 to 2023-24	
		Budget 2019-20	Projected 2020-21	Projected 2021-22	Projected 2022-23	Projected 2023-24	\$	%
6111	Current Real Estate Taxes	\$5,214,138	\$5,214,138	\$5,214,138	\$5,214,138	\$5,214,138	0	0.0
6112	Interim Real Estate Taxes	\$8,500	\$8,500	\$8,500	\$8,500	\$8,500	0	0.0
6113	Public Utility Realty Taxes	\$6,900	\$6,900	\$6,900	\$6,900	\$6,900	0	0.0
6114	PILOTS	\$315	\$315	\$315	\$315	\$315	0	0.0
6120	Per Capita Taxes, Section 679	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	0	0.0
6140	Current Act 511 Taxes - Flat Rate	\$18,500	\$18,500	\$18,500	\$18,500	\$18,500	0	0.0
6150	Cur. Act 511 Taxes - Proportional	\$1,280,000	\$1,296,000	\$1,312,200	\$1,328,603	\$1,345,210	65,210	5.1
6400	Delinquencies on Taxes	\$490,000	\$490,000	\$490,000	\$490,000	\$490,000	0	0.0
	Other Local Revenue	\$648,175	\$648,175	\$648,175	\$648,175	\$648,175	0	0.0
	<b>Total Local Revenue</b>	<b>\$7,685,028</b>	<b>\$7,701,028</b>	<b>\$7,717,228</b>	<b>\$7,733,631</b>	<b>\$7,750,238</b>	<b>65,210</b>	<b>0.8</b>
	Total State Revenue	6,746,990	6,812,285	6,878,569	6,953,432	7,023,278	276,288	4.1
	Total Federal Revenue	212,233	212,233	212,233	212,233	212,233	0	0.0
	Total Other Revenue	0	0	0	0	0	0	0.0
	<b>Total All Revenue</b>	<b>14,644,251</b>	<b>14,725,546</b>	<b>14,808,030</b>	<b>14,899,296</b>	<b>14,985,749</b>	<b>497,361</b>	<b>4.9</b>

**Projected Expenditures**

Using the historical figures plus 2018-19 and 2019-20 budgets as a basis, expenditure projections were developed for 2020-2021 through 2023-24 using the following assumptions:

- Current collective bargaining agreements are used through 2019-20.
- Increases for 2020-21 through 2023-24 are 1.5 percent annually.
- PSERS contributions are increased by estimated percentages.

- Other Employee Benefits are increased by 6.0 percent.
- No new debt is incurred, and 2020 debt amortization schedules were used to project expense.
- Other expenditures are increased by 2.0 percent annually or held at budgeted levels.

While projections indicate limited revenue growth, expenditures are anticipated to increase significantly. Overall, expenditures are expected to rise by almost \$1.5 million or 10.1 percent. (Table 2-10)

**Table 2-10: Millersburg Area School District Expenditures by Function**

	<u>Budget</u> <u>2019-2020</u>	<u>Projected</u> <u>2020-21</u>	<u>Projected</u> <u>2021-22</u>	<u>Projected</u> <u>2022-23</u>	<u>Projected</u> <u>2023-24</u>	<u>Change 2019-20</u> <u>to 2023-24</u>	
						<u>\$</u>	<u>%</u>
Instruction	9,513,278	9,731,402	9,967,189	10,220,909	10,472,578	959,300	10.1
Support Service	4,508,043	4,617,142	4,735,605	4,861,889	4,988,121	480,078	10.6
Operation of Noninstructional Services	339,854	347,261	355,433	363,860	372,478	32,624	9.6
Facilities Acq. Constr. and Imp Services	50,500	30,000	30,000	30,000	30,000	-20,500	-40.6
Other Expenditures and Financing Uses	704,470	465,475	783,850	783,225	786,225	81,755	11.6
<b>Total Expenditures</b>	<b>15,116,145</b>	<b>15,191,280</b>	<b>15,872,077</b>	<b>16,259,882</b>	<b>16,649,402</b>	<b>1,533,257</b>	<b>10.1</b>

**Millersburg Area Surplus/(Deficit)**

Projections indicate annual growing deficits for Millersburg Area. The projected 2019-20 estimated deficit of \$471,894 grows to a \$1,663,652 deficit in 2023-24. During this period, expenditures increase by \$1.5 million or 10.1 percent compared to a revenue growth of only \$497,361 or 4.9 percent. Retirement costs as projected by the PSERS retirement system are the key element in deficit growth. (Table 2-11)

**Table 2-11: Millersburg Area School District Surplus/(Deficit)**

	<u>Estimated</u> <u>2019-2020</u>	<u>Projected</u> <u>2020-21</u>	<u>Projected</u> <u>2021-22</u>	<u>Projected</u> <u>2022-23</u>	<u>Projected</u> <u>2023-24</u>
Revenues	14,644,251	14,725,546	14,808,030	14,899,296	14,985,749
Expenditures	<u>15,116,145</u>	<u>15,191,280</u>	<u>15,872,077</u>	<u>16,259,882</u>	<u>16,649,402</u>
<b>Surplus/(Deficit)</b>	<b>-471,894</b>	<b>-465,733</b>	<b>-1,064,048</b>	<b>-1,360,586</b>	<b>-1,663,652</b>

**Millersburg Area General Fund Balance**

The Government Finance Officers Association (GFOA) recommends maintaining a minimum unassigned fund balance equal to 5 percent to 15 percent of total expenditures. For 2019-20, Millersburg Area reported a total fund balance in the General Fund of \$3.3 million and a budgetary reserve of \$70,000. The unassigned fund balance of \$1.5 million is 9.8 percent of total expenditures. Continuing deficits will erode the fund balance. The Pennsylvania School Code provides that districts where budgets are less than \$19 million may maintain an unassigned fund balance between 8 percent and 12 percent based on the actual size of the budget (24 PS Section 6-688). The budgetary reserve is fund balance that has been allocated to the budget but not expressly identified for spending. Since it is included in the budget, it is not included in the fund balance. (Table 2-12)

**Table 2-12: Millersburg Area General Fund Balance**

	<b>Budget</b>
<b>Fund Balance*</b>	<b><u>2019-2020</u></b>
Committed Fund Balance	725,000
Assigned Fund Balance	1,085,354
Unassigned Fund Balance	<u>1,486,681</u>
<b>Total General Fund Balance</b>	<b>3,297,035</b>
<b>Budgetary Reserve</b>	<b>70,000</b>
<i>*Does not include Capital Reserve account of \$3,745,614. The School Code limits the Capital Reserve Fund use to building improvement programs. Capital Reserve funds must be returned to the General Fund if not used within 5 years from the date of deposit but is to be returned in equal amounts over 5 years (24 PS Section 6-690).</i>	

## Upper Dauphin Area School District

### Historical Review

Revenues exceeded expenditures in Upper Dauphin Area in four of the five years in the review period. Surpluses started at \$43,779 in 2013-14, peaked at \$1.3 million in 2015-16, and then fell to \$477,285 in 2016-17 and \$349,415 in 2017-18. The District experienced a deficit of \$396,254 in 2014-15. The District also included deficits of \$450,192 for the 2018-19 budget and \$336,897 for the 2019-20 budget. Revenues grew by \$2.4 million or 13.8 percent during the historical review period, while expenditures grew by \$2.1 million (12.1 percent). (Table 2-13.)

**Table 2-13: Upper Dauphin Area School District Surplus/ (Deficit)**

	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18	Change 2013-14 to 2017-18	
						\$	%
Revenues	17,573,933	18,402,145	24,249,601	19,590,759	20,003,702	2,429,769	13.8
Expenditures	17,530,154	18,798,399	22,955,386	19,113,474	19,654,287	2,124,133	12.1
<b>Surplus/(Deficit)</b>	<b>43,779</b>	<b>-396,254</b>	<b>1,294,216</b>	<b>477,285</b>	<b>349,415</b>		

### Upper Dauphin Area Revenues

Gains during the period on the local level came in real estate, earned income and real estate transfer taxes. Property taxes rose during that time from 16.76 mills in 2013-14 to 18.8775 in 2017-18, resulting in a \$770,910 or 14.4 percent increase in revenue. EIT spiked in 2016-17 at \$1,037,660 and ended the five-year period at \$911,753, an overall growth of 12.6 percent. (Table 2-14)

**Table 2-14: Upper Dauphin Area School District Local Revenue by Source**

Description	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18	Change 2013-14 to 2017-18	
						\$	%
Cur Real Estate Taxes	\$5,360,551	\$5,430,734	\$5,729,812	\$6,044,156	\$6,131,462	770,910	14.4
Interim RE Taxes	24,551	13,644	36,425	26,296	57,771	33,220	135.3
Public Utility Realty Tax	9,235	8,490	7,707	7,962	7,641	-1,593	-17.3
PILOTS	11,673	15,540	15,610	16,463	17,871	6,198	53.1
Per Capita, Section 679	26,019	25,895	25,873	25,755	25,232	-787	-3.0
Per Capita Taxes	26,019	25,895	25,864	25,755	25,221	-798	-3.1
Earned Income Taxes	809,682	840,092	866,267	1,037,660	911,753	102,071	12.6
Occupation Taxes	776,326	767,735	785,453	778,661	762,634	-13,692	-1.8
RE Transfer Taxes	60,255	71,482	106,600	125,147	88,148	27,892	46.3
Delinquent Taxes	596,271	859,132	809,356	789,876	774,385	178,114	29.9
Other Local Revenue	438,936	538,528	372,824	378,286	495,552	56,615	12.9
<b>Total Local Revenue</b>	<b>\$4,077,225</b>	<b>\$4,487,802</b>	<b>\$4,462,873</b>	<b>\$4,506,910</b>	<b>\$4,722,253</b>	<b>645,028</b>	<b>15.8</b>

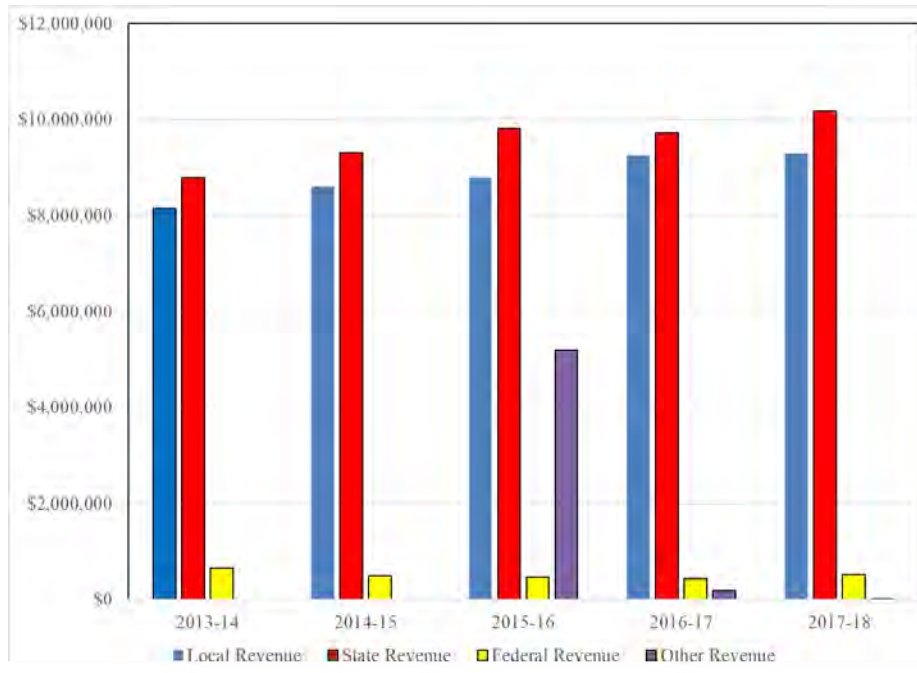
State revenue during the historical period increased by \$1.4 million or 15.9 percent, with the District receiving \$328,562 or 6.0 percent more in basic education subsidy. State retirement contributions grew by \$798,716 or 111.4 percent. Upper Dauphin Area also received Ready to Learn Block Grants from 2014-15 to 2017-18 ranging from \$157,248 to 227,012, and Pre-K Counts grants from 2015-16 to 2017-18 growing from \$52,875 to \$127,500. Federal revenues

decreased from \$652,787 in 2013-14 to \$520,374 2017-18 or 20.3 percent. (Table 2-15 and Graph 2-2)

**Table 2-15: Upper Dauphin Area School District State Revenue by Source**

Description	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18	Change 2013-14 to 2017-18	
						\$	%
Basic Education Funding	5,519,718	5,519,746	5,623,973	5,760,899	5,848,281	328,562	6.0
Vocational Education	146,277	111,839	116,063	91,139	91,700	-54,578	-37.3
Special Education Funding	760,430	775,840	793,503	803,629	820,554	60,124	7.9
Pre-K Counts	0	0	52,875	127,500	127,500	127,500	100.0
Pupil Transportation	623,594	719,168	735,865	740,707	696,364	72,770	11.7
R&SF/Bldg Reimburse	161,384	158,286	84,629	77,633	84,763	-76,621	-47.5
Property Tax Reduce Alloca	418,359	418,473	418,551	418,465	418,999	640	0.2
Ready to Learn Block Grant	0	157,248	177,110	227,012	202,061	202,061	100.0
Share of SS & Medicare	317,573	320,162	302,218	337,370	342,316	24,743	7.8
State Share of Retirement	716,784	1,093,224	1,439,858	1,074,448	1,515,500	798,716	111.4
Other State Revenue	<u>117,507</u>	<u>33,758</u>	<u>59,492</u>	<u>50,968</u>	<u>28,322</u>	<u>-89,185</u>	<u>-75.9</u>
<b>Total State Revenue</b>	<b>8,781,627</b>	<b>9,307,744</b>	<b>9,804,137</b>	<b>9,709,770</b>	<b>10,176,359</b>	<b>1,394,732</b>	<b>15.9</b>

**Graph 2-2: Upper Dauphin Area School District Revenue by Source**



**Upper Dauphin Area Expenditures**

Expenditures for Upper Dauphin Area rose by \$2.1 million or 12.1 percent from 2013-14 to 2017-18. Upper Dauphin Area spends the bulk of its resources on instruction, including regular and special education students. Teacher salaries and benefits are also in the instruction category. Instruction costs for the District increased by \$1.3 million or 11.6 percent over the review period.

Administrative costs such as tax collection, legal services, business services, superintendent and building administration are listed under Support Services. The category of Support Services also includes transportation, library and school nurse costs. Spending on Support Services increased by \$729,989 or 15.3 percent. (Table 2-16)

**Table 2-16: Upper Dauphin Area School District Expenditures by Function**

	<b>Actual 2013-14</b>	<b>Actual 2014-15</b>	<b>Actual 2015-16</b>	<b>Actual 2016-17</b>	<b>Actual 2017-18</b>	<b>Change 2013-14 to 2017-18</b>	
						<b>\$</b>	<b>%</b>
Instruction	\$10,854,198	\$11,393,843	\$11,439,225	\$11,626,638	\$12,113,898	1,259,700	11.6
Support Services	4,785,249	5,053,078	4,983,327	5,972,182	5,515,239	729,989	15.3
Operation of Noninstructional Services	316,568	332,125	333,846	331,395	374,751	58,184	18.4
Fac Acq, Construct and Impr Services	132,188	0	0	155,476	557,973	425,785	322.1
Other Expenditures and Financing Uses	<u>1,441,951</u>	<u>2,019,352</u>	<u>6,198,988</u>	<u>1,027,783</u>	<u>1,092,426</u>	<u>-349,524</u>	<u>-24.2</u>
<b>Total Expenditures</b>	<b>\$17,530,154</b>	<b>\$18,798,399</b>	<b>\$22,955,386</b>	<b>\$19,113,474</b>	<b>\$19,654,287</b>	<b>2,124,133</b>	<b>12.1</b>
	<u>Percent of Total</u>						
Instruction	61.9	60.6	49.8	60.8	61.6		
Support Services	27.3	26.9	21.7	31.2	28.1		
Operation of Noninstructional Services	1.8	1.8	1.5	1.7	1.9		
Fac Acq, Construct and Impr Services	0.8	0.0	0.0	0.8	2.8		
Other Expenditures and Financing Uses	<u>8.2</u>	<u>10.7</u>	<u>27.0</u>	<u>5.4</u>	<u>5.6</u>		
Total Expenditures	100.0	100.0	100.0	100.0	100.0		

Expenditures by object include personnel services such as salaries and benefits; purchased technical services; purchased property services; supplies; and debt and other uses. The major objects of expenditure for most districts are personnel services, personnel benefits, and debt and other financing uses. Retirement benefits show the largest increase during the historical period, growing by \$1.3 million or 109.0 percent. Purchased Services Other, which includes tuition payments to other districts, vo-techs, colleges and charter schools, increased by \$559,447 or 26.4 percent, while Purchased Services-Property grew from \$630,319 in 2013-14 to \$1,152,798 in 2016-17, then falling slightly to \$1,006,709 in 2017-18. (Table 2-17)



**Table 2-17: Upper Dauphin Area School District Expenditures by Object**

	<b>Actual 2013-14</b>	<b>Actual 2014-15</b>	<b>Actual 2015-16</b>	<b>Actual 2016-17</b>	<b>Actual 2017-18</b>	<b>Change 2013-14 to 2017-18</b>	
						<b>\$</b>	<b>%</b>
Salaries	\$7,793,159	\$7,963,639	\$7,976,947	\$7,981,393	\$8,067,725	274,565	3.5
Social Security	583,113	592,005	602,964	594,196	599,692	16,579	2.8
Retirement	1,238,250	1,721,548	2,005,577	2,354,141	2,587,574	1,349,324	109.0
Other Benefits	2,086,111	2,150,326	1,892,723	1,975,097	2,197,131	111,020	5.3
PS - Prof & Tech	762,767	632,288	620,524	529,399	624,435	-138,332	-18.1
PS - Property Services	630,319	390,888	504,427	1,152,798	1,006,709	376,390	59.7
PS - Other	2,117,785	2,286,698	2,393,534	2,501,788	2,677,232	559,447	26.4
Supplies	773,759	638,264	519,615	635,748	562,823	-210,936	-27.3
Property	51,035	385,604	175,765	351,846	217,974	166,939	327.1
Other Objects	283,855	792,139	271,543	165,069	157,986	-125,869	-44.3
Other Uses of Funds	1,210,000	1,245,000	5,991,765	872,000	955,006	-254,994	-21.1
<b>Total Expenditures</b>	<b>\$17,530,154</b>	<b>\$18,798,399</b>	<b>\$22,955,386</b>	<b>\$19,113,474</b>	<b>\$19,654,287</b>	<b>2,124,133</b>	<b>12.1</b>
	<u>Percent of Total</u>						
Salaries	44.5	42.4	34.7	41.8	41.0		
Social Security	3.3	3.1	2.6	3.1	3.1		
Retirement	7.1	9.2	8.7	12.3	13.2		
Other Benefits	11.9	11.4	8.2	10.3	11.2		
PS - Prof & Tech	4.4	3.4	2.7	2.8	3.2		
PS - Property Services	3.6	2.1	2.2	6.0	5.1		
PS - Other	12.1	12.2	10.4	13.1	13.6		
Supplies	4.4	3.4	2.3	3.3	2.9		
Property	0.3	2.1	0.8	1.8	1.1		
Other Objects	1.6	4.2	1.2	0.9	0.8		
Other Uses of Funds	6.9	6.6	26.1	4.6	4.9		
<b>Total Expenditures</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>		

**Upper Dauphin Area Existing Debt Levels and Time Frames to Retire Debt**

Upper Dauphin Area’s debt service payments varied throughout the period from a high of \$1.5 million in 2014-15 to a low of \$1.027 million in 2016-17. Debt service was \$1.092 million in 2017-18. Debt service as a percentage of total expenditures ranged from a high of 8.2 percent in 2013-14 to a low of 4.8 percent in 2015-16.

Upper Dauphin Area was above the 7.0 percent state average for debt service as a percentage of general fund expenditures in 2013-14 and below the 6.2 percent state average in 2017-18. The District remained within best practice recommendations throughout the period. Best practices recommend debt service as a percentage of general fund expenditures that remains under 10 percent. A range of 10 to 15 percent of general fund expenditures is considered cause for concern. A range of 15 to 20 percent of general fund expenditures may be viewed as an excessive burden. (Tables 2-18 and 2-19)

**Table 2-18: Upper Dauphin Area School District General Obligation Debt Principal Amount Outstanding as of December 31, 2019**

Series	Outstanding	Date of Maturity
Bond - Series of 2005	\$1,440,000	2020-21
Note - Series of 2015	\$2,814,000	2024-25
Bond - Series of 2019	\$5,330,000	2030-31

Source: Official Bond Statements

**Table 2-19: Upper Dauphin Area General Obligation Debt Debt Service as a Percentage of Total Expenditures**

	Actual <u>2013-14</u>	Actual <u>2014-15</u>	Actual <u>2015-16</u>	Actual <u>2016-17</u>	Actual <u>2017-18</u>
Debt Service	\$1,439,956	\$1,467,162	\$1,093,239	\$1,027,664	\$1,092,426
State Reimbursement	-161,384	-158,286	-84,629	-77,633	-84,763
Net Debt Service	\$1,278,572	\$1,308,876	\$1,008,610	\$950,031	\$1,007,664
Expenditures	\$17,530,154	\$18,798,399	\$22,955,386	\$19,113,474	\$19,654,287
DS % of Expenditures	7.3%	7.0%	4.4%	5.0%	5.1%

Source: District AFR

**Upper Dauphin Area 2018-19 and 2019 -2020 Budgets**

At the time of the initial report, actual numbers for 2018-19 were not available. Upper Dauphin Area budgeted deficits for 2018-2019 (\$450,192) and 2019-20 (\$336,897), however Upper Dauphin ended 2018-19 with an operating surplus of \$232,516. (Table 2-20)

**Table 2-20: Upper Dauphin Area School District Budgets**

	Budget <u>2018-19</u>	Reported <u>2018-19</u>	Budget <u>2019-2020</u>
<b>Revenue</b>			
Local Taxes	\$8,817,114	\$9,385,614	\$8,952,645
Local Other Revenue	433,100	17,423	543,100
State Revenue	9,941,063	10,202,066	9,953,280
Fed Revenue	418,843	521,115	517,431
Other Revenue	0	0	0
<b>Total Revenue</b>	<b>\$19,610,120</b>	<b>\$20,126,218</b>	<b>\$19,966,456</b>
<b>Expenditures</b>			
Instruction	\$12,924,595	12,627,741	\$12,999,524
Support Services	5,692,282	5,726,176	5,841,414
Non-Instructional	417,063	448,773	436,043
Fac,Acq & Cons	0	0	0
Other Fin Use	1,026,372	1,091,012	1,026,372
<b>Total Expenditures</b>	<b>\$20,060,312</b>	<b>\$19,893,702</b>	<b>\$20,303,353</b>
<b>Surplus/(Deficit)</b>	<b>-\$450,192</b>	<b>\$232,516</b>	<b>-\$336,897</b>

**Upper Dauphin Area Projected Revenues**

Using the historical figures plus the 2018-19 and 2019-20 budgets as a basis, revenue projections were developed for 2020-21 through 2023-24 using the following assumptions:

- No tax rate increases.
- No increase in the assessed value of properties.
- Collection rates remain constant.

- Earned income tax shows moderate growth (1.25 percent annually) as local income increases.
- Basic Education Funding is increased by 0.5 percent annually.
- State Special Education Funding is increased by 2.0 percent annually.
- State aid for pensions is increased at the same percentages at which PSERS contributions are expected to grow.
- State share for Social Security taxes and Medicare is increased at the same rate as employee salaries.
- Other state revenues are kept at 2019-20 budgeted levels or increased by two percent.
- Federal and Other Revenues are kept at 2019-20 budgeted levels.

Based on the assumptions, Upper Dauphin Area’s projected revenue is anticipated to grow by \$463,517 or 2.3 percent through 2023-24. Most of the growth is expected in state revenue, which is projected to rise by \$375,382 or 3.8 percent. Local revenue is likely to remain relatively flat, with only a slight increase of 5.1 percent anticipated in earned income taxes. (Table 2-21)

**Table 2-21: Upper Dauphin Area School District Projected Revenue by Source**

	<b>Budget 2019-2020</b>	<b>Projected 2020-21</b>	<b>Projected 2021-22</b>	<b>Projected 2022-23</b>	<b>Projected 2023-24</b>	<b>Change 2019-20 to 2023-24</b>	
						<b>\$</b>	<b>%</b>
Current Real Estate Taxes	\$6,412,145	\$6,412,145	\$6,412,145	\$6,412,145	\$6,412,145	0	0.0
Interim Real Estate Taxes	20,000	20,000	20,000	20,000	20,000	0	0.0
Public Utility Realty Taxes	7,500	7,500	7,500	7,500	7,500	0	0.0
PILOTS	13,000	13,000	13,000	13,000	13,000	0	0.0
Per Capita Taxes, Section 679	25,000	25,000	25,000	25,000	25,000	0	0.0
Current Act 511 Taxes - Flat Rate	25,000	25,000	25,000	25,000	25,000	0	0.0
Cur. Act 511 Taxes - Proportional	1,730,000	1,751,625	1,773,520	1,795,689	1,818,135	88,135	5.1
Delinquencies on Taxes	720,000	720,000	720,000	720,000	720,000	0	0.0
Other Local Revenue	<u>543,100</u>	<u>543,100</u>	<u>543,100</u>	<u>543,100</u>	<u>543,100</u>	<u>0</u>	<u>0.0</u>
<b>Total Local Revenue</b>	<b>\$9,495,745</b>	<b>\$9,517,370</b>	<b>\$9,539,265</b>	<b>\$9,561,434</b>	<b>\$9,583,880</b>	<b>88,135</b>	<b>0.9</b>
<b>Total State Revenue</b>	<b>9,953,280</b>	<b>10,042,293</b>	<b>10,132,595</b>	<b>10,233,743</b>	<b>10,328,662</b>	<b>375,382</b>	<b>3.8</b>
<b>Total Federal Revenue</b>	<b>517,431</b>	<b>517,431</b>	<b>517,431</b>	<b>517,431</b>	<b>517,431</b>	<b>0</b>	<b>0.0</b>
<b>Total Other Revenue</b>	<b><u>0</u></b>	<b><u>0</u></b>	<b><u>0</u></b>	<b><u>0</u></b>	<b><u>0</u></b>	<b>0</b>	<b>0.0</b>
<b>Total All Revenue</b>	<b>\$19,966,456</b>	<b>\$20,077,094</b>	<b>\$20,189,291</b>	<b>\$20,312,608</b>	<b>\$20,429,973</b>	<b>463,517</b>	<b>2.3</b>

**Upper Dauphin Area Projected Expenditures**

Using the historical figures plus the 2018-19 and 2019-20 budgets as a basis, expenditure projections were developed for 2020-2021 through 2023-24 using the following assumptions:

- Current collective bargaining agreements are used through 2019-20.
- Increases for 2020-21 through 2023-24 are 1.5 percent annually.
- PSERS contributions are increased by estimated percentages.
- Other Employee Benefits are increased by 6.0 percent.
- No new debt is incurred; debt amortization schedules were used to project expense.
- Other expenditures are increased 2.0 percent annually or held at budgeted levels.

While projections indicate limited revenue growth, expenditures are anticipated to grow significantly. Overall, expenditures are expected to rise by almost \$2 million or 10 percent. The largest increase is in Personnel Services – Employee Benefits, growing by \$1.1 million or 17.5 percent. (Table 2-22)

**Table 2-22: Upper Dauphin Area School District Expenditures by Function**

	Budget 2019-2020	Projected 2020-21	Projected 2021-22	Projected 2022-23	Projected 2023-24	Change 2019-20 to 2023-24	
						\$	%
Instruction	12,999,524	13,303,760	13,631,860	13,985,667	14,336,952	1,337,428	10.3
Support Service	5,841,624	5,980,622	6,132,243	6,293,061	6,453,766	612,142	10.5
Operation of Non Instr Services	436,043	444,423	453,650	463,462	473,034	36,991	8.5
Facilities Acq, Constr, and Imp Services	0	0	0	0	0	0	0.0
Other Expenditures and Financing Uses	1,026,372	1,087,084	978,300	1,077,500	1,075,752	49,380	4.8
<b>Total Expenditures</b>	<b>20,303,563</b>	<b>20,815,889</b>	<b>21,196,053</b>	<b>21,819,690</b>	<b>22,339,505</b>	<b>2,035,942</b>	<b>10.0</b>

**Upper Dauphin Area Surplus/(Deficit)**

Projections indicate annual growing deficits for Upper Dauphin Area. The 2019-20 budget deficit of \$337,107 grows to a \$1,909,532 deficit in 2023-24. During this period, expenditures are projected to increase by \$2 million or 10 percent compared to a revenue growth of only \$463,517 or 2.3 percent. (Table 2-23)

**Table 2-23: Upper Dauphin Area School District Surplus/(Deficit)**

	Budget 2019-2020	Projected 2020-21	Projected 2021-22	Projected 2022-23	Projected 2023-24
Revenues	19,966,456	20,077,094	20,189,291	20,312,608	20,429,973
Expenditures	20,303,563	20,815,889	21,196,053	21,819,690	22,339,505
<b>Surplus/(Deficit)</b>	<b>-337,107</b>	<b>-738,795</b>	<b>-1,006,762</b>	<b>-1,507,082</b>	<b>-1,909,532</b>

**Upper Dauphin Area General Fund Balance**

The Government Finance Officers Association (GFOA) recommends maintaining a minimum unassigned fund balance equal to 5 percent to 15 percent of total expenditures. For 2019-20, Upper Dauphin Area reported a total fund balance in the General Fund of \$7.0 million. The unassigned fund balance of \$1.6 million is 7.9 percent of the total expenditures. The

Pennsylvania School Code provides that districts where budgets are less than \$19 million may maintain an unassigned fund balance between 8 percent and 12 percent based on the actual size of the budget (24 P.S. Section 6-688). (Table 2-24)

Continuing deficits will erode the fund balance.

**Table 2-24: Upper Dauphin Area School District General Fund Balance**

	<b>Budget</b>
	<b><u>2019-2020</u></b>
Committed Fund Balance	5,344,562
Unassigned Fund Balance	<u>1,624,268</u>
<b>Total General Fund Balance</b>	<b>\$6,968,830</b>

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## **CHAPTER 3**

### **CURRICULUM ANALYSIS OF OPTION 5**

The merger of two districts requires a systemic review of curriculum, which allows the new district to incorporate the best of the two merging districts, as well as incorporate best practices for curriculum development, instructional strategies and educational opportunities.

In focusing on Option 5 (grades Pre-K to 5, 6 to 8, 9 to 12) as recommended in the Feasibility Study, one of the advantages is that the grade configuration better promotes systemic implementation than other options. Another is that this option affords the most effective and efficient use of resources. The combination of primary, elementary, middle and high school staff, students and resources allow for a synergy, where the whole is greater than the sum of the parts.

To facilitate the curriculum analysis, Chapter 3 is divided into two sections—Section 1: Grades Pre-K to 8 and Section 2: Grades 9 to 12 High School.

#### **Section 1: Grades Pre-K to 8**

##### **Age-Appropriate Environment, Support, Curriculum**

Interpersonal relations and issues differ at each level. The cognitive, social, emotional and academic needs of middle school students differ from those of the elementary level student. Disciplinary infractions are dealt with differently at each level due to maturity level and age expectations. A first-grade student throwing a tantrum would be dealt with differently than an eighth-grade student doing the same thing. Creating a physical and social environment to provide age-appropriate behaviors is more easily done when the student body is at the same relative level of development.

Having students of elementary school age in one building and students of middle school age in a separate building allows the schools to focus on developing an age-appropriate environment to permeate the entire school. The school would be able to establish and promote academic expectations to behavioral expectations to personal expectations in a building wide environment.

In addition, the integration and support of Special Education students with the appropriate age cohorts could be more efficiently and uniformly done when those grade level classes are all in one site. With the increased number of classes at a given grade level in Option 5, special needs students can be integrated in a variety of classrooms, providing age appropriate academic and social interactions without putting an inordinate number of special needs students in any one class.

##### **Curriculum**

As part of the process, members of the study team met with teachers and administrators from both districts. Meetings were held with representatives of the social studies, math, English, science, physical education, computer/business, art and music departments. During these meetings, representatives from each district were able to explain how their curriculum is set up and were able to talk about the similarities and differences that presently exist in their respective areas. For the most part, there are far more similarities than differences.

In these conversations, opportunities were identified that could be realized with the merger. While there is much to be drawn from each district, this is also an opportunity to look at instruction and curriculum with new eyes.

Decisions by the merged district to adopt in its entirety any program or curriculum that is presently being used in only one of the existing districts will impact the additional cost of materials. Implementing the agreed upon program for Pre-K to 5 and 6-8 would necessitate purchasing only the additional materials needed to augment the supply for that site. In addition, some of the materials and resources that are already available from other programs or curricula could serve as supplemental resources. If the materials are classroom resources, rather than consumables or individual student resources, then decisions will be made whether to share the resources or supplement them for every classroom.

Both districts use the same programs in key areas of literacy instruction (e.g. *Read Naturally* for fluency). Both districts presently use a balanced literacy approach, which integrates all components of literacy—reading, writing, listening and speaking—into their curriculum. Once the districts are merged, these materials will be blended and integrated as appropriate into the curriculum.

Regarding science instruction, one classroom may be used as an elementary level science classroom for elementary students to cycle through. In the meetings with teachers, it was noted that having a science classroom at the elementary level would enhance their ability for science demonstrations and improve their instruction.

A decision on a math series is required. Assuming one of the math series that is presently used is chosen for the merged district, existing materials would only have to be supplemented to provide for instruction of all students. For example, Millersburg Area has recently implemented Ready Math series for grades K-5, with a six-year contract. The district has also implemented Go Math series with a digital component for grades 6 to 8. Upper Dauphin Area has implemented a different math series (My Math) at elementary and middle school under a three-year contract. The merged district must determine the math series it will use and then incur the cost of expanding the materials for grades K through 8 and providing the training to properly implement the series.

At the joint meeting of content teachers, the concept of “departmentalizing” was favorably received. This calls for specific teachers to be identified as a content (e.g. math or science) teacher. All students in a specific grade would cycle through that teacher’s class for instruction in that content area. The remaining teachers would be responsible for all other content areas. This concept also is effective when using multiple tiered support whereby students could be grouped for math instruction, with one teacher working with struggling students, another with students who are on grade level, and a third with students who are academically talented.

The curricular needs of students in elementary (grades K-5) are different than those of students in middle school (grades 6-8). Teacher certifications reflect these differences, requiring teachers certified for grade K-8 to be “generalists” with a content specialty, and requiring teachers



certified for grades 7-9 to be content specific. (Teachers certified to teach grades 7-9 are also certified to teach their content in Grade 6, if that grade is part of a middle school configuration.)

### **Collaboration and Professional Development**

In virtually every teacher meeting that was held, the opportunity for collaboration was identified as a significant positive to the merger. Having teachers from any given grade level in the same building will be more conducive to collaboration and shared professional development. Some curriculum and materials presently used in each district will be retained and incorporated into the curriculum and instruction in the merged district. Having teachers with the background, experience and mastery of those curricula and materials will support their integration into the system. Having these teachers working in the same proximity and on the same instructional teams as others unfamiliar with the materials will create a support system to facilitate fidelity in implementation.

Having the teachers from any given grade level in the same building will also provide the opportunity for more efficient, cost-effective and time-effective planning of professional development. The professional development occurring in the building where they teach gives the teachers access to their own materials and facilities. It also presents opportunities to take advantage of relatively short periods within the school day for professional development, data analysis, team planning and development of common assessments. When the district's grade level or content teachers are at the same site, then team planning time, data analysis time and collaboration/coaching time can be built into their weekly schedules to accommodate regular engagement.

This opportunity for regular, natural, and consistent collaboration within a teacher's work schedule will facilitate such critical components of good instruction as creating common assessments; following the scope and sequence of the curriculum with fidelity; and analyzing student performance data to establish goals for tiered support and sharing instructional strategies.

STEM is important in both districts, but their approach and resources differ. If STEM is to be integrated into the curriculum as it is presently done in Millersburg Area, professional development and collaboration is critical. If it is introduced separately and then integrated into coursework, as it is now done in Upper Dauphin Area, comparable materials and resources will be needed. Collaboration is critical to successfully implementing STEM, regardless of the model used.

### **Equity of Resources and Programs<sup>1</sup>**

Presently, both school districts allocate their Title I funds to each of their elementary schools. Option 5 provides for the most efficient and effective use of Title I funds. Title I funds require an equalization of resources across the district. Combining students into distinct schools concentrates resources supported by Title I federal funding. This creates not only a consolidation

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<sup>1</sup> According to The US Department of Education Fact Sheet on Equal Access to Educational Resources, issued in 2014, the following resources may be considered to ensure equal access is provided: 1) Courses, Academic Programs, Extracurricular Activities; 2) Teachers and Leaders; 3) Other School Personnel; 4) School Facilities; and 5) Technology and Instructional Materials.

of federal funds, but it also creates an economy of scale in which the resources provide greater impact. For example, a computer lab purchased through Title I funds could be accessible to all the district's elementary grade students when those students are in one elementary building.

The resources purchased through Title I funds would be available to all students in the school. The district's distribution for Title I funds would strongly favor a single building for Pre-K, along with grades K to 5, due to the number of students and the socio-economic makeup of the student body, drawing from the entire district.

Title I funds also require equity in programs and resources, including human resources. The funding cannot be used to supplant a program, but rather to supplement, so that students have equal access to programs. With all students in discrete buildings under Option 5, the teaching staff, regardless of years of experience or expertise, would be available to all students in the respective grades.

### **Special Education**

The district is required to meet the needs of all identified students; the challenge is finding methods that allows the district to efficiently utilize its resources and meet the needs of students.

Classrooms at the Millersburg Area facility are already set up to accommodate the Life Skills program at the middle level. Upper Dauphin Area Elementary/Middle School has eight rooms for learning support; four on the elementary side and four on the middle school side. These will accommodate the increased enrollment of a grades Pre-K to 5 school, including Life Skills. The Millersburg Area facility has four rooms dedicated to learning support, in addition to the Life Skills suite. The amount of push-in or pull-out support to be offered will dictate the number of classrooms needed, but four classrooms should provide the needed space.

Grouping the students together by grade configuration—all Pre-K to 5 students in one building—provides the opportunity to consolidate and efficiently use resources. Students at different grade levels have different needs. Using the enrollment numbers for 2019-2020 as a basis for comparison, both districts have a combined total of 139 students in grades K-5 that are presently in need of special education services (Table 3-1). When considering the number of students with specific learning disabilities in the primary grades (K to 2) and the intermediate grades (3 to 5), these students can be grouped in a way that efficiently and effectively provides the support they need. The materials and resources are centrally located, and the special education teacher(s) would be able to work with individual and groups of students with similar primary disabilities.

**Table 3-1: Special Education students by district by primary disability (2019-20)**

Grade		AUT	SLD	MDS	ID	OHI	OI	ED	S/L	Hearing	TOTAL
K	UDASD	2	0	0	0	0	0	0	4	0	6
	MASD	0	0	0	0	1	1	0	5	0	7
1	UDASD	4	1	1	0	0	0	0	5	0	11
	MASD	1	3	0	1	0	0	0	2	0	7
2	UDASD	2	4	0	0	0	1	0	6	0	13
	MASD	2	5	0	1	1	0	0	3	0	12
3	UDASD	1	6	0	0	2	0	0	4	0	13
	MASD	2	7	0	1	0	0	0	3	0	13
4	UDASD	1	8	2	3	1	0	0	4	0	19
	MASD	0	4	0	0	0	0	0	2	1	7
5	UDASD	1	7	0	0	4	0	0	2	0	14
	MASD	1	10	0	2	0	0	0	4	0	17
<b>Total K-5</b>		<b>17</b>	<b>55</b>	<b>3</b>	<b>8</b>	<b>9</b>	<b>2</b>	<b>0</b>	<b>44</b>	<b>1</b>	<b>139</b>
6	UDASD	0	7	0	0	2	0	0	2	0	11
	MASD	4	10	0	3	0	0	0	1	0	18
7	UDASD	1	4	0	0	4	0	0	0	0	9
	MASD	2	3	0	1	1	0	1	0	0	8
8	UDASD	0	7	0	2	5	0	1	0	0	15
	MASD	2	2	0	2	0	0	0	1	0	7
<b>Total 6-8</b>		<b>9</b>	<b>33</b>	<b>0</b>	<b>8</b>	<b>12</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>0</b>	<b>68</b>

As an example, from Table 3-1 above, Millersburg Area facility would have 14 students with the primary disability of autism, with 10 of them at the middle level grades, while the Loyalton facility would have 12, with only one at the middle level. The distribution of the students in primary, intermediate and middle grades in a merged district (Option 5) would create cohorts of 9 (K to 2), 6 (3 to 5) and 9 (6 to 8) in approximate age developmental groups. This arrangement would provide the best opportunity to efficiently create an environment and support for the students.

Environments for emotional support and autistic support are not necessarily the same as those needed for specific learning disabilities or other health impairments. Life Skills classrooms and a multi-disabilities classroom require a completely different arrangement than most special education classrooms. Life Skills students would require room at each site (Pre-K to 5, 6 to 8, and 9 to 12) (Table 3-2). In 2019-20, the Life Skills student breakdown for the merged district would be 19 students in Pre-K to 5; and 10 students in grades 6 to 8. Students must be in a building that would provide them grade-appropriate classes to ensure least restrictive environment. Presently, the Loyalton and Millersburg Area facilities can accommodate Life Skills students.

**Table 3-2: Total number of students with individualized education programs at each district at elementary and middle grades (2019-20) and number of special education teachers at each level (Life Skills students and teachers as separated out of other disabilities)**

Special Education Totals 2019-20									
K-5					6-8				
	Students		Teachers			Students		Teachers	
UDASD K-5	76		4		UDASD 6-8	35		3	
Life Skills K-6		8		1	Life Skills 7-12		14		1
MASD K-5	62		4		MASD 6-8	33		2	
Life Skills K-6		11		1	Life Skills 7-12		12		1
<b>Total K-5</b>	<b>138</b>	<b>19</b>	<b>8</b>	<b>2</b>	<b>Total 6-8</b>	<b>68</b>	<b>26</b>	<b>5</b>	<b>2</b>

In addition to the classroom and resource needs, it will be necessary to have ample meeting space for individualized education program (IEP) meetings. Small rooms for speech and language support, as well as other therapies, such as occupational, are also required.

Changes in enrollment in special education, particularly for costly primary disabilities, would have less impact on the capacity of a classroom with students in grades Pre-K to 5 and 6 to 8 in respective buildings and the district would be better positioned to address changes in needs.

**Staffing**

Regarding staffing needs, Option 5 provides more classrooms per grade level in a single building. This situation provides better opportunities for students to be assigned with the best pairing of instructor and classmates. There are times when a student is best kept in proximity to or away from other students. The more classrooms available, the better the opportunities to put students in settings that will promote their success.

In Option 5, the elementary school would require 35 classroom teachers resulting in an average class size of 22.4. The middle school would require 17 core content teachers (reading, English, math, science, social studies) with an average class size of 23.6 (Table 3-3).

**Table 3-3: Comparison of enrollment and classroom staffing needs by grade for Option 5 (K to 5, 6 to 8) for 2020-21**

Loyalton Facility							
Grades	Enrollment	Teachers	Class Size	Related Arts	Student support	Special Ed	Total Prof Staff
K	147	7	21.0				
1	114	6	19.0				
2	133	6	22.2				
3	118	5	23.6				
4	145	6	24.2				
5	128	5	25.6				
<b>K-5 Total:</b>	<b>785</b>	<b>35</b>	<b>22.4</b>	<b>3</b>	<b>6</b>	<b>10</b>	<b>54</b>
Millersburg Facility							
Grades	Enrollment	Sections	Class Size	Related Arts	Student support	Special Ed	Total Prof Staff
6	143	6	23.8				
7	159	7	22.7				
8	169	7	24.1				
<b>6-8 Total:</b>	<b>471</b>	<b>20</b>	<b>23.6</b>	<b>20</b>			
Content Classes		5		2			
Total Content Classes		100		40			
Teacher Classes Per Day		6		6			
<b>Teachers</b>		<b>17</b>		<b>7</b>	<b>2</b>	<b>7</b>	<b>33</b>
<b>School Total:</b>	<b>1,256</b>	<b>52</b>		<b>10</b>	<b>8</b>	<b>17</b>	<b>87</b>

The determination of the number of related arts teachers needed depends on various factors, such as the duration of the related arts course and the variety of courses to offered.

For Option 5, it is assumed that grades K to 5 would offer physical education (PE), art and music as options, and there would be the same number of related arts sections as classroom sections, and these courses would be offered all year. The schedule uses a 6-day cycle. Using those assumptions, the Pre-K to 5 building would need 3.3 full-time equivalent (FTE) related arts teachers. Each elementary level related arts area would require 1.1 FTE to meet with all the classes. That is due to there being 37 elementary classes and only 36 periods in a 6-cycle, 6-period per day schedule. In addition, one full-time librarian would also be needed. Library/technology would be taught by the librarian, which is counted as a separate position.

For grades 6 to 8, the frequency with which a related arts course is offered (quarterly, semester, all year) impacts the number of teachers needed. It is assumed that each course is offered for a 45 or 90 minute class whether that means a quarter or semester daily class or a semester or year on

an A/B schedule; the district is offering PE/wellness, music, art, computer applications and industrial technology; a male and female PE teacher would be on staff; the courses are offered by semester; and there are four courses offered to complete the students' seven class requirements. Using those assumptions, the middle level (6 to 8) would need 7 FTE related arts teachers, including a male and female PE instructor.

### **Student Support Services**

For the elementary student body, additional support of reading specialists, guidance counselors, and librarian are critical elements. Consolidating the students in grades Pre-K to 5 into one building, enables a split between the needs of primary school students (grades Pre-K to 2) and intermediate school students (grade 3 to 5) regarding reading support, math support, special education support and guidance.

The needs of students at the primary grades, intermediate grades and middle level grades differ significantly. Having staff that are focused on the needs of students at specific grade levels is a better use of resources and will prove more beneficial to meeting the needs of students.

The number of reading specialists at the elementary level will depend upon Title I funding and the role the reading specialist plays. It would make sense to have a reading specialist for grades Pre-K to 2 and another for grades 3 to 5 to support the teachers and the students. Presently the English and language arts (ELA) teachers at the middle school handle instruction in reading and language arts. An elementary librarian would be needed to support the instruction for library skills and research. A middle school librarian would be an asset due to the technology and research needs of the students.

### **Scheduling of Classes and Resources**

The classroom needs for elementary and middle level students differ significantly. The schedule of classes in an elementary school is different than the schedule in a middle school. At the elementary level, classes can be scheduled for various lengths of time (e.g. literacy block may be 120 minutes, math may be 80 minutes, art may be 40 minutes, and Tiered Support may be 30 minutes).

The focus of elementary scheduling is to provide large blocks of time for literacy and math instruction. Social studies and science often are scheduled in the same block of time, alternating content areas often-by day. For example, in the elementary grades, social studies and science are taught during a 30-minute block; literacy block is 135 minutes, math is 75 minutes, and related arts are 45 minutes. Much of the social studies and science content in the early elementary grades is also supporting applied literacy skills. The tiered support for math and literacy is incorporated as part of the instructional day. All the related arts teachers usually meet with students in class-size groups once a week/cycle.

In the middle school, the academic standards for science and social studies become more rigorous, requiring blocks of instructional time that would be comparable to those designated for math and language arts. Classes at the middle level are usually scheduled to run 42 to 45 minutes for content and related arts classes. Reading is usually an area of instruction in the middle level with time comparable to that given to language arts instruction.

The related arts courses at the middle level are scheduled for a full class period, with students taking the course every day for a quarter or half of the school year. Usually a whole grade level would be assigned related arts courses during the same period. This is the time that is usually used to schedule grade level teachers' team time or preparation time for the non-related arts teachers.

### **Facilities Considerations**

With the discrepancy in the scheduling requirements at the elementary and middle school grades, the demands for access to facilities, resources and personnel are completely different, and, for the most part, not usually compatible. This impacts access to classrooms, cafeteria, library and other facilities. The use of personnel is also affected since the times when instructors and support staff used at the elementary level are on a different schedule than those used at the middle grade level.

Library space and resources would be more efficiently used when dealing with students of comparable age groupings (e.g., K to 5, 6 to 8). The materials, level of instruction and access within a library differ from the primary to the intermediate grades and differ yet more between the intermediate grades and middle level.

The size and availability of specialized rooms, such as the art room or music room, will impact the amount of instruction students can receive in these areas. For the elementary grades (K to 5), the assignment of the related arts is usually for a 30 to 45-minute block of time for a full class of students. Students usually rotate through these areas over the course of a week at the elementary level; however, the middle level students take classes in these rooms daily.

With grades Pre-K to 5 in one building, the principal can schedule classes, staff, facilities and resources using a common set of criteria. This would be a more time-effective and efficient process. At the elementary level, the related arts teachers and classrooms would be scheduled to specifically address the needs of grades K to 5. They would be able to accommodate tiered support, extended ELA blocks of instructional time, library usage and playground time.

Grades 6-8, having consistent length of periods, allow the principal to schedule classes and students without significant difficulty. The assignment of rooms and access to materials and resources becomes manageable because of the consistency within the scheduling process.

The schedule or length of periods would be consistent across the grade levels. This provides for the most efficient use of the facilities, classrooms and materials, since all classes can be scheduled with the specific needs of elementary or middle school students in mind.

### **Technology Infrastructure and Instructional Support**

The technology needed at an elementary level is different than that at a middle or high school level. With the elementary grades in a single building, it would be more cost-effective to build the infrastructure and procure the technology resources for that level. The materials and technology can be shared more readily when the grades that would need them are in one building.

At Millersburg Area, the elementary and middle school students each are given a device (iPads in grades K to 2; Chromebooks in grades 3 to 12) as part of its 1:1 approach to instructional technology. Upper Dauphin Area has iPads and computers that are used as centers within the classroom. The elementary classrooms have approximately five iPads per classroom, in addition to two computer labs for student use. Of these two labs, one is used by the librarian and the other is open for use by any class.

The cost of providing comparable technology and access to programs would be dependent upon the enrollment and the technology infrastructure of the building. From the IT assessment provided by each district, the Upper Dauphin Elementary School (Loyalton) would require upgraded technological infrastructure and an increase in the number of devices. The instructional technology, most notably the interactive projectors, would require upgrading. The cost would reflect the technology needs of elementary student instruction.

The middle level would already be at the necessary level at the Millersburg Middle School building. Classrooms there are already equipped with interactive boards, and the infrastructure has the capacity to meet the instructional and organizational technology needs.

Any computer program used for classroom instruction or academic support would require professional development for teachers who have not used it before. With all teachers of a grade level at a single site, those already familiar can support those new to the system, thus reducing the cost of professional development and onboarding time.

## Section 2: Grades 9 to 12 High School

Upon the merger implementation all students will be attending the high school at Elizabethville. This will have implications on costs related to meeting the needs of the combined student body, particularly related to programming, staffing and facilities.

The enrollment of the grades 9 to 12 building will remain relatively stable, according to projections from the Pennsylvania Department of Education (PDE) (Table 3-5). Class size, however, will fluctuate, which will impact the schedule of classes and facilities, especially the specialized rooms such as science laboratories, art and music rooms, special education rooms and computer labs. For example, the number of lab sections for biology would be impacted by the enrollment in whatever grade biology is offered.

Table 3-5: Projected enrollments of merged high school (based on PDE projections)

Year	9 <sup>th</sup> grade	10 <sup>th</sup> grade	11 <sup>th</sup> grade	12 <sup>th</sup> grade	Total
2020-21	157	159	137	147	600
2021-22	176	150	149	136	611
2022-23	167	168	141	148	624
2023-24	157	160	158	140	615



## Facility Considerations

Students' access to course options is impacted by the size of the enrollment in each grade and the availability of appropriate classrooms. The number of science labs, art rooms, music rooms and special education rooms available in the building will impact when and to whom courses can be offered.

### *Science*

Using the present graduation requirements, access to science labs is also a critical consideration. There may be a cost to ensure enough laboratory space is available to meet the needs for science lab courses. There are several science courses listed in each school's course selection guides that would require laboratory space. The science labs are used only once during the week in each class, which allows multiple classes to use a single lab over the course of the week. The labs for each area require specific accommodations. For example, a chemistry lab needs gas (for Bunsen burners), water, electricity, a safety shower and other safety features.

Based on the number of science courses that require access to a laboratory and the minimum number of sections required to meet the needs of the projected enrollment, it is possible to estimate the number of laboratories for each area of science. Assuming the laboratories are available for use by multiple teachers and sections of students, and laboratory schedules permit access to the labs every period of the day, the proposed minimum number of laboratories is as follows:

- Biology courses would need one lab to provide opportunity for eight lab sections;
- Chemistry courses would need one lab to provide opportunity for nine lab sections;
- Physics or physics-related courses would require one physics classroom to provide the opportunity for 4-5 lab sections.

Each lab will require adequate storage space for materials and resources. Storage of chemicals and technology/equipment for the lab may require special accommodations, such as venting and secure storage. Optimally, these storage areas should be adjacent to the laboratory.

There should be science classrooms available for instruction when the lab is not being used. In addition, there should be science classrooms to accommodate the non-laboratory science classes.

### *Other Subject Areas and Considerations*

Music courses, such as band and chorus, may require access to large-group instructional space, but these tend to be areas that are specific to instruments or voice instruction. There must be storage area available in these areas as well to accommodate instruments, uniforms, and materials/resources.

The number and type of art courses offered will be determined by the space available. Two-dimensional art classes and three-dimensional art classes have differing room requirements. The present art course selections at each school include 2-D (painting, drawing, etc.) and 3-D (ceramics and sculpture). Both schools offer "art studio" courses in various mediums. In addition to the instructional space, storage space is needed for materials, resources, student work, etc.

Regarding online instruction, presently the online courses are taken by students either in the library or in classrooms with teacher supervision. Access to a computer lab or designated classroom could increase the opportunity to offer more online courses, or to offer more students the opportunity to take the online courses presently offered.

Technology infrastructure must be able to accommodate increased use of individual devices at all points in the building.

High school students have different needs from a library/technology center than middle level students. The high school library will need to be able to address the research and online instruction demands of a strong high school curriculum. The need for large-group instruction and small-group instruction rooms are needed at a high school.

Special education students have particular requirements to best address their cognitive and physical impairments. The layout of rooms for students with multiple disabilities or students with life skills needs are generally different than the layout of rooms for students with cognitive or emotional needs.

There should be some area to accommodate storage of instructional materials and a location for teacher collaboration. Usually that collaboration space is established to accommodate content areas (English, math, social studies, etc.).

### **Staffing**

The combination of both high schools into one building provides the opportunity to review staffing needs. Part of that review should take into consideration the opportunity this presents to build a robust selection of electives. The number and type of electives to be offered may impact the number of teaching positions needed each year.

As noted above, the facility and access to specialized rooms may limit the opportunities. However, in cases where access to parts of the facility is not limited, it would be worth reviewing staffing options that could open opportunities for students.

Increasing the number of teachers at one site that teach the same content and related arts areas as well as those at the same grade level will increase the opportunity for district-wide collaboration and professional development. Having all middle level English teachers from the district, for example, in one building provides opportunities for them to meet face-to-face on a regular basis. Similarly, having all the teachers for one grade level for the district in one building provides a great opportunity for grade-level and cross-curricular collaboration. In conversations with teachers, the possibility of collaboration and sharing instructional strategies was very high on their list of opportunities presented by a merger.

Presently, some staff are used to supplement other levels (e.g., middle school teacher covering some elementary-level classes or high school teacher covering some middle-level classes). While it would still be possible to assign teachers to classes at different levels, a certain amount of natural collaboration that presently exists will be lost. This is particularly true with Related Arts. Currently, teachers at different levels (such as middle level and high school art) share rooms,

which provides for a natural collaboration. With grades 9-12 in a site separate from middle school, it will be difficult to have natural on-site collaboration among teachers from different levels located in other buildings e.g. elementary, middle and high school.

Table 3-6 illustrates the number of credits needed in each area, and which credits are required. For purposes of comparison, the table reflects the maximum number of credits a student would receive, assuming they take a full schedule that also includes a lab science for an additional ½ credit.

**Table 3-6: Each district’s present required credits in each area for graduation, with total potential credits each year and potential total credits for high school experience in a merged district.**

	Graduation Credits		Credits Per Year				Total Credits
	MASD	UDASD	9	10	11	12	
English	4.00	4.00	1.00	1.00	1.00	1.00	4.00
Social Studies	4.00	4.00	1.00	1.00	1.00	1.00	4.00
Math	4.00	4.00	1.00	1.00	1.00	1.00	4.00
Science	4.00	3.00	1.50	1.50	1.50	1.50	6.00
Phys Ed/Wellness	3.50	2.50	1.00	1.00	0.50	0.50	3.00
Arts/Humanities	1.00	0.00					0.00
Safety Education	0.25	0.00					0.00
Electives	5.75	7.50	2.50	2.50	3.00	3.00	11.00
<b>Total Credits</b>	<b>26.50</b>	<b>25.00</b>	<b>8.00</b>	<b>8.00</b>	<b>8.00</b>	<b>8.00</b>	<b>32.00</b>

The schedule must provide enough sections for each student to get seven credits per year. The enrollment of each grade level dictates the number of sections needed in a content area to accommodate all students at that grade level (Table 3-7). For example, the information in Table 3-7 shows it would take seven sections of English, with the class size range from 23 to 26, to accommodate the 176 students in 9<sup>th</sup> grade in 2021-22 School Year. It would also take six sections of English in each grade to meet the needs of students enrolled in 10<sup>th</sup>, 11<sup>th</sup>, and 12<sup>th</sup> grades in 2021-22.

**Chart 3-7: Example of enrollment by grade level and the number of sections needed with a class size to range between 23-26 students per section.**

For 2021-22 School Year	Grade Level				
	9	10	11	12	
Students	176	150	149	136	
Maximum Students per Section	26	26	26	26	
Minimum Number of Sections	7	6	6	6	
Average Class Size at Maximum	25.1	25	24.8	22.7	
Core Content Teacher Classes per Day	6	6	6	6	
Teachers per Core Content Subject	1.2	1.0	1.0	1.0	5.0

Adding up the number of sections needed each year provides the total number of sections required for all students to get a credit of English. The same calculation would be used for each of the other six credits students are required to take each year.

Considering the number of sections needed each day to meet the needs of that grade’s enrollment, and assuming a teacher’s assignment is six instructional periods, the number of full time equivalent (FTE) teachers for each area can be calculated by dividing the number of sections by 6 (i.e., the number of sections one teacher is assigned per day). Table 3-8 shows the number of FTE teachers per grade, and the total FTE teachers per area needed to meet the scheduling needs of the projected enrollment. The numbers are slightly higher in science to account for the lab periods (as indicated in Table 3-6).

**Chart 3-8: FTE for teachers needed at each grade level in each subject area to maintain a class size ranging from 23-26, assuming a teacher schedule of six instructional periods (2019-20 enrollment).**

	Teachers per Subject Area*				Total
	9	10	11	12	
English	1.2	1.2	1.2	1	5
Social Studies	1.2	1.2	1.2	1	5
Math	1.2	1.2	1.2	1	5
Science	1.8	1.8	1.8	1.5	7
Phys Ed/Wellness	1.2	1.2	0.6	0.5	4
Electives	2.9	2.9	3.5	3	13
<b>Total Teachers to Cover Credits</b>	<b>9.5</b>	<b>9.5</b>	<b>9.5</b>	<b>8</b>	<b>39</b>

So, from Table 3-8 above, five English teachers would be needed to meet the four English credit graduation requirements of the students. This minimum number would limit the number of electives in English because the five teachers (at six sections per teacher) would be able to teach 30 sections of English. The number of sections needed to meet the English graduation requirement is 27. This leaves three sections for courses that would be considered electives. If, due to scheduling conflicts or other reasons, a section could not enroll the class average size, additional sections of the required courses could be required. This would, of course, reduce the number of sections available for elective courses.

The need for science teachers will be impacted by certification. While seven science certified teachers would be able to provide the number of sections needed for four years of science, science teachers are certified by their specific area of instruction; for example, only biology-certified teachers can teach biology courses and only chemistry-certified teachers can teach chemistry courses.

In Table 3-8, the 13 FTE teachers needed to teach the required number of elective classes will be in a variety of content areas. For example, this would cover business, art, music, technology, agriculture, foreign language and construction trades, as well as any teachers from the core content areas to provide electives.

In addition to the content teachers, there should also be ten student support professionals for the high school. This would include six special education teachers, two guidance counselors, one librarian and one nurse to meet the needs of the high school enrollment.

### **Other Factors Affecting Teacher Counts**

As Table 3-8 indicates, it would take a **minimum** of 39 teachers to provide enough sections for each of the 611 students enrolled in the 2021-22 school year to attend seven classes a day, with the class size parameter at 23 to 26 students per class. Each teacher beyond the minimum provides opportunity for six additional sections of a content area or elective.

The number of teachers and the appropriate certifications could present financial implications in the merger. In some cases, the subject area, and not the student number, will dictate the need for staff. Certain science areas, such as chemistry, biology and physics, require specific certifications. In addition, the lab requirement of some science courses results in a higher teacher count to cover the additional period for lab. Other areas, such as Cooperative Diversified Occupations and some special education categories also require specific certifications.

Decisions on the graduation requirements will impact the number of required credits in specific areas. This will also have an impact on the number of teachers required in different areas.

Deciding on the sequence of math and science courses should not change the number of teachers in a content area, but it may change the number needed for a given grade level. In the case of science, it could change the number of teachers needed with specific certifications.

Dual enrollment and off-site educational experiences will have an impact on the number of students requiring classroom instruction by a teacher. This could have an impact on the number of instructors needed in different areas and could provide some flexibility in the scheduling of personnel.

Materials and resources for all required courses must be purchased to accommodate increased student enrollment.

The band directors at each school are working on options to merge the bands. One band is presently a competition band while the other is a marching band. The competition band is an extracurricular program. The marching band is cocurricular. The needs of the merged program should be taken into consideration.

### **Curriculum**

A single middle school configuration allows students to be better poised to take advantage of the opportunities in a merged high school. The opportunities for middle school students to engage in the industrial arts and vocational-technical elective at the middle school level will give them foundational skills for the construction industry and agricultural courses in high school.

The shop areas in the Millersburg building would need to be upgraded to a level supporting introductory experiences in vocational-technical areas. The shop areas in the present Upper

Dauphin Area High School can already accommodate the more advanced programs in construction trades and agricultural studies.

The merger will present the opportunity for a wide range of course options for students in both districts. The first decision will be to determine which courses will be required. These decisions will determine the resources and materials that would be required. It could be possible for materials and resources from some courses to serve as supplemental materials for other courses that would be offered.

As the departments from each district merge, there must be decisions regarding common assessments, as well as curriculum and instructional models that should be followed to ensure consistency and fidelity in the implementation of the merged curriculum. Choices will have to be made regarding the electives available to students at each grade level. Millersburg Area has a career pathways model, which would be consistent with Upper Dauphin Area’s course offerings. From conversations with teachers of the related arts, it appears that the career pathways approach is a compatible structure for students to choose electives. Upper Dauphin Area’s agriculture and natural resource management courses, as well as opportunities for students to get hands-on experiences both in school and outside of school, are also consistent with Millersburg Area’s career pathways model.

Once graduation requirements and required courses are determined, the district must ensure that there are enough resources and materials to support the number of students taking those courses. Some materials presently used could be repurposed as supplemental materials. Technology will have to be upgraded to meet the needs of all the students.

*Unique High School Courses*

There are a number of courses unique to one district or the other (Table 3-10). Some of these courses offer great opportunities for students from each district. Some of these courses are online courses, which should be made easily available. Others are related to dual enrollment agreements that should be beneficial to students at both districts.

The courses offer great opportunities to students, but it does not appear to be practical to offer all the unique courses in the course selection catalog. The impact it would have on scheduling, classroom space, staffing and programming would be significant.

**Table 3-10: Courses Unique to Each District**

Subject/ District	Course	CR	Comment	9	10	11	12
<b>Art</b>							
MASD	Photography and Photoshop I	0.5			X	X	X
	Photography and Photoshop II	0.5			X	X	X
<b>Business/IT</b>							
UDASD	Penn College Intro to Bus	0.5	college credit option		X	X	X

**Table 3-10: Courses Unique to Each District**

Subject/ District	Course	CR	Comment	9	10	11	12
	Comp Applications I	0.5	word processing and presentation basics (self-paced and remediation)	X	X	X	X
	Comp Applications II	0.5	Word Proc/ presentation/spreadsheet	X	X	X	X
	Financial Literacy	0.5					
	Comp Applications: Graphic and Tech Design	0.5		X	X	X	X
	Video Production	0.5		X	X	X	X
	VPC: Trojan News	0.5			X	X	X
	Trojan Sports News	0.5	semester	X	X	X	X
	Trojan Sports News	1.0	year	X	X	X	X
	Student help Desk	0.5	semester		X	X	X
	Student help Desk	1.0	year		X	X	X
	HACC CIS Introduction to Computer Applications	0.5	dual enrollment; weighted; college credit option			X	X
	Penn College: Intro to Web Page Development	1.0	dual enrollment; weighted; college credit option			X	X
	Penn College: Information, Technology and Society	1.0	dual enrollment; weighted; college credit option		X	X	X
MASD	Excel	0.5		X	X	X	X
	Fundamentals of Computer Systems	0.5	online course	X	X	X	X
	Fundamentals of Digital Media	0.5	online course	X	X	X	X
	Fundamentals of Programming	0.5	online course	X	X	X	X
<b>FACS</b>							
UDASD	Nutrition and You	0.5		X	X	X	X
	Foods and You				X	X	X
	L.I.F.E.				X	X	X
	Child Dev					X	X
	Consumer Strategies			X			
	Penn College Sanitation		college credit option; Weighted		X	X	X
<b>Industrial Arts</b>							
UDASD	Basic Cabinet making I	0.5		X	X	X	X
	Basic Cabinet making II	1.0			X	X	X
	Advanced Cabinet making	1.0				X	X
	Architectural Drafting	1.0				X	X
	Building Trades I	3			X	X	
	Building Trades II	3	prep for NOCTI			X	X
	Building Trades III	3					X
MASD	Construction Careers	0.5	online course	X	X	X	X
<b>Music</b>							
UDASD	Foundations of Music Theory	0.5			X	X	X

**Table 3-10: Courses Unique to Each District**

Subject/ District	Course	CR	Comment	9	10	11	12
	Hon Adv Music Theory	0.5				X	X
	Piano/Keyboard Techniques I	0.5		X	X	X	X
	Piano/Keyboard Techniques II	0.5			X	X	X
	Piano/Keyboard Techniques III	0.5				X	X
	Piano/Keyboard Techniques IV	0.5					X
MASD	Jazz to Rock History	0.5	half-year	X	X	X	X
<b>Agriculture</b>							
UDASD	Foundations in Agriculture & Natural Resources	0.5		X			
	Intro to Agricultural Mechanics & Technology (*Sci)	0.5		X	X		
	Intro to Animal, Plant and Soil Science (*Sci)	0.5		X	X		
	Basic Welding	0.5		X	X	X	X
	Small Gas Engines	0.5			X	X	X
	Engine & Machine Technology	0.5			X	X	X
	Advanced Agriculture Mechanics	0.5			X	X	X
	Crop and Soil Science (*Sci)	0.5			X	X	X
	Forestry	0.5			X	X	X
	Wildlife Mgt. & Conservation	0.5			X	X	X
	Advanced Horticulture	0.5			X	X	X
	Greenhouse Production & Management	0.5			X	X	X
	Dairy and Livestock Production & Mgt. (Offered 2019-2020)	0.5			X	X	X
	Equine Management (NOT Offered 2019-2020)	0.5			X	X	X
	Animal Science (*Sci)	0.5			X	X	X
	Meat & Food	0.5			X	X	X
	Supervised Agriculture Experience (A/B)	0.5	semester A/B		X	X	X
	Supervised Agriculture Experience	0.5	semester		X	X	X
	Supervised Agriculture Experience	1.0			X	X	X
	Advanced Welding	0.5				X	X
<b>Diversified Occupation</b>							
UDASD	Diversified Occupations I	1.0	classroom requirement for DO II				X
	Diversified Occupations II	3	half-day on-site experience				X
	Career Exploration & Job Acquisition	0.25	semester A/B	X	X	X	X
	Elementary Education Internship	3					X
	Teacher Assistant	0.5	semester	X	X	X	X



**Table 3-10: Courses Unique to Each District**

Subject/ District	Course	CR	Comment	9	10	11	12
	Teacher Assistant	0.1.0	year	X	X	X	X
	Elementary Education Internship	3	full year				X
<b>English</b>							
UDASD	Journalism	0.5	elect	X	X	X	X
	Penn College Honors English*	1.0	3 college credits				X
MASD	Yearbook	1.0	elect			X	X
<b>Social Studies</b>							
UDASD	Honors Humanity 100	1.0	two-yr. sequence; multi-disciplinary course w/ Art and Music dept.			X	X
	Honors Humanity 101	1.0	two-yr. sequence; multi-disciplinary course w/ Art and Music dept.			X	X
	World Conflict	0.5				X	X
	Local History	0.5		X	X	X	X
	CP Principles of Microeconomics	0.5					X
	CP Principles of Macroeconomics	0.5					X
MASD	Am History through Film	0.5	elect	X	X	X	X
	PA Legislative System	0.5	elect	X	X	X	X
	United States Geography	0.5	elect	X	X	X	X
	WWII and the Holocaust	0.5	elect			X	X
<b>Wellness</b>							
UDASD	Strength and Conditioning	0.5	elect	X	X	X	X
MASD	Health Sciences 1	0.5	elect; online	X	X	X	X
	Introduction to Careers in Health Sciences	0.5	elect; online	X	X	X	X
	Introduction to Human Services	0.5	elect; online	X	X	X	X
<b>Math</b>							
UDASD	Honors Pre-calculus	1.0					
	Math 120 College Algebra	1.0	college credit			X	X
	Honors Calculus I (Harrisburg Univ Math 120)*	1.0	college credit				X
	Honors AP Calculus or Math 220 Harrisburg Univ Calc II*	1.0	option of college credit or AP Calc AB exam				X
MASD	Trigonometry	1.0				X	X
<b>Science</b>							
UDASD	Penn College Fundamentals of Chem (w/lab)	1.0.5	college credit option			X	X
	Penn College Into to Health Careers	0.5	college credit option			X	X
	Hon Elect and Magnet	0.5				X	X
	Honors Wave, Sound Opt	0.5				X	X

**Table 3-10: Courses Unique to Each District**

Subject/ District	Course	CR	Comment	9	10	11	12
	Penn College Basics of Med Terminology (PC 3 college credits)	0.5	college credit option			X	X
MASD	Forensic Science	0.5					
	STEM Engineering and Design	0.5	math or elect			X	X
	STEM Engineering and Fabrication	0.5	math or elect			X	X
	Honors Biotechnology (Harrisburg Univ.)	1.0	Weighted; college credit option			X	X

Some of the unique courses require unique certifications. Determining which courses will be maintained in the merged high school will have an impact on the number of teachers in specific areas that will be required. It will also be necessary to consider the sustainability of any course or program, looking at the availability of teachers with the required certification.

As decisions are made regarding which courses will remain, consideration must be given to rising seniors who will be impacted during the transition. A plan for phasing out courses or programs may have to be developed.

It may be possible to maintain some courses by offering them on a rotational basis (e.g., courses A and B offered during alternating semesters or years), but ultimately it could be problematic to continue to offer all the courses presently offered at both high schools.

Consideration must also be given to students who are in the high school during the merger process. In this transition, decisions must be made regarding their graduation requirements, class rank and course offerings, among other areas. The administration must consider the impact that eliminating options presently available to seniors would have on students caught in the transition and plan accordingly. To address these concerns, it would be wise to create a group comprised of high school students and their parents to talk through district plans to address high school students impacted by the transition to a merged school district.

**Special Education**

Upper Dauphin Area had 136 special education students in its district during the 2018-19 school year. In addition, there were 17 out-of-district placements. The district uses Susquenita, Halifax and River Rock for its out-of-district placements. The district’s life skills program can presently accommodate students in grades K to 6 and 7 to 12. The in-district special education population is 12 percent of the total enrollment.

Millersburg Area had 170 special education students in its district during the 2018-19 school year. In addition, there were 11 out-of-district placements. The in-district special education population is 21.6 percent of the total enrollment.

Millersburg Area has a life skills consortium with other local districts. The life skills classes in Millersburg Area run a café in the morning; a suite of rooms accommodates this café and the life skills classes. Regardless of which configuration is used, when the high school is a separate

building, life skills students in grade 9 to 12 will be required to attend the high school. The building must be able to accommodate their needs.

At Millersburg Area, speech services are contracted services, either through the Intermediate Unit or other agencies. Upper Dauphin Area has a full-time speech therapist.

Millersburg Area also has a “paced sequence” at the high school level, which is remedial and moves at a slower pace. Students must be placed in this sequence by administration; they cannot choose it.

Special education is the one area that is almost impossible to predict financial implications therefore this analysis uses the amounts for the 2019-20 school year because they are the most recent numbers that can be verified (Tables 3-11 and 3-12). The assumption is that the identified students will proceed to the next year or the next level; but in any given year, a student with significant disabilities could move in or move out of the district, changing the needs and the costs significantly. The annual number of identified students has a direct impact upon special education staffing and services. The district needs to examine the grade levels and requirements of their special education population to determine the number and type of special education staffing that would be necessary. For smaller populations, contracted positions may prove to be the most cost-effective.

**Table 3-11: Special needs students from each district according to their primary disability (2019-20 school year)**

Special Education population/Primary Disability 2019-20												
Grade		AUT	SLD	MDS	ID	OHI	OI	ED	S/L	Hearing	Life Skills	TOTAL
K	UDASD	2	0	0	0	0	0	0	4	0		6
	MASD	0	0	0	0	1	0	0	5	0		6
1	UDASD	4	1	1	0	0	0	0	5	0		11
	MASD	1	3	0	1	0	0	0	2	0		7
2	UDASD	2	4	0	0	0	1	0	6	0		13
	MASD	2	5	0	1	1	0	0	3	0		12
3	UDASD	1	6	0	0	2	0	0	4	0		13
	MASD	2	7	0	1	0	0	0	3	0		13
4	UDASD	1	8	2	3	1	0	0	4	0		19
	MASD	0	4	0	0	0	0	0	2	1		7
5	UDASD	1	7	0	0	4	0	0	2	0		14
	MASD	1	10	0	2	0	0	0	4	0		17
K-5 LSS	UDASD										8	
K-5 LSS	MASD										11	
Total K-5		17	55	3	8	9	1	0	44	1		138
6	UDASD	0	7	0	0	2	0	0	2	0		11
	MASD	4	10	0	3	0	0	0	1	0		18
7	UDASD	1	4	0	0	4	0	0	0	0		9

**Table 3-11: Special needs students from each district according to their primary disability (2019-20 school year)**

Special Education population/Primary Disability 2019-20												
Grade		AUT	SLD	MDS	ID	OHI	OI	ED	S/L	Hearing	Life Skills	TOTAL
	MASD	2	3	0	1	1	0	1	0	0		8
8	UDASD	0	7	0	2	5	0	1	0	0		15
	MASD	2	2	0	2	0	0	0	1	0		7
Total 6-8		9	33	0	8	12	0	2	4	0		68
6-8 LSS	UDASD										1	
6-8 LSS	MASD										9	
9	UDASD	1	12	1	0	2	0	0	0	1		17
	MASD	2	2	0	1	2	0	0	0	0		7
10	UDASD	0	3	0	1	1	0	1	0	0		6
	MASD	2	2	0	1	2	0	0	0	1		8
11	UDASD	0	6	0	3	2	0	0	0	0		11
	MASD	2	8	0	1	1	0	1	0	0		13
12	UDASD	2	7	1	6	3	0	2	0	0		21
	MASD	0	5	0	1	1	0	0	0	0		7
Total 9-12		9	45	2	14	14	0	4	0	2		90
9-12 LSS	UDASD										13	
9-12 LSS	MASD										5	
Total 9-12 LSS											18	

**Table 3-12: The total number of special education students and teachers at elementary, middle and high school grades, based on 2019-2020 enrollments**

Special Education Totals 2019-20														
K-5	Students		Teachers		6-8	Students		Teachers		Merged 9-12	Students		Teachers	
UDASD K-5	76		4		UDASD 6-8	35		3						
Life Skills K-6		8		1	Life Skills 7-12		1		1					
MASD K-5	62		4		MASD 6-8	33		2		Total 9-12	9		4	
Life Skills K-6		11		1	Life Skills 7-12		9		1	Life Skills 9-12*		18		2
Total K-5	138	19	8	2	Total 6-8	68	10	5	2		9	18	4	2

*\*Life Skills for grades 9-12 would be added with any of the merged district options.*

It will be necessary to have a Life Skills classroom at the high school. This will be a separate site for students, and Life Skills students must have access to grade-appropriate classes whenever possible. As a result, Life Skills students in grades 9 to 12 (or even those beyond 12<sup>th</sup> grade) cannot be in a building that would not provide classes at a grade 9 to 12 level in order that the students be offered the least restrictive environment.

Upper Dauphin Area uses paraeducators more extensively than Millersburg Area, which is an option to be examined when looking at the services to be provided, and the most cost-effective way to provide those services. Presently many of the paraeducators in each district are full-time employees, with accompanying benefits. The role and number of paraeducators will need to be reviewed when combining the special education population at the high school level.

The number of paraeducators should always be determined by the need of the students. A possible guideline could be that each special education teacher has a paraeducator. This would help facilitate both a push-in as well as a pull-out model for students in need of academic or emotional support. Any aide specific to a student, as required by the student's IEP, would be in addition to the possible guideline offered above.

Upon merging, the special education population will be consolidated at a single location by grade level. This may result in decisions to use in-house resources rather than contracted services to meet some needs.

The consolidation of students should provide the opportunity for more efficient and effective use of resources, since students in need of learning support, emotional support or Life Skills at the elementary, middle or high school level will be in the same respective building.

The combining of the special education students from both districts should still allow enough capacity to maintain the present consortium arrangement with Halifax School District for providing the Life Skills program.

If combining the number of special education students from Millersburg Area and Upper Dauphin Area school districts warrants consideration of in-house support rather than contracting with the intermediate unit, the merged district may consider using any additional capacity as a potential revenue stream by enrolling students from other districts on a service-for-fee basis. Presently both districts provide services-for-fee to neighboring districts through the Life Skills program. In discussions with the special education department, it was determined that it is possible to accommodate their multiple-disability students while still having capacity for additional tuition-paying students from other districts.

### **Professional Development to Prepare for Merger**

As part of the merger analysis process, representatives from both districts were brought together to discuss their respective content areas. The conversations were productive and positive. However, those conversations were only a first step. Prior to and following the boards determination of the merger option and Department of Education approval, additional planning will be necessary to allow collaboration between the districts on decisions related to courses, programs, common assessments, curriculum, instructional strategies and more. These are decisions that will need to be made as part of the planning process as they impact the budgeting process for post-merger curriculum and professional development.

**Conclusion**

This analysis is offered as a guideline for discussions and decisions related to curriculum. The recommendations will be impacted by priorities of the district and factors beyond the scope of this analysis. The recommendation is that Option 5 is the most cost-effective and the most educationally sound option for merging the two school districts.

## CHAPTER 4 FACILITIES IN A MERGED DISTRICT

How to utilize existing facilities is an important consideration for decision-makers. In order to make a recommendation regarding facilities, our educational facility planners and project architect conducted educational and facilities assessments of facilities at both school districts. The assessments included meetings with school district administrators and interior and exterior walk-throughs of the following facilities:

- Millersburg Area Middle and High School  
799 Center St, Millersburg PA 17061
- Lenkerville Elementary School  
520 S Market St, Millersburg PA 17061
- Upper Dauphin Area High School  
220 N Church St, Elizabethville PA 17023
- Upper Dauphin Area Elementary and Middle School  
5668 State Route 209, Lykens PA 17048

Additionally, the project architect conducted interior and exterior walk-throughs of the stadium, maintenance facilities, and storage facilities (house and former church) at the Millersburg Area Middle School and High School campus. A detailed report on the facilities is available in the Phase I project report, *Millersburg Area and Upper Dauphin Area School District Combination Feasibility Report*.

Initially, five options were identified, as described below. Each school consolidation option (excepting status quo option for high schools) proposes to consolidate grades 9 to 12 district wide at Upper Dauphin Area High School, while discontinuing use of Lenkerville Elementary School. The architect's condition assessment of Lenkerville Elementary School identified \$7.3 million in systemic renovation costs within the next five years based on 49,500 sq.ft. times \$120/sq.ft. equaling \$5.9 million base construction cost times 123 percent for non-construction "soft" costs (including design and construction contingencies, printing, financing, professional fees, testing, etc.).

A timeline and background regarding Phase I of the project is included in Appendix III at the end of this report.

Option 1	Status Quo Facility Option with Lenkerville closure
Option 2	District-wide Consolidation Grade Pre-K to 4, 5 to 8, and 9 to 12 (Utilizing Upper Dauphin Elementary, Middle, and High Schools, Only)
Option 3	Two - Grade Pre-K to 8 Attendance Areas with Grade 9 to 12 Consolidation
Option 4	District-wide Consolidation Grade Pre-K to 4, 5 to 8, and 9 to 12
Option 5	District-wide Consolidation Grade Pre-K to 5, 6 to 8, and 9 to 12

In a process described in more detail in the timeline included in Appendix II, with input from school leadership the five options were winnowed down to three options for further consideration. More detail on these options is provided in Appendix III.

- Option 2 District-wide Consolidation Grade Pre-K to 4, 5 to 8, and 9 to 12  
(Utilizing Upper Dauphin Elementary, Middle, and High Schools, Only)
- Option 3 Two - Grade Pre-K to 8 Attendance Areas  
with Grade 9 to 12 Consolidation
- Option 5 District-wide Consolidation Grade Pre-K to 5, 6 to 8, and 9 to 12

Finally, this report makes a final recommendation for:

**Option 5 District-wide Consolidation Grade Pre-K to 5, 6 to 8, and 9 to 12**

**Final Recommendation – Option 5**

After careful consideration of the available options, it is recommended that Millersburg Area and Upper Dauphin Area school districts pursue Merger Option 5 - District-wide Consolidation Grade Pre-K to 5, 6 to 8, and 9 to 12. Considering all benefits and challenges of Options 2, 3, and 5, Option 5 is the preferred facility solution.

The following is a summary of the Option 5, including considerations and recommendations regarding implementation. Under Option 5, facilities would be used as follows. Please note, all options considered consolidate all high school students at the current Upper Dauphin Area High School facility.

- Pre-K through 5 at the Loyaltown campus of the Upper Dauphin Area School District
- Grades 6<sup>th</sup> to 8<sup>th</sup> at the Millersburg Area Middle School and High School campus
- Grades 9 to 12 at the Upper Dauphin Area High School (Elizabethville).

**Pre-K to 5 Elementary School**

The merged district will operate a Pre-K to 5 elementary school at the Loyaltown campus.

- Grade level clusters: It is recommended the building be organized in grade-level clusters, concentrating the youngest students in the existing Upper Dauphin Area Elementary School side.
- Classroom modifications: It is recommended that classrooms used for pre-school and kindergarten be modified with in-classroom toilets.
- Multiple gym and cafeteria options: This campus offers separate gym and cafeteria facilities and an additional multi-purpose room suitable for either food service or physical education.
- Wall modification: It is recommended that modifications be made to the wall that divides the existing Pre-K to 4 Upper Dauphin Elementary School from the 5 to 8 Upper Dauphin Middle School to promote the free flow of students while maintaining building Code compliance for safety.
- Bus and parent traffic: It is recommended that bus and parent traffic be separated. The existing middle school entrance would be the bus drop-off and an after-hours activity entrance. The existing elementary school entrance is better suited and therefore recommended for parent drop-off and visitor entry, as it features a passive security vestibule into the Principal’s office.



## 6 to 8 Middle School

The merged district will adapt the existing Millersburg secondary building for Millersburg 6 to 8 Middle School.

- Multi-disciplinary teams: It is recommended the building be organized in grade-level, multi-disciplinary teams of English, reading, math, social studies, and science.
- Grade-level distribution: It is recommended that the 6<sup>th</sup> grade located in the two-story wing, with 7<sup>th</sup> and 8<sup>th</sup> grade sharing the one-story wing.
- Art and Tech Ed: This facility already has secondary-related arts program spaces. It is recommended to adapt and upgrade the existing building trades shop for tech ed programming.
- Extracurricular and Community Access: The Millersburg campus offers two gyms, signature weight room, auditorium, and stadium complex that would be valuable to ease pressure on the consolidated high school's facilities for extra-curricular activities and for community use.
- Dauphin County Library: The Millersburg campus features the Johnson Memorial Library branch of Dauphin County Library, which would remain in use.

## Advantages of Option 5

Option 5 is the preferred approach over the other options analyzed. Following are advantages identified in this analysis:

- Elementary faculty would benefit from dedicated sign-out science labs.
- The district could capitalize on the Grade 4-8 certification which requires content area specialty, using science team-teaching for 4<sup>th</sup> and 5<sup>th</sup> grades.
- In addition, 5<sup>th</sup> graders would benefit from one more year of robust, elementary-level math and literacy pupil supports services, to better prepare for secondary school.

Further, organizing the district in grade-level buildings promotes class section size equity.

- The district can more efficiently address unforeseen changes in needed special education services, in grade-level buildings.
- Faculty can conduct face-to-face, grade-level planning, without coordinating technology and schedules.
- Science classrooms are available as sign-out labs for elementary science instruction and projects.
- The facilities in this configuration provide ample space to accommodate unforeseeable enrollment bubble.
- The facilities in this configuration provide ample space to accommodate special education and pupil support services.

## Adaptation-related costs (\$133,000)

There are modest suggested adaptation costs related to Option 5:

- Adaptive use of Millersburg Area High School building trades shop for middle school tech ed lab: \$74,000 (3,000 sq.ft. x \$20/sq.ft. (includes equipment) x 1.23 for soft costs)
- Separate Millersburg parent from bus drop-off (summer 2020 paving project).
- New toilet rooms in four kindergarten classrooms: \$47,000 (64 sq.ft. per toilet x 4 toilets x 1.2 net to gross sq.ft. = 307 sq.ft. x \$120/sq.ft. x 1.23 for soft costs)

- Modify openings between the existing Upper Dauphin Area Elementary School and Upper Dauphin Area Middle School \$12,000 (\$5,000 per opening x 2 openings x 1.23 for soft costs)

## CHAPTER 5 TRANSPORTATION IMPACT ANALYSIS

The merger of the two school districts will necessitate a larger overall transportation network with more routes and annual transportation miles than combined pre-merger district totals. The larger transportation network will lead to higher expenditures and larger state subsidies. The net cost of post-merger transportation services is estimated to be similar to the combined pre-merger district totals. There is the potential for net cost savings in the range of \$50,000 to \$100,000 annually if the merged district can procure transportation services based on state formula, which Upper Dauphin Area has been able to acquire in recent history. However, the merger will see a year-one net cost increase of approximately \$360,000 because of the one-year lag in state subsidies.

Based on preliminary post-merger route analyses, 90 percent of students are calculated as having morning and afternoon post-merger transportation trips of 60 minutes or less, and travel times are relatively uniform across grade levels. Millersburg Area elementary students, Upper Dauphin Area middle school students, and Millersburg Area high school students exhibit greater pre-merger-to-post-merger transportation time changes due to the facility arrangement of Option 5. The analysis and routes described are preliminary, conservative estimates; the districts can consider adding additional routes to balance cost and travel times. The districts also can consider seeking vendor assistance to review the preliminary routes for further efficiency. We believe the two districts can further refine and add to these preliminary routes to reduce the impact of travel time on outlier students and to explore other efficiencies, such as using the Millersburg Area Middle/High School complex as a hub for elementary student transportation.

Lastly, the following analysis does not take into account any transportation-related impacts of the COVID-19 pandemic such as increased costs related to school bus cleaning, additional bus driver shortages, or other impacts that may affect the service and its costs.

### Transportation Financials

Upper Dauphin Area transportation expenditures have fluctuated between approximately \$985,000 and \$1.16 million in the last five fiscal years. These costs have been in close proximity to the route allowances as calculated in the Pennsylvania Department of Education’s Pupil Transportation and Nonpublic and Charter School Pupil Transportation subsidies, leading to relatively high state subsidies as a percentage of total costs.

**Table 5-1: Upper Dauphin Area School District Transportation Revenues and Expenditures**

	Actual	Actual	Actual	Actual	Actual	Change 2014-15 to 2018-19	
	2014-15	2015-16	2016-17	2017-18	2018-19	\$	%
Expenditures	1,019,689	1,002,617	985,118	1,158,268	1,110,301	90,612	8.9
Less: State Subsidy Revenue	719,168	739,715	744,942	702,139	763,452	44,284	6.2
<b>Net Cost</b>	<b>300,521</b>	<b>262,902</b>	<b>240,176</b>	<b>456,129</b>	<b>346,849</b>	<b>46,328</b>	<b>15.4</b>
Revenue as Percent of Total Expenditures	70.5%	73.8%	75.6%	60.6%	68.8%		

The district has been able to keep net district transportation costs relatively low because it has been successful in procuring transportation services with compensation structures largely tied to the daily rates as calculated by the state’s formula funding, with extracurricular event and field trip compensation charges set with per-mile and per-hour rates.

Millersburg Area transportation expenditures have grown almost 17 percent in the last five fiscal years from a low of \$375,601 in 2014-15 to \$439,142 in the 2018-19 fiscal year. These costs have been more than the route allowances as calculated in the state subsidy formula, leading to relatively low state subsidies as a percentage of total costs.

**Table 5-2: Millersburg Area School District Transportation Revenues and Expenditures**

	Actual	Actual	Actual	Actual	Actual	Change 2014-15 to 2018-19	
	2014-15	2015-16	2016-17	2017-18	2018-19	\$	%
Expenditures	375,601	393,161	394,451	397,692	439,142	63,540	16.9
Less: State Subsidy Revenue	158,829	162,475	161,235	173,659	151,238	-7,591	-4.8
<b>Net Cost</b>	<b>216,772</b>	<b>230,685</b>	<b>233,216</b>	<b>224,033</b>	<b>287,903</b>	<b>71,131</b>	<b>32.8</b>
Revenue as Percent of Total Expenditures	42.3%	41.3%	40.9%	43.7%	34.4%		

Smaller, rural districts can have difficulty procuring transportation services based on state formula due to fewer available contractors and higher fixed costs. Indeed, Millersburg Area has advertised for public bids in the past often without any response besides its current vendor, so it’s higher costs when compared to state formula are not for a lack of effort on the district’s part to close this gap. The current transportation contract between Millersburg Area School District and the David Schlegel Transportation Company is based on a \$1,456.05 daily rate for standard routes and route-specific daily rates for nonpublic and van routes.

For context, the next table shows the combined pre-merger transportation financial figures of the two school districts. The districts’ total transportation expenditures have grown 11 percent from approximately \$1.4 million to \$1.55 million in the last five full fiscal years. State subsidies provided to the two districts has grown at a slower pace of 4.2 percent in the same timeframe. Total net costs have ranged from a low of \$473,393 to over \$680,000.

**Table 5-3: Pre-Merger Millersburg Area School District and Upper Dauphin Area School District Combined Transportation Revenues and Expenditures**

	Actual	Actual	Actual	Actual	Actual	Change 2014-15 to 2018-19	
	2014-15	2015-16	2016-17	2017-18	2018-19	\$	%
Expenditures	1,395,290	1,395,778	1,379,570	1,555,960	1,549,443	154,153	11.0
Less: State Subsidy Revenue	877,997	902,191	906,177	875,798	914,691	36,694	4.2
<b>Net Cost</b>	<b>517,293</b>	<b>493,587</b>	<b>473,393</b>	<b>680,162</b>	<b>634,752</b>	<b>117,459</b>	<b>22.7</b>
Revenue as Percent of Total Expenditures	62.9%	64.6%	65.7%	56.3%	59.0%		

### Transportation Financial Impact of the Combined District

Our analysis finds that the merged district will have more annual transportation miles, increased subsidy revenue, and increased expenditures when compared to the combined totals of the pre-merger school districts. There is potential for net savings in the post-merger transportation system; if the merged district procures transportation services based on state formula costs, we anticipate net costs to be as low as \$487,000, a potential savings up to \$125,000 annually. However, the first year of merged district finances will see an increase in net costs because state subsidies are based on prior-year operations. Thus, in year one, the merged district will be paying for the larger transportation network but receiving the final pre-merger subsidies. This section will summarize pre- and post-merger financials, further detail the year-one implications of the lag in state subsidy payments, provide notes on procurement to realize the potential savings cited, and further detail our state subsidy estimates.

Table 5-4 summarizes the pre-merger post-merger financial analysis. The increase in annual mileage for the merged district (when compared to the combination of the two districts pre-merger) increases state approved costs from the current \$1.34 million to an estimated \$1.75 million. We anticipate total state subsidies to increase by approximately \$400,000 to a total of \$1.34 million.

**Table 5-4: Pre-Merger Financial Summary and Post-Merger Financial Estimates<sup>1</sup>**

	Millersburg Area	Upper Dauphin Area	Pre-Merger Combined	Post-Merger Estimate	Difference
(a) Expenditures (\$)	439,142	1,110,301	1,549,443		
(b) State Approved Cost (\$)	271,610	1,066,367	1,337,977	1,758,039	420,063
Expenditures as a Percent of Approved Costs (a/b)	161.7%	104.1%	115.8%		
Total State Share (\$)	166,225	640,886	807,112	1,055,351	248,239
Excess Cost (\$)	0	174,856	174,856	287,142	112,285
(c) Total State Subsidy (\$)	166,225	815,743	981,968	1,342,493	360,525
Net Cost: Expenditures less Subsidy (a-c) (\$)	272,916	294,558	567,475		

### Transportation Contract Pricing and Net Costs

The resulting expenditures and net costs of the post-merger district will depend on the procurement of transportation services. A goal of the any district should be to procure transportation services at state formula costs which reduces net costs to district taxpayers. The merged district’s larger size alone bodes well for reaching this procurement goal since one of the constituent districts already procures state formula rates. While not required, the new district can gain negotiation leverage by putting its routes out for public bid. The merger should also serve as

<sup>1</sup> Note that this table uses expenditures and state subsidy data based on 2018-2019 operations. The total state subsidy data differs from the historical financials for 2018-19 because the subsidy for 2018-19 operations is payable in 2019-20. See the “Year-One Financials and Subsidy Lag” for details.

an opportunity to revisit the potential for shared transportation services for nonpublic and other small capacity routes with neighboring districts such as Halifax Area School District and Williams Valley School District.

At the minimum, costs will match state allowed costs of \$1.76 million, creating a net cost of \$415,546 or about \$151,000 less than the pre-merger net cost. If the merged district limits its total expenditures as a percent of state approved costs comparable to Upper Dauphin Area (104.1 percent), total expenditures would be approximately \$1.83 million annually. The net cost to district taxpayers would be approximately \$488,000 or about \$80,000 less than the pre-merger districts combined. However, if transportation services are procured such that total expenditures as a percent of state approved costs is comparable to the combined districts (115.8 percent), total expenditures would eclipse \$2 million with a net cost to district taxpayers of almost \$700,000 or \$125,000 greater than the pre-merger total.

**Table 5-5: Expenditure and Net Cost Estimates and Pre-Merger to Post-Merger Difference**

	<b>Pre-Merger Combined</b>	<b>Low Estimate</b>	<b>Difference</b>	<b>Medium Estimate</b>	<b>Difference</b>	<b>High Estimate</b>	<b>Difference</b>
Expenditures	1,549,443	1,758,039	208,597	1,830,471	281,028	2,035,896	486,454
Less Total State Subsidy	981,968	1,342,493	360,525	1,342,493	360,525	1,342,493	360,525
<b>Net Costs</b>	<b>567,475</b>	<b>415,546</b>	<b>-151,928</b>	<b>487,978</b>	<b>-79,497</b>	<b>693,403</b>	<b>125,929</b>

A priority for the merged district should be to procure transportation services consistent with transportation contracts at state formula costs which reduces net costs to district taxpayers. Additionally, post-merger agreements should include the district’s right to contract with others, route development assistance, the district’s ability to request driver reassignments, and fuel cost escalators.

**Year-One Financial and Subsidy Lag Considerations**

One important consideration for the merger is the fact that subsidy revenue is payable in the following fiscal year. For example, transportation subsidies paid out by the state to school districts in 2019-2020 is based on 2018-2019 route data. From a financial perspective, school districts are always paying for current-year transportation services and receiving state subsidies based on prior-year experiences.

While this is typically of little consequence to school districts, it is a notably important consideration for the first fiscal year of the merged district as it will have increased expenditures for a larger school transportation network but will only recognize the state subsidy revenues calculated against the final year of pre-merger operations. The one time, first year impact of this is the gap between post-merger and pre-merger subsidies, currently estimated in Table 5-4 as \$360,525. The districts should consider including this total in a request for one-time financial assistance for the merger.

## State Subsidy Calculations

To understand how a merged district will impact expenditures, subsidies, and net district cost, it is important to understand how the state allocates route allowances. While complex, the state formula essentially consists of three components<sup>2</sup>:

- Vehicle Allowance
- Mileage Allowance
- Utilization Allowance

Vehicle allowance is calculated based on vehicle age (with larger allowance for newer vehicles), seating capacity and the number of days in service. This allowance is a smaller component than the other two and is not directly under the control of the districts since they do not provide transportation services in-house.

Mileage allowance is a main driver of allowed costs and makes distinction between miles driven with students and without students. In essence, the state will subsidize total mileage until without-student mileage exceeds with-student mileage. At that point, approved mileage is capped at two times the with-student mileage.

The Utilized Passenger Capacity Miles (UPCM) allowance is calculated by multiplying approved annual miles by the greatest number of pupils assigned to ride each route at any time. For large buses that are used close to capacity, this allowance can match or even exceed the mileage allowance.

Implicit in the state subsidy formula is that mileage without students is nonproductive and should be minimized, and that greater vehicle capacity utilization will be awarded with larger subsidies. Both districts have benefitted from routes that maximize mileage allowance: only one large bus route between the two districts had a without-student mileage greater than its mileage with students. Smaller capacity vehicles, particularly in Upper Dauphin, often had greater without-student miles but the variance was not typically substantial.

As the next table shows, due to geographic distribution, Millersburg Area has notably higher bus capacity rates and lower small capacity vehicle utilization rates when compared to Upper Dauphin Area.

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<sup>2</sup> A fourth allowance component, Layover/Congested Miles Allowance, is not present in either Millersburg Area or Upper Dauphin Area subsidy allowances for any current routes and is omitted from post-merger analysis.

**Table 5-6: Annual Route Mileage and Capacity Data, Summary of Pupil Transportation Subsidy, Payable Year 2019-2020 for School Year 2018-2019**

	Total Approved Annual Miles	Total Annual Miles Driven	Approved Miles as a Percent of Total (%)	Average Students at Maximum Capacity	Average Seating Capacity	Students as Percent of Capacity (%)
<b>Millersburg Area</b>						
Buses	41,007	41,007	100.0	58.2	72.0	80.9%
Vans / Small Capacity	78,213	80,988	96.6	5.1	9.6	53.7%
<b>Total</b>	<b>119,219</b>	<b>121,995</b>	<b>97.7</b>			
<b>Upper Dauphin Area</b>						
Buses	201,274	201,520	99.9	56.0	77.8	71.9%
Vans / Small Capacity	274,872	305,817	89.9	6.1	6.3	97.7%
<b>Total</b>	<b>476,146</b>	<b>507,337</b>	<b>93.9</b>			
<b>Combined</b>						
Buses	242,280	242,527	99.9%	56.8	75.8	74.9%
Vans / Small Capacity	353,085	386,805	91.3%	5.9	7.1	83.3%
<b>Grand Total</b>	<b>595,365</b>	<b>629,332</b>	<b>94.6</b>			

As noted earlier, the post-merger transportation landscape will be more consistent with current Upper Dauphin Area route statistics due to its larger size and longer bus routes. To estimate state allowed costs and potential transportation subsidy figures, we assumed similar without-student miles witnessed in Upper Dauphin Area routes are expected in the merged district.

**Table 5-7: Pre-Merger and Post-Merger Bus Route Averages**

	Number of Routes	Miles with Students	Miles without Students	Days in Service	Approved Miles	Seating Capacity	Approved Annual Miles
Millersburg Area	7	24.9	7.5	181.0	32.4	72.0	5,858.1
Upper Dauphin Area	13	59.8	28.3	176.0	88.0	77.8	15,482.6
Total	20	47.6	21.0	177.8	68.5	75.8	12,114.0
<b>Post-Merger Estimates</b>	<b>22</b>	<b>63.3</b>	<b>28.8</b>	<b>180.0</b>	<b>91.3</b>	<b>75.5</b>	<b>16,434.8</b>

Note: Routes typically constitute two, three, or four separate runs a day.

For projection simplicity, we assume the smaller capacity vehicle and van routes of both districts will remain the same. This includes Amish school transportation provided by MASD, runs to Dauphin County Technical School, and runs including Northern Dauphin Christian School and Hill Top Academy. Our analyses of the Traversa-generated routes suggest approved annual miles will be greater than 361,000 and represent 99 percent of total miles driven.

**Table 5-8: Annual Route Mileage and Capacity Data, Merged District Routes Projections**

	Total Approved Annual Miles	Total Annual Miles Driven	Approved Miles as a Percent of Total (%)	Average Students at Maximum Capacity	Average Seating Capacity	Students as Percent of Capacity (%)
Buses	361,565	365,026	99.1	54.4	75.5	72.0
Vans / Small Capacity	353,085	386,805	91.3	5.9	7.1	83.3
<b>Total</b>	<b>714,650</b>	<b>751,830</b>	<b>95.1</b>	<b>26.8</b>	<b>36.6</b>	<b>73.2</b>



Route figures were entered into the state allowance formula for contracted services to derive the estimated route allowance figures below. Total allowance figures were multiplied by the 2019-2020 cost index of 5.910 to compute a total allowable cost estimate of \$1.68 million.

**Table 5-9: Projected Route Allowances by Allowance Type, in Dollars (\$)**

	Vehicle Allowance	Miles Allowance	UPCM Allowance	Total Allowance	Total Allowable Costs
New Routes	38,472	83,160	69,126	190,758	1,127,380
Existing Small Capacity / Van Routes	9,386	81,210	3,900	94,495	558,465
<b>Total</b>	<b>47,858</b>	<b>164,369</b>	<b>73,026</b>	<b>285,253</b>	<b>1,685,845</b>

The state subsidy is calculated off this annual allowable cost figure. In general terms, the annual allowable cost is multiplied by the district’s market value aid ratio to derive a “State Share.” This State Share would typically constitute the state subsidy. However, the Public School Code requires that no school district will need to raise more than one-half mill of its market value to pay toward state approved transportation costs. That is, if the difference between annual allowable cost and the State Share is in excess of half-mill of market value, the “excess cost” is added to the state subsidy. This is an important distinction because over \$150,000 of Upper Dauphin Area’s current state subsidy is from excess cost, and we anticipate the merged district to also receive excess cost subsidy.

To estimate state subsidy, the data and considerations above were analyzed while assuming that other state calculation components (notably, intermediate unit transportation) are held constant. The market value aid ratio (MVAR) of the two districts is very similar and we anticipate a combined district’s MVAR to be 0.6003 (see Chapter 6 and Table 6-20 for details). This aid ratio is multiplied by the total approved costs to derive a State Share subsidy of approximately \$1 million. The difference between these two of \$702,688 is greater than half a mill of the districts’ combined market value by approximately \$287,000 creating a total transportation subsidy of nearly \$1.34 million.

**Table 5-10: Estimated State Subsidy Calculation for Merged District**

Approved Costs	Amount (\$)
District Transportation	1,685,845
Intermediate Units	72,194
<b>Total</b>	<b>1,758,039</b>
Less: State Share (Aid Ratio of 0.6003)	1,055,351
Difference	702,688
Less: Half Mill Market Value (2018 STEB)	415,546
Excess Cost	287,142
<b>Transportation Subsidy (State Share plus Excess Cost)</b>	<b>1,342,493</b>

## Transportation Times

The next section analyses pre-merger and post-merger student transportation times and the impact on students under Option 5 facility arrangements. Pre-merger transportation statistics were assessed using various Upper Dauphin Area and Millersburg Area datasets and staff interviews to confirm assumptions. Preliminary post-merger bus routes were developed by Upper Dauphin Area staff using Traversa, a school transportation software package licensed by Upper Dauphin Area School District.

Millersburg Area currently benefits from notably short transportation times due to the majority of MASD's student population living near the Lenkerville Elementary School and the Millersburg Area Middle/High School complex. Post-merger transportation times will more closely resemble pre-merger UDASD transportation times due to the increased district land area.

Overall, 90 percent of students are calculated as having morning and afternoon post-merger transportation trips of 60 minutes or less. Furthermore, we believe the two districts can further refine these preliminary routes to reduce the impact of travel time on outlier students and to explore other efficiencies, such as using the Millersburg Area Middle/High School complex as a hub for elementary student transportation. The addition of routes can also be considered, but this will likely add to costs at a rate that subsidies would not match dollar-for-dollar because utilization (e.g. capacity rates) would likely decrease.

An important distinction between pre-merger and post-merger transportation is the grade-level routes in the post-merger preliminary analysis. Both districts currently have some level of grade-level mix in its bus runs. For example, pre-merger Millersburg Area runs have students from all grade levels on a bus, particularly for runs servicing outlying areas of the district. Upper Dauphin Area currently bus many middle and high school students on the same run. Parents may take more solace in the fact that a smaller grade variation will exist on post-merger routes under this preliminary analysis.

Staff built preliminary routes with middle and high school start and end times of 7:25am and 2:35pm, while the elementary school routes were developed with 8:25am start and 3:30pm, respectively.

For a point of reference, we provide the following information which contextualizes baseline transportation of the area. The new district will be approximately 18 east-to-west at its widest point in a rural region of Pennsylvania without any controlled-access major interstate. Furthermore, the valley-and-ridge geography of the area creates natural transportation obstacles for outlying areas such as Carsonville.

For example, a car ride from the Millersburg Area Middle/High School complex to the Upper Dauphin Area Middle School facility takes between 14 and 18 minutes at 7:00am along US Route 209, according to Google Maps routing. A car ride around the same time from the Gratz Post Office (in the eastern reaches of UDASD) to the Millersburg Area Middle/High School typically takes 20 minutes along PA Route 25. A driver starting in Carsonville, meanwhile, has between a 20- to 25-minute car ride to the UDASD and MASD middle school buildings.



**Pre-Merger Transportation Analysis**

In order to prepare the analysis, a Trip Detail report was exported from Transfinder, identifying student-level details on school of attendance, morning/afternoon bus route, bus stop, and associated transportation times. The report was prepared in a spreadsheet format and processed in a statistical and graphical program to analyze district transportation times.

The tables below show the current percentage of students by travel time threshold for each grade level. As a group, high school students spend more time on buses than their elementary and middle school peers. For example, only 48 percent of high school students currently have a morning travel time of 20 minutes or less when compared to 73 percent of elementary students and almost 70 percent of middle school students. Overall, at least 95 percent of all grade levels exhibit a morning travel time of 45 minutes or less.

Afternoon travel times are slightly longer for each grade level. Approximately 57 percent of elementary and middle school students have an afternoon bus ride of 20 minutes or less compared with only 32.4 percent of high school students. Furthermore, a smaller percentage of students exhibit afternoon bus ride times of 45 minutes or less when compared to morning route times, regardless of grade level.

**Table 5-11: Percent of Students Transported by Travel Time Threshold and Grade Level, Morning Routes, Upper Dauphin Area**

Grade Level	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less
Elementary	382	20.5%	73.0%	85.6%	96.9%	99.7%
Middle School	344	23.0%	69.5%	82.0%	96.2%	100.0%
High School	310	12.1%	48.2%	79.5%	95.4%	99.0%

**Table 5-12: Percent of Students Transported by Travel Time Threshold and Grade Level, Afternoon Routes, Upper Dauphin Area**

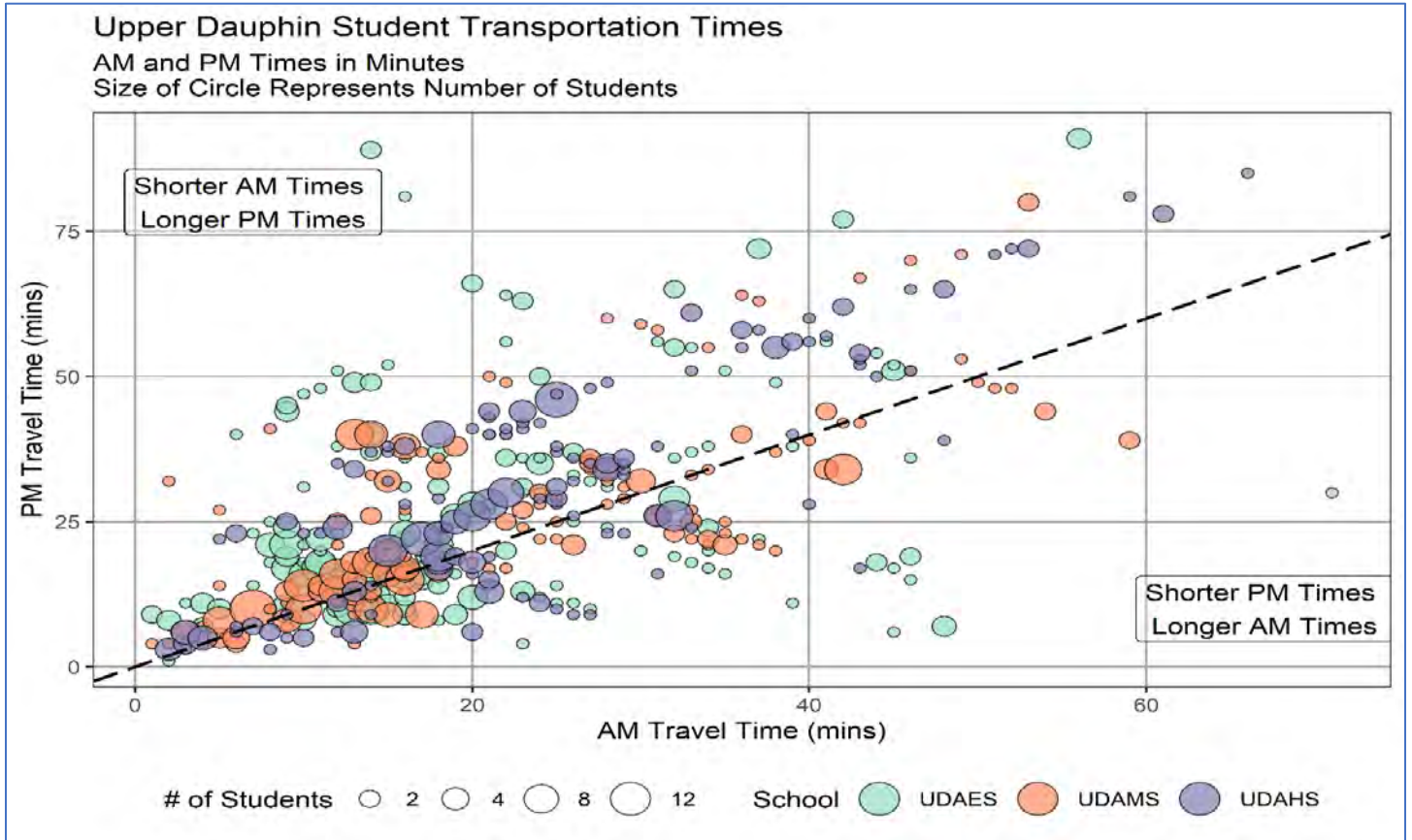
Grade Level	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less
Elementary	382	18.4%	57.6%	76.6%	88.9%	95.3%
Middle School	344	23.5%	57.0%	71.2%	94.8%	98.0%
High School	310	13.6%	32.4%	62.1%	80.6%	94.5%

Several considerations impact student times that may create notable differences between AM and PM transportation times. Besides traffic levels, a student may board a bus near their primary residence in the morning but get dropped off at a daycare facility in the afternoon. Furthermore, an afternoon bus route may not be an exact reverse of its morning course, possibly making the same loop through a residential development.

The next chart plots student AM and PM times to show this variation. The subsequent chart shows student times by bus route and is limited to those students with the same AM/PM bus stop to show route variation. In each graphic, the dotted diagonal line represents equal AM-PM time

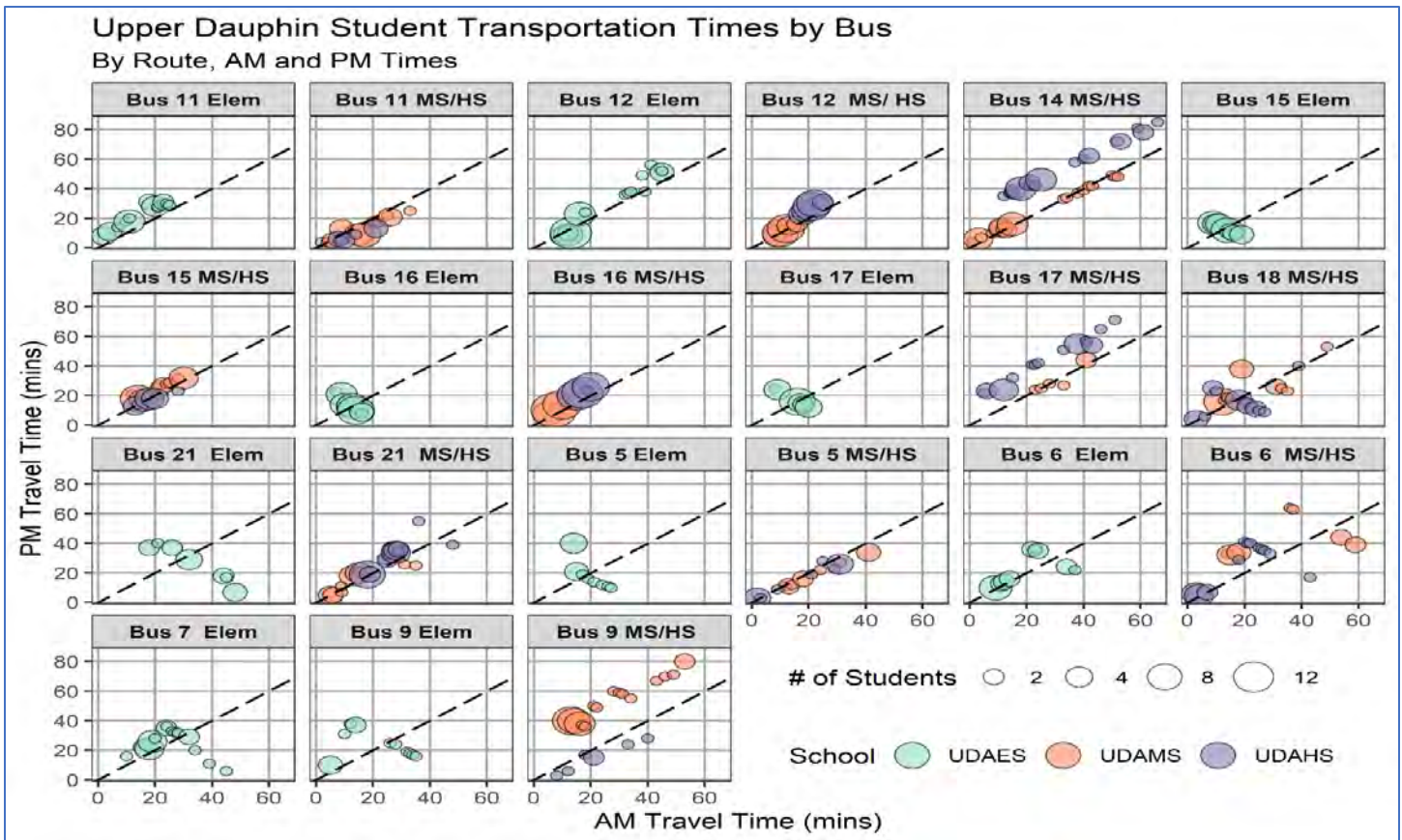
intervals. “Bus 21 Elem” is an example of a route that has an inverse relationship between morning and afternoon student times.

Graph 5-1: Morning and Afternoon Student Time Comparison, Upper Dauphin Area





**Graph 5-2: Morning and Afternoon Student Time Comparison by Bus Route, Upper Dauphin Area**



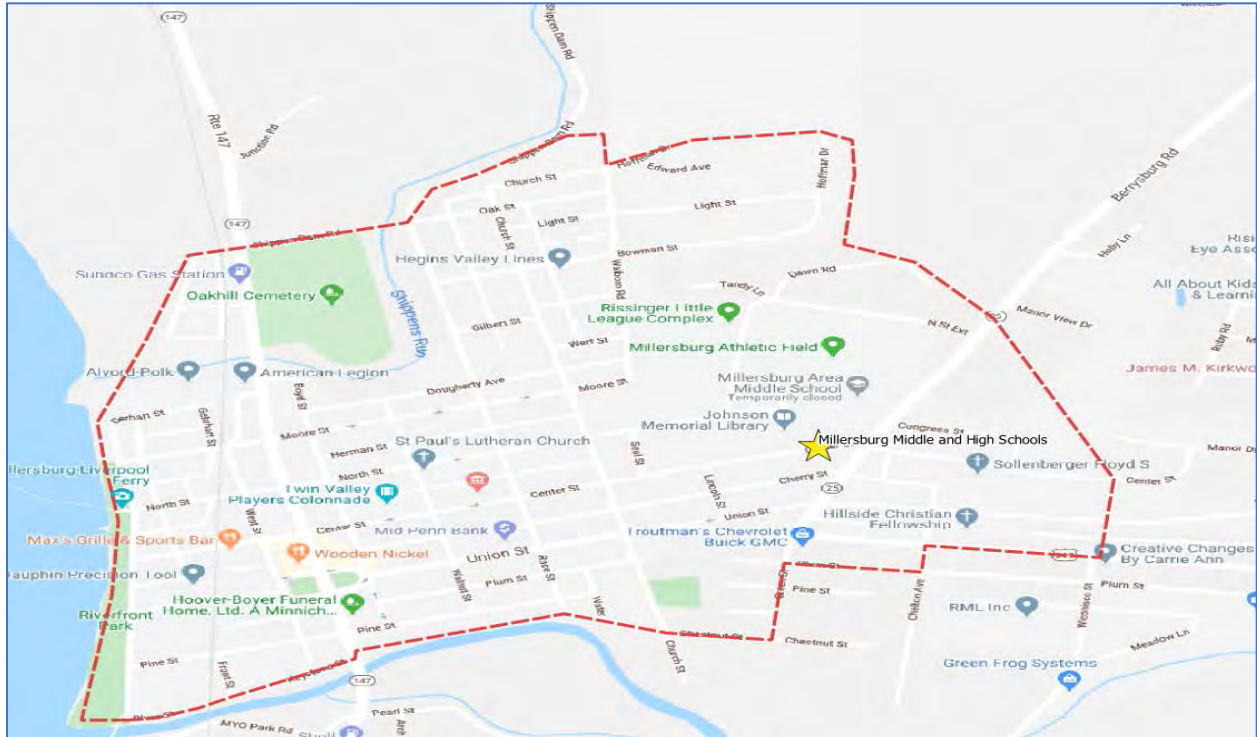
**Millersburg Area School District**

Millersburg Area School District also provides student transportation services by contracting with the private sector. The majority of Millersburg Area bus routes are provided by the David Schlegel Transportation Company while two routes are provided by the Yellow Breeches Educational Center. Millersburg Area route details are not maintained with a specialized software system but with a series of route-level and student-level spreadsheets.

**Pre-Merger Transportation Analysis**

Millersburg Area School District provided their route and student spreadsheet data which were cleaned to assign route times per bus stop and then to merge stop times with anonymized student bus stop records. Elementary student data was more comprehensive while only a subset of Middle and High School student records was provided. This is because the residential area immediately surrounding the Middle/High School complex is deemed a “walk-zone” for Grades 6 through 12.

**Map 5-2: Millersburg Area Walk Zone (Approximate)**



Since the population of Millersburg Area is much more concentrated near its two existing educational facilities than Upper Dauphin Area, the former’s transportation times are notably shorter. Over half of Millersburg Area elementary students have bus rides of 10 minutes or less, and at least 75 percent of all grade levels exhibit travel times of 20 minutes or less.

**Table 5-13: Percent of Students Transported by Travel Time Threshold and Grade Level, Morning Routes, Millersburg Area**

Grade Level	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less
Elementary	321	61.1%	81.9%	92.8%	100.0%	100.0%
Middle School	79	40.5%	75.9%	97.5%	100.0%	100.0%
High School	73	46.6%	78.1%	94.5%	100.0%	100.0%

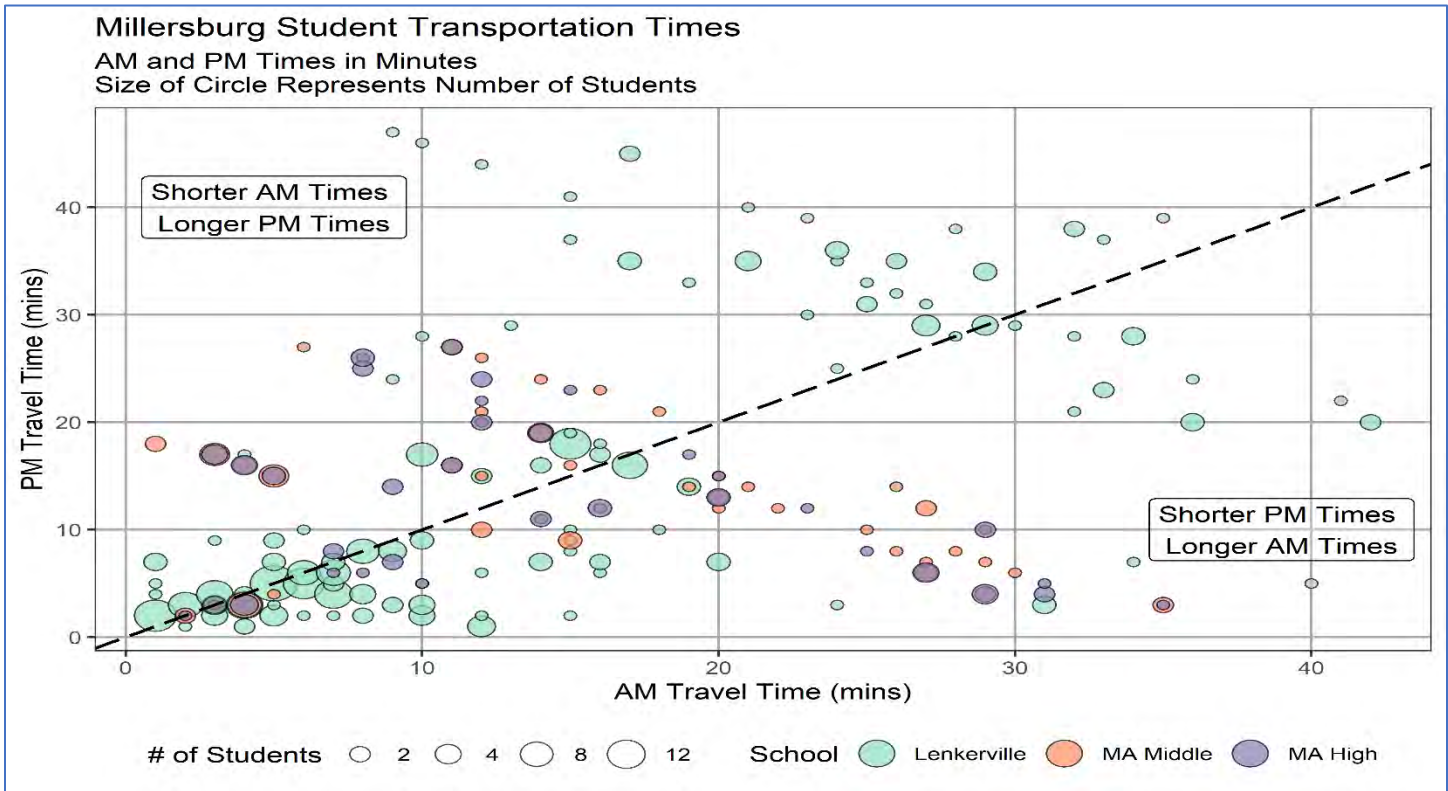
**Table 5-14: Percent of Students Transported by Travel Time Threshold and Grade Level, Afternoon Routes, Millersburg Area**

Grade Level	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less
Elementary	321	65.7%	81.0%	88.8%	99.4%	100.0%
Middle School	79	40.5%	88.6%	100.0%	100.0%	100.0%
High School	73	42.5%	84.9%	100.0%	100.0%	100.0%

Despite these notable similarities in the distribution of morning and afternoon student times, Millersburg Area students exhibits notable variation in AM/PM transportation times at the

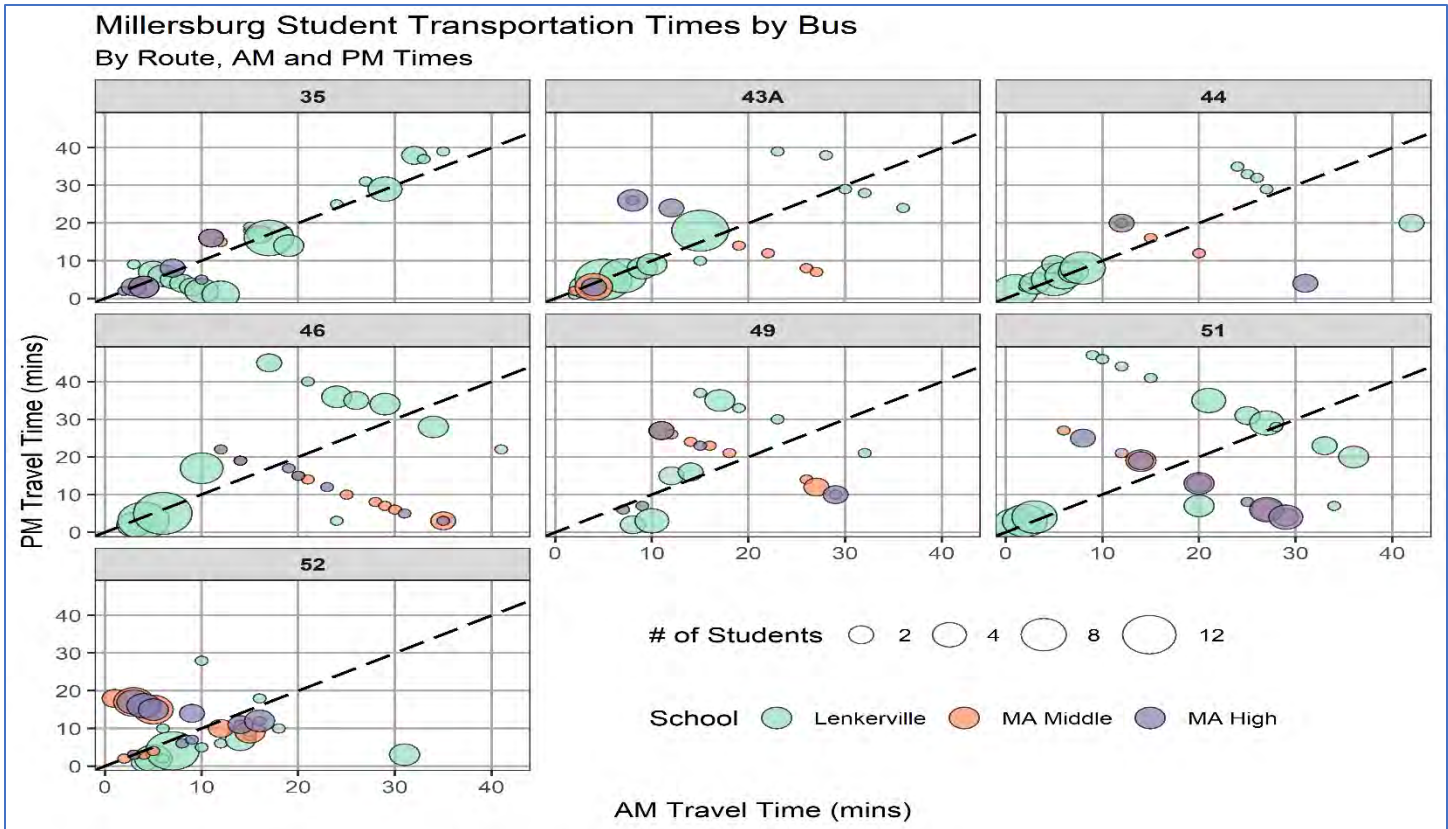
student level. The next graph illustrates this point, while the per-route graph shows several routes (particularly buses 46, 49, and 51) to have notable variations in student morning and afternoon times, suggesting notable segments where afternoon routes do not run in reverse order.

**Graph 5-3: Morning and Afternoon Student Time Comparison, Millersburg Area**





**Graph 5-4: Morning and Afternoon Student Time Comparison by Bus Route, Millersburg Area**



**Pre-Merger Transportation Comparison**

The two districts are compared below by combining their travel time percentage tables. Most notably, more than 60 percent of Millersburg Area elementary students arrive to school in 10 minutes or less compared to only 20 percent of Upper Dauphin Area students. A majority of all district-grade level combinations except Upper Dauphin Area high school students have morning and afternoon route times of 20 minutes or less pre-merger.

**Table 5-15: Percent of Students Transported by Travel Time Threshold, Grade Level, and District, Morning Routes**

Grade Level	District	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less
Elementary	Millersburg Area	321	61.1%	81.9%	92.8%	100.0%	100.0%
	Upper Dauphin Area	380	20.5%	73.2%	85.5%	96.8%	99.7%
Middle	Millersburg Area	79	40.5%	75.9%	97.5%	100.0%	100.0%
	Upper Dauphin Area	344	23.0%	69.5%	82.0%	96.2%	100.0%
High	Millersburg Area	73	46.6%	78.1%	94.5%	100.0%	100.0%
	Upper Dauphin Area	306	12.1%	48.4%	79.7%	95.8%	99.0%

**Table 5-16: Percent of Students Transported by Travel Time Threshold, Grade Level, and District, Afternoon Routes**

Grade Level	District	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less
Elementary	Millersburg Area	321	65.7%	81.0%	88.8%	99.4%	100.0%
	Upper Dauphin Area	380	18.4%	57.6%	76.6%	88.9%	95.3%
Middle	Millersburg Area	79	40.5%	88.6%	100.0%	100.0%	100.0%
	Upper Dauphin Area	344	23.5%	57.0%	71.2%	94.8%	98.0%
High	Millersburg Area	73	42.5%	84.9%	100.0%	100.0%	100.0%
	Upper Dauphin Area	306	13.7%	32.7%	62.7%	80.4%	94.4%

## Post-Merger Transportation Times Analysis

To estimate the impact of school district merger on student transportation times, Millersburg Area School District provided anonymized student address and grade data to Upper Dauphin Area School District. This dataset was imported into the Traversa student transportation software package. Upper Dauphin staff developed routes and bus stops with these data for all students.<sup>3</sup> Unless otherwise stated, route runs were built to be grade-level specific and with Option 5 facility arrangements. That is, all students in grades K through 5 were transported on runs to the Loyalton campus of the Upper Dauphin Area School District; grades 6 to 8 transported on bus runs to the Millersburg Area Middle School/High School campus; and grades 9 to 12 transported to the Upper Dauphin Area High School. This resulted in 22 buses with 32 morning runs and 32 afternoon runs.

This analysis serves as a comparison of pre-merger routes to the current post-merger route database. However, it should be noted that further work can be done to refine these routes and, where deemed necessary, attempt to reduce student travel times.

### Morning and Afternoon Time Transported

The following two tables show morning and afternoon travel times for all students in the Traversa dataset regardless of pre-merger district. Approximately 30 percent of students should experience travel times of 20 minutes or less regardless of grade level. However, there is more variability by grade level and between morning and afternoon times at the higher end of the transportation time distribution.

**Table 5-17: Percent of Students Transported  
by Travel Time Threshold, Grade Level, Post-Merger Morning Routes**

Grade Level	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less	More than 60 minutes
Elementary	811	13.1%	30.5%	51.3%	84.5%	92.0%	8.0%
Middle School	375	9.6%	32.5%	65.9%	80.8%	91.7%	8.3%
High School	508	6.5%	25.4%	50.6%	79.3%	95.9%	4.1%

**Table 5-18: Percent of Students Transported  
by Travel Time Threshold, Grade Level, Post-Merger Afternoon Routes**

Grade Level	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less	More than 60 minutes
Elementary	811	20.1%	32.2%	56.1%	86.9%	94.2%	5.8%
Middle School	375	2.9%	26.9%	41.1%	70.1%	86.9%	13.1%
High School	508	6.1%	30.5%	48.8%	78.5%	95.1%	4.9%

<sup>3</sup> The Millersburg “walk-zone” was preserved for students attending the Millersburg Area middle school complex for grades 6-8.

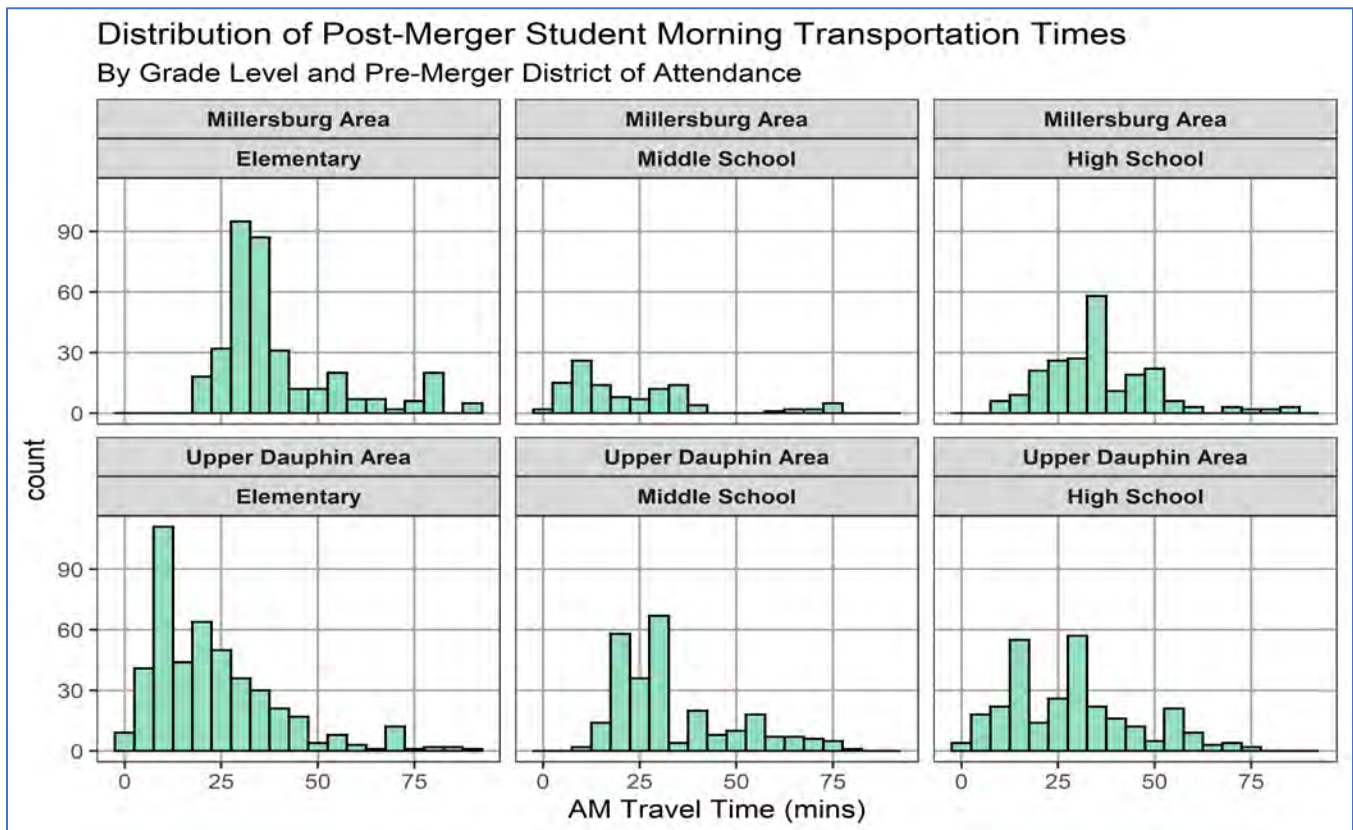
### Time Transported by Pre-Merger District

Under the Option 5 elementary and high school facility arrangement, Millersburg Area elementary and high school students will have longer trips to school than their Upper Dauphin counterparts. Less than one-in-four Millersburg Area elementary students have post-merger transportation times of 30 minutes or less, though three-in-four have morning transportation times of 45 minutes or less. A majority of Upper Dauphin Area elementary students have morning transportation times of under 20 minutes.

**Table 5-19: Percent of Students Transported by Travel Time Threshold, Grade Level, and Pre-Merger District, Post-Merger Morning Routes**

Grade Level	District	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less	More than 60 minutes
Elementary	Millersburg Area	354	0.0%	1.7%	23.2%	75.4%	87.0%	13.0%
Elementary	Upper Dauphin Area	457	23.2%	52.7%	73.1%	91.5%	95.8%	4.2%
Middle School	Millersburg Area	112	32.1%	58.0%	69.6%	91.1%	92.0%	8.0%
Middle School	Upper Dauphin Area	263	0.0%	21.7%	64.3%	76.4%	91.6%	8.4%
High School	Millersburg Area	218	0.9%	8.7%	32.1%	75.2%	95.4%	4.6%
High School	Upper Dauphin Area	290	10.7%	37.9%	64.5%	82.4%	96.2%	3.8%

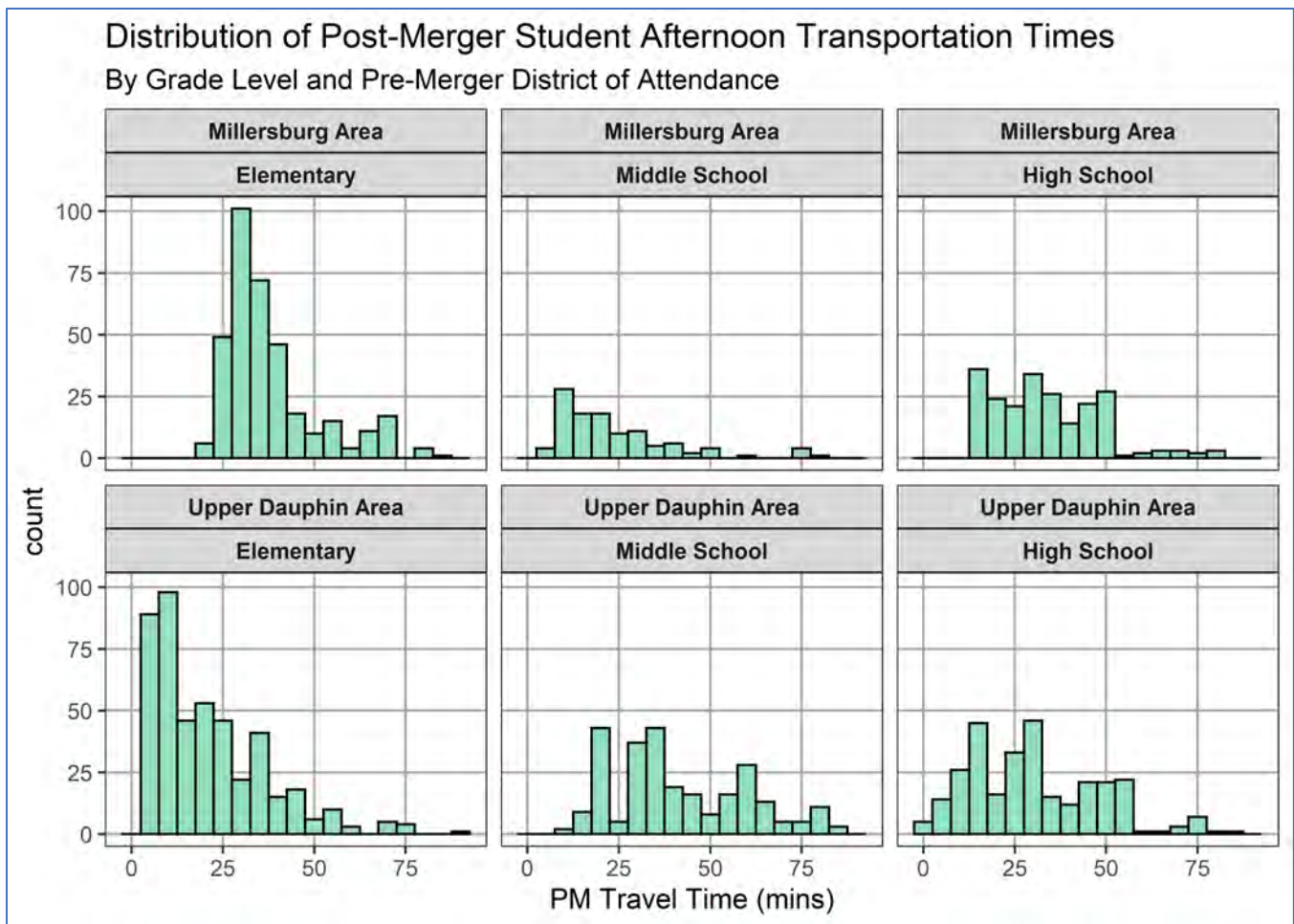
**Graph 5-5: Distribution of Post-Merger Student Morning Transportation Times**



**Table 5-20: Percent of Students Transported by Travel Time Threshold, Grade Level, and Pre-Merger District, Post-Merger Afternoon Routes**

Grade Level	District	Student Count	10 minutes or less	20 minutes or less	30 minutes or less	45 minutes or less	60 minutes or less	More than 60 minutes
Elementary	Millersburg Area	354	0.0%	0.8%	32.2%	79.9%	89.5%	10.5%
Elementary	Upper Dauphin Area	457	35.7%	56.5%	74.6%	92.3%	97.8%	2.2%
Middle School	Millersburg Area	112	9.8%	53.6%	74.1%	91.1%	94.6%	5.4%
Middle School	Upper Dauphin Area	263	0.0%	15.6%	27.0%	61.2%	83.7%	16.3%
High School	Millersburg Area	218	0.0%	23.9%	48.6%	77.5%	95.0%	5.1%
High School	Upper Dauphin Area	290	10.7%	35.5%	49.0%	79.3%	95.2%	4.8%

**Graph 5-6: Distribution of Post-Merger Student Afternoon Transportation Times**



## Transportation Time Maps

The following maps show the geography of morning and afternoon student times for each grade level. This is provided as a reference to understand the geographic distribution of students by travel time and to potentially target certain regions for further analysis.<sup>4</sup> Elementary and high school students with the longest daily travel times are predominantly in Millersburg proper and along Route 147 in Upper Paxton Township, while middle school students with the longest travel times are scattered among various regions of Upper Dauphin Area.

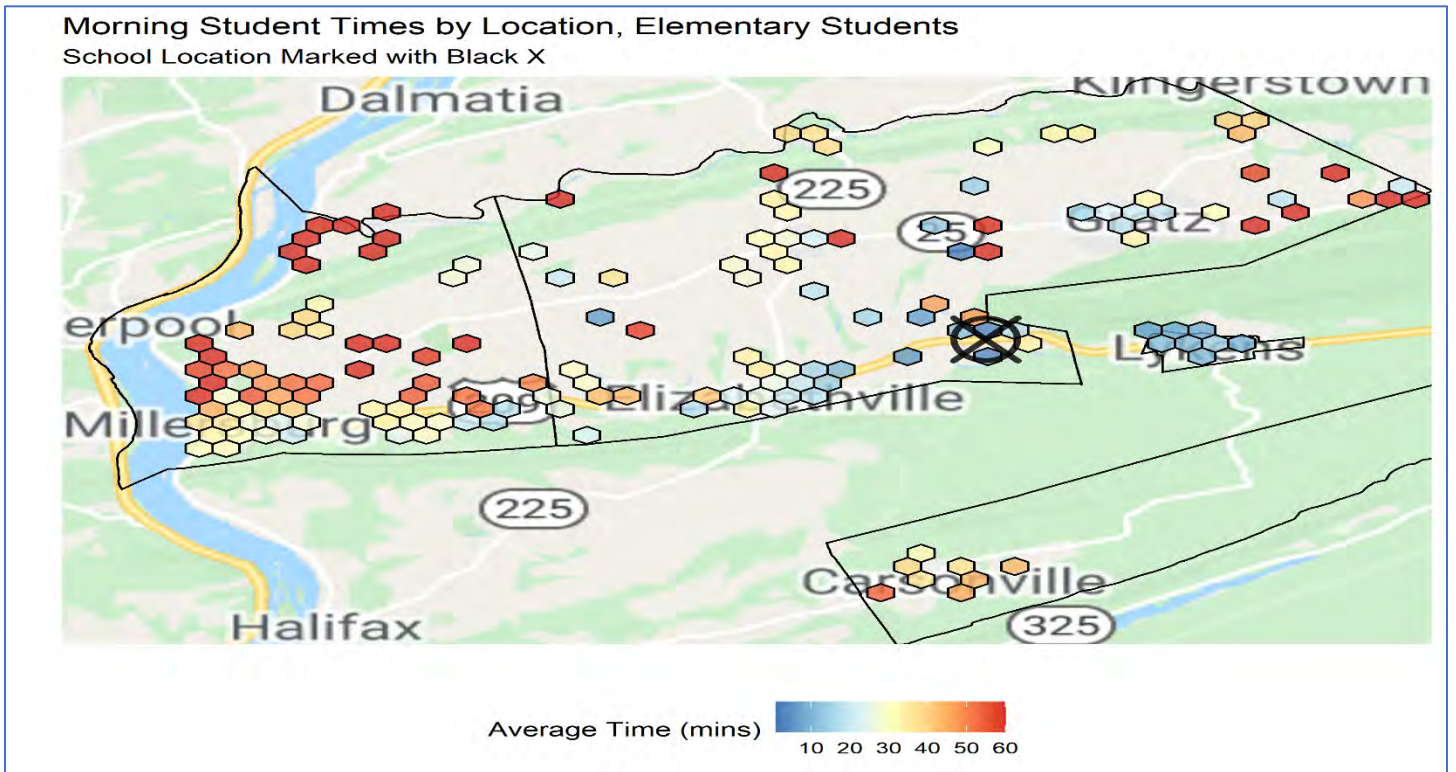
Not considered in this analysis is the use of a hub system to reduce bus transit time for students. A hub system, the use of vans/small capacity vehicles or other measures may be considered to further reduce transit time for outliers.

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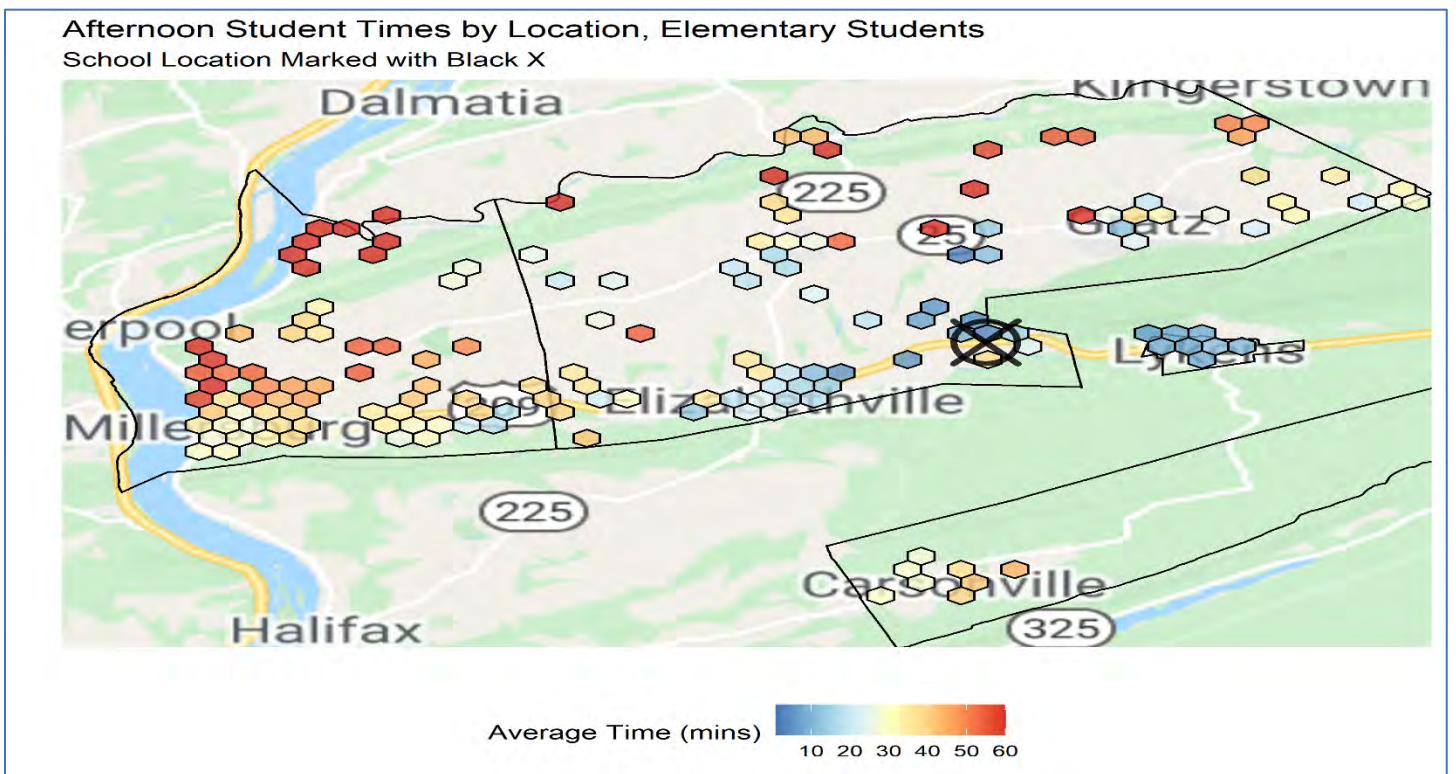
<sup>4</sup> Anonymized address data was run through the Google Geocoding API to turn addresses into latitude and longitude coordinates for the purposes of the map. As such, some geocoding errors may exist, and the maps are provided as a reference rather than authoritative.



Map 5-3: Morning Student Times by Location, Elementary Students

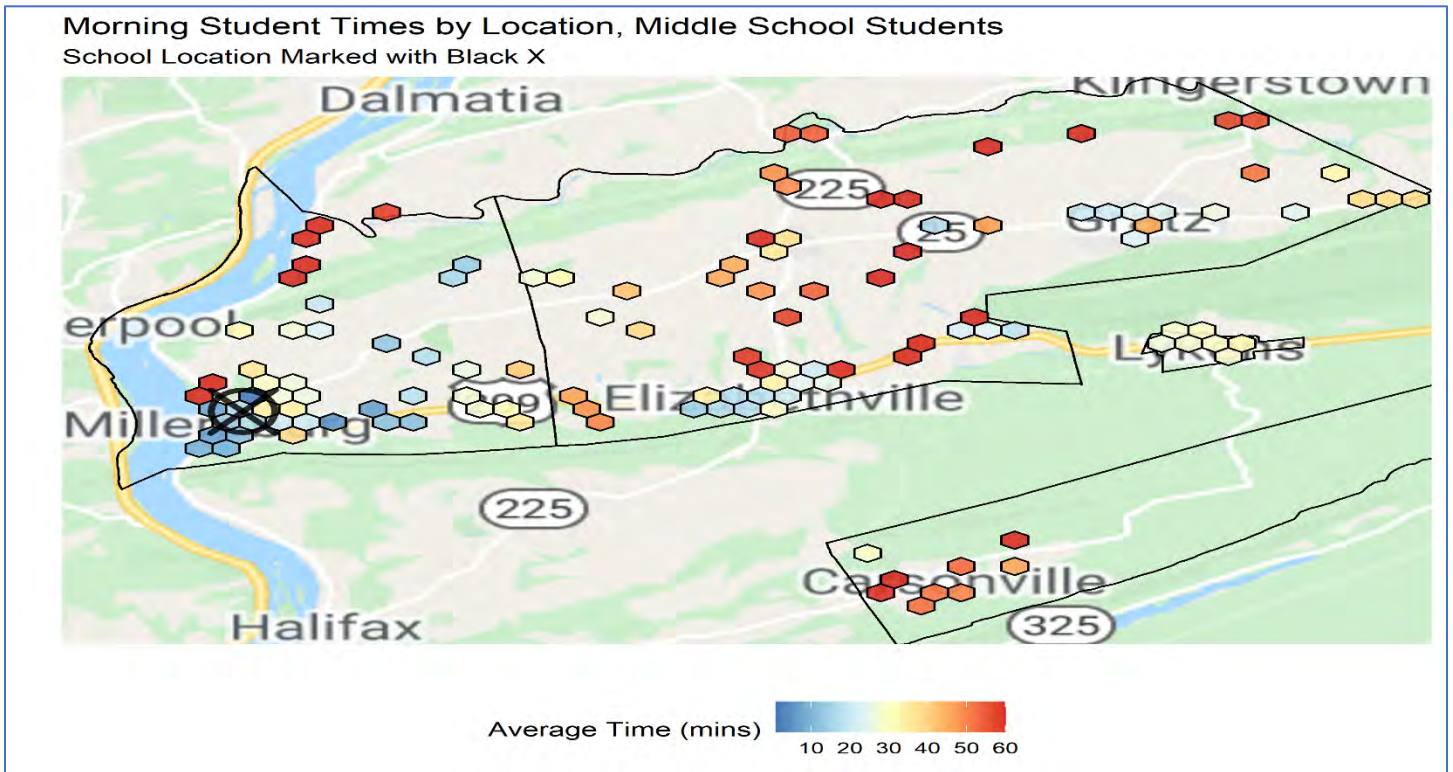


Map 5-4: Afternoon Student Times by Location, Elementary Students

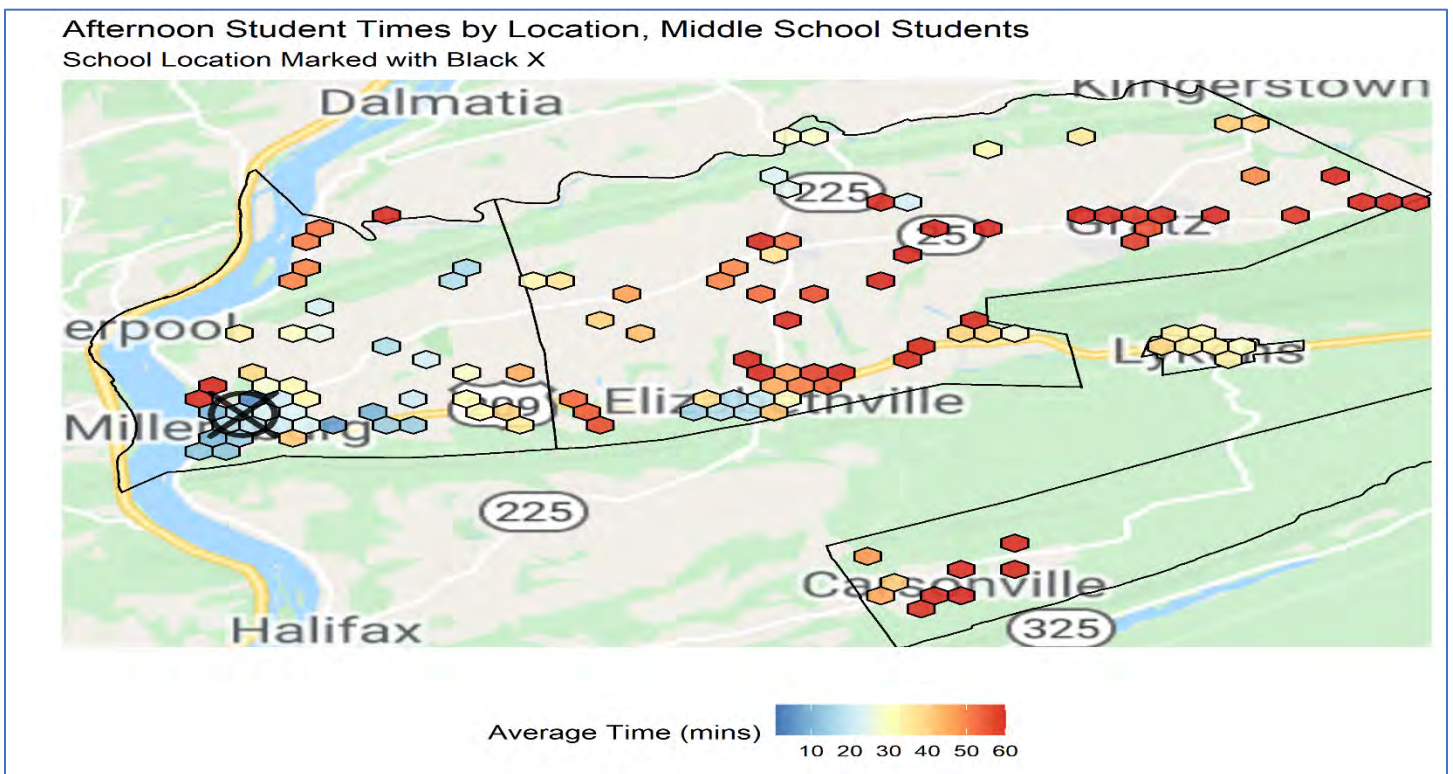




Map 5-5: Morning Student Times by Location, Middle School Students

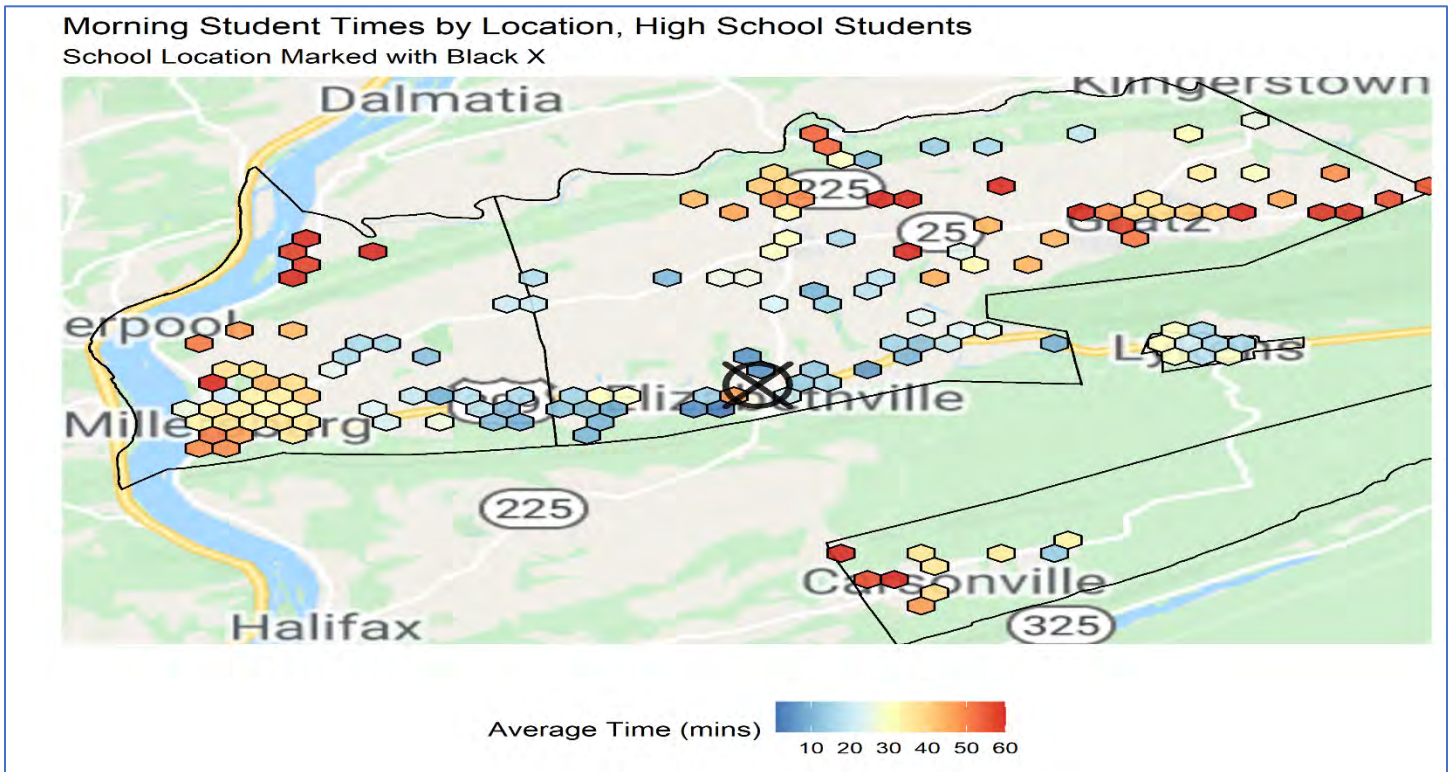


Map 5-6: Afternoon Student Times by Location, Middle School Students

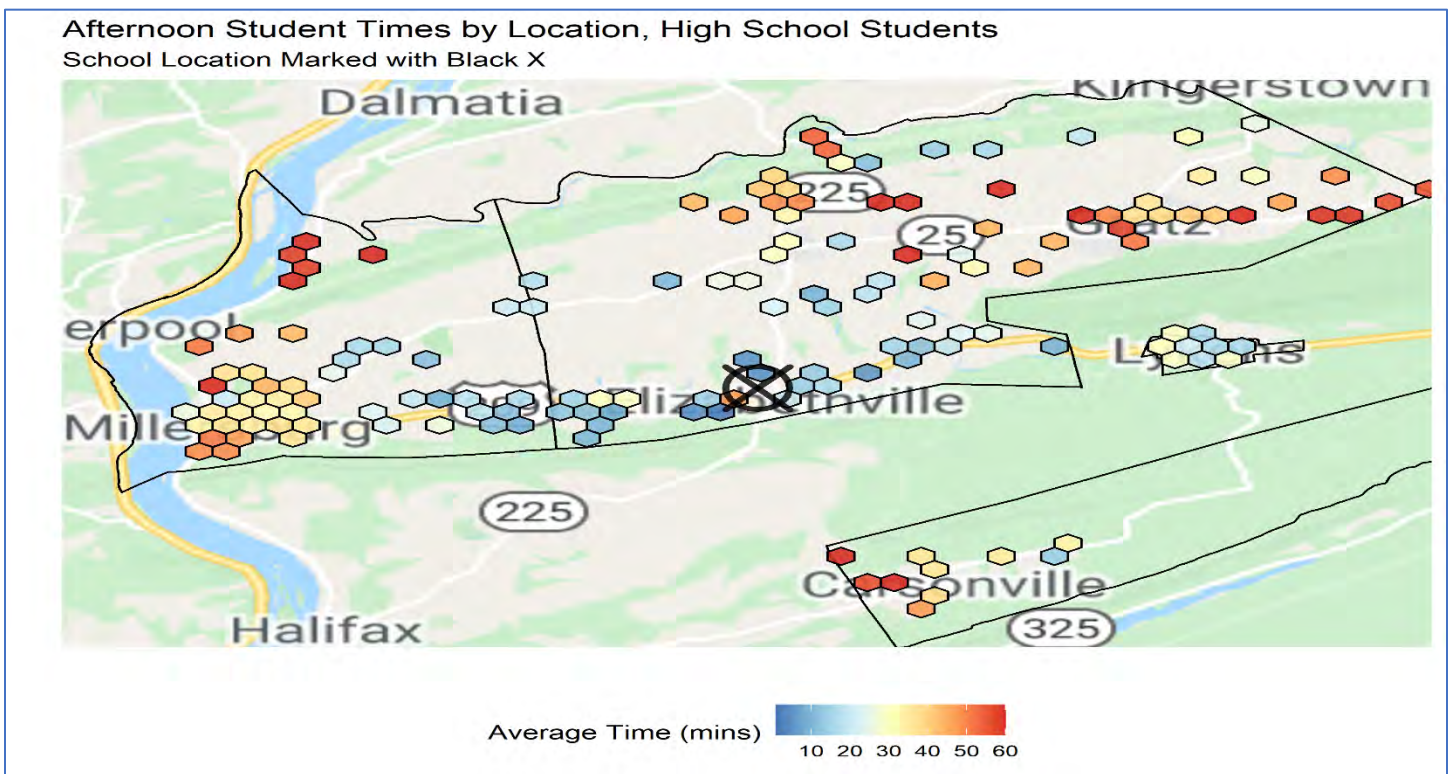




Map 5-7: Morning Student Times by Location, High School Students



Map 5-8: Afternoon Student Times by Location, High School Students



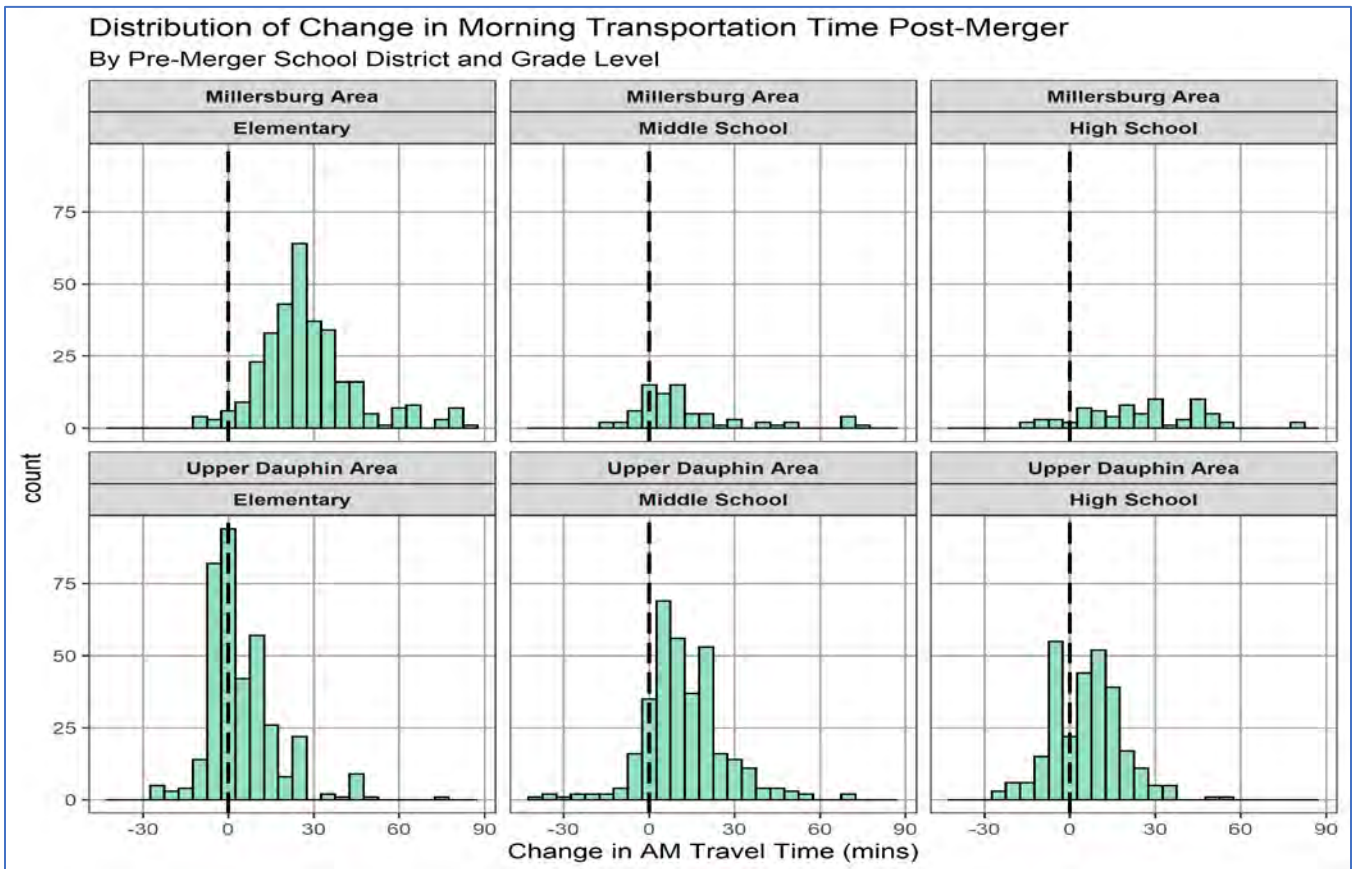
### Change in Total Time Transported

Our next analysis investigates the amount of transportation time *added or subtracted* per student based on preliminary route schedules. The following tables and graphs show that Millersburg elementary students, Millersburg high school students, and Upper Dauphin middle school students have the largest change in travel times.

**Table 5-21: Post-Merger Morning Travel Time Added/Subtracted**

Grade Level	District	Student Count	Less Time Post-Merger	0-15 Minutes Added	16-30 Minutes Added	31-45 Minutes Added	45-60 Minutes Added	60 Minutes or More Added
Elementary	Millersburg Area	320	2.8%	14.4%	45.6%	22.8%	7.2%	7.2%
Elementary	Upper Dauphin Area	371	41.2%	42.6%	12.4%	1.9%	1.6%	0.3%
Middle School	Millersburg Area	76	25.0%	46.1%	15.8%	2.6%	3.9%	6.6%
Middle School	Upper Dauphin Area	336	14.3%	48.8%	26.5%	7.4%	2.4%	0.6%
High School	Millersburg Area	73	11.0%	26.0%	23.3%	19.2%	17.8%	2.7%
High School	Upper Dauphin Area	282	34.4%	48.6%	13.8%	2.5%	0.7%	0.0%

**Graph 5-7: Distribution of Change in Morning Transportation Time, by Pre-Merger School District and Grade Level**

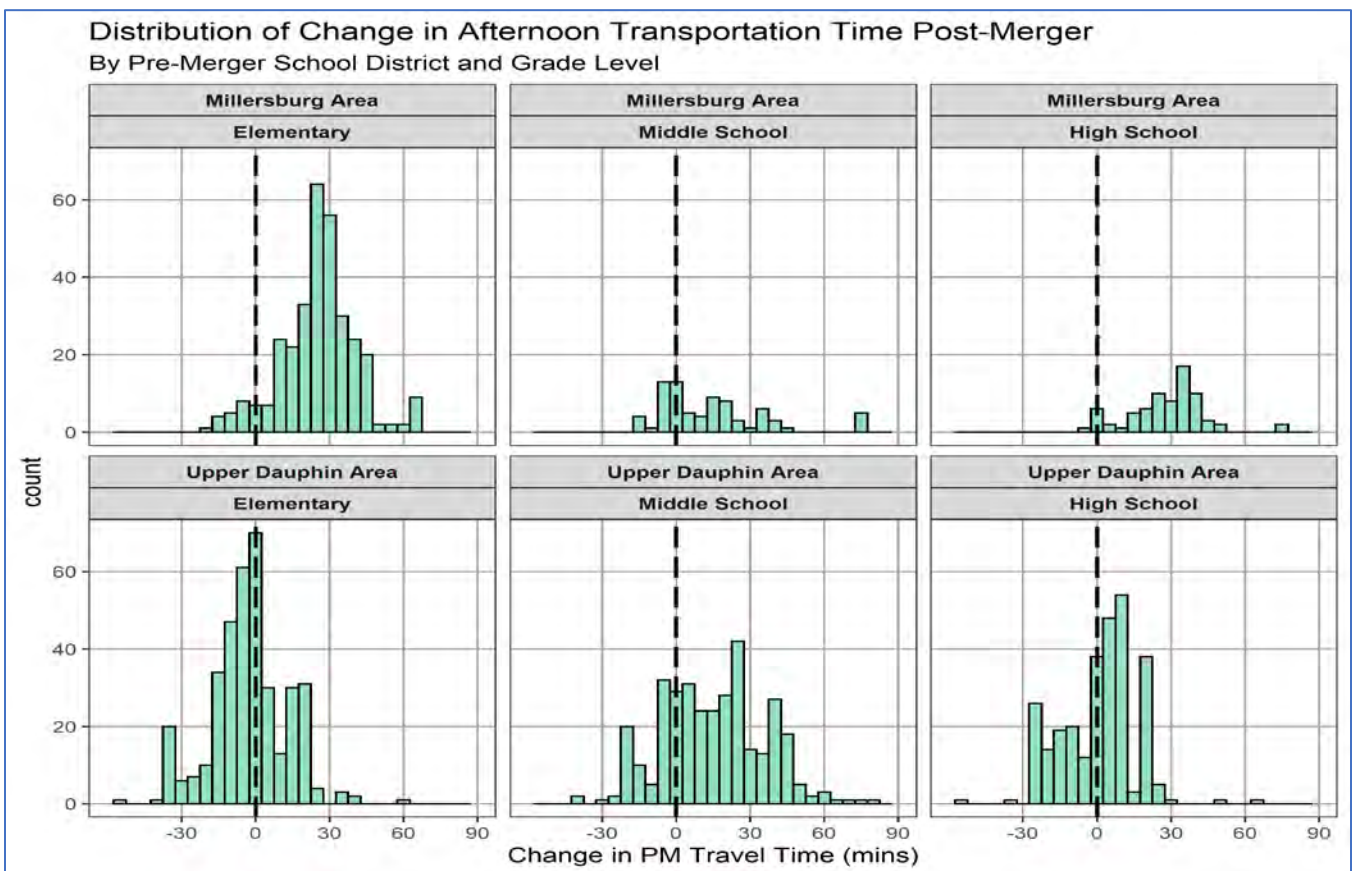




**Table 5-22: Post-Merger Afternoon Travel Time Added/Subtracted**

Grade Level	District	Student Count	Less Time Post-Merger	0-15 Minutes Added	16-30 Minutes Added	31-45 Minutes Added	45-60 Minutes Added	60 Minutes or More Added
Elementary	Millersburg Area	320	6.9%	12.8%	45.6%	24.7%	6.6%	3.4%
Elementary	Upper Dauphin Area	371	62.3%	25.1%	11.1%	1.3%	0.0%	0.3%
Middle School	Millersburg Area	76	36.8%	22.4%	21.1%	13.2%	0.0%	6.6%
Middle School	Upper Dauphin Area	336	25.9%	23.2%	26.8%	19.6%	2.7%	1.8%
High School	Millersburg Area	73	5.5%	12.3%	32.9%	43.8%	2.7%	2.7%
High School	Upper Dauphin Area	282	36.5%	46.8%	16.0%	0.0%	0.4%	0.4%

**Graph 5-8: Distribution of Change in Afternoon Transportation Time, by Pre-Merger School District and Grade Level**



**Regional Comparison**

The table below provides summary transportation route data for regional school districts, sorted by total state subsidy (excluding any intermediate unit and AVTS transportation statistics). A few comparison districts stand out. From a route perspective, Northern Lebanon and Mifflinburg Area School Districts have the most similar with- and without-student average mileage profiles. Despite its smaller geography, Shikellamy School District has a similar number of routes and average total approved route miles. Susquenita School District, while also smaller, has slightly more routes and slightly less average daily

route miles. Line Mountain has a similar state subsidy compared to the post-merger district estimate, but this is due to longer average routes and a higher excess cost subsidy.

**Table 5-23: Regional School District Transportation Statistics, FY2018-2019 Operations, Sorted by State Subsidy<sup>5</sup>**

School District	Transportation Characteristics			Average Daily Miles			District Transportation Subsidy (\$)			State Approved Costs (\$)
	Square Miles	Number of Bus Routes	Total Students Transported	With Students	Without Students	Total Approved	State Share	Excess Cost	State Subsidy	
Central Dauphin	127.3	109	13,515	41.0	30.2	70.7	2,964,401	167,641	3,132,042	6,733,077
Mifflin County	364.7	69	5,219	46.7	34.8	75.2	2,923,759	647,959	3,572,419	4,482,231
Juniata County	374.0	43	2,742	62.9	36.9	98.4	1,748,139	908,486	2,656,624	3,415,668
Midd-West	226.7	35	2,071	36.8	42.1	68.6	1,418,706	557,378	1,976,084	2,487,648
West Perry	314.3	45	2,506	48.1	26.6	71.1	1,361,491	572,690	1,934,181	2,457,564
Lower Dauphin	96.6	40	3,436	49.4	24.1	73.5	1,187,410	285,856	1,473,266	2,536,895
Northern Lebanon	143.9	23	2,122	61.7	31.0	92.8	1,158,974	599,755	1,758,728	2,403,271
Susquenita	91.7	25	1,842	49.0	33.9	82.9	1,151,267	465,453	1,616,720	2,003,248
Line Mountain	155.6	15	1,199	78.1	37.0	115.0	1,120,380	395,615	1,515,995	1,705,037
Post-Merger	121.7	22	1,696	63.3	28.8	91.3	1,055,351	287,142	1,342,493	1,685,845
Shikellamy	77.7	21	2,225	54.1	33.1	87.2	1,049,572	10,008	1,059,580	1,499,817
Danville Area	125.3	37	2,623	47.6	31.9	74.9	865,707	378,935	1,268,786	1,946,141
Mifflinburg Area	214.4	17	1,937	69.7	25.4	95.1	816,705	246,679	1,063,384	1,569,078
Selingsgrove Area	104.9	32	2,097	31.6	18.2	49.0	787,480	94,853	882,333	1,605,757
Shamokin Area	70.6	24	2,425	27.2	16.0	43.1	776,812	0	776,812	951,975
Pine Grove Area	104.2	16	1,772	48.4	37.1	81.7	738,693	98,639	853,587	1,135,228
Upper Dauphin Area	89.7	15	1,097	53.7	25.4	79.0	640,886	174,856	815,743	1,066,367
Halifax Area	86.3	13	1,086	73.1	29.4	102.5	638,293	194,994	833,287	1,059,407
Southern Columbia Area	110.0	22	1,523	40.1	13.9	54.0	569,687	152,016	739,080	1,058,504
Newport	71.5	14	809	41.0	15.2	56.0	542,109	107,123	649,231	848,105
Greenwood	97.1	16	759	39.7	33.2	69.4	535,157	254,245	789,402	960,957
Lewisburg Area	41.8	14	1,213	49.0	23.0	72.0	518,164	51,637	569,801	1,154,104
Williams Valley	61.6	9	992	38.6	21.5	60.1	473,551	42,428	596,216	608,053
Annvil-Cleona	39.2	11	1,331	56.1	16.6	72.7	415,840	58,461	474,301	871,884
Mount Carmel Area	23.6	11	1,501	26.5	45.4	46.1	386,033	0	387,774	462,759
Tri-Valley	99.2	14	923	47.8	17.8	65.5	320,450	35,780	390,073	530,283
Millersburg Area	32.0	7	690	24.9	7.5	32.4	166,225	0	166,225	271,610

Susquenita School District publishes its transportation timetables on its website, and it is inferred from them that the vast majority of elementary, middle and high school students are transported to their respective school facility in 45 minutes or less. However, Susquenita may have more in common with Millersburg Area than Upper Dauphin Area or the post-merger district with core population communities in Duncannon and Marysville. The district seems to utilize van transportation for some of its more remote students with two runs for elementary students and two runs for middle and high school students in areas such as Pine Hill Road in the districts’ western edge.

<sup>5</sup> Number of Bus Routes is an estimate as route data is sometimes duplicated in state datasets when multiple vehicles service one route within one school year (data is limited to routes with at least 100 days of service and seating capacities of 60 or more pupils). Average daily mileage figures are calculated off this data subset (e.g., small capacity vehicle and van runs are excluded). District Transportation Subsidy and State Approved Cost statistics include all local educational agency (LEA) routes and exclude intermediate unit and AVTS transportation data.

## CHAPTER 6

### FINANCIAL IMPACTS OF A COMBINED DISTRICT

Both districts will face significant deficits over the next several years regardless of whether they combine. Combining the districts involves equalizing the millage rates, realigning the administration, and adjusting the salary and benefits schedules for professional and support staff. This chapter looks at the estimated financial effects of combining the districts.

#### Expenditure Impacts

As shown in the districts' individual projections, expenditure increases are inevitable. Growth in healthcare and pensions are two of the biggest increases. Those costs will continue to grow regardless of whether the districts combine.

##### Professional Staff

Consolidating bargaining agreements for existing professional employees is potentially the most costly or difficult change to implement. Both current collective bargaining agreements include six salary columns (Instructional I through Masters + 45). However, the districts operate with two different experience steps in their schedules. Millersburg Area has a 20-step schedule while Upper Dauphin Area has a 15-step schedule.

The schedules reviewed were those printed in the individual collective bargaining agreements (CBA) for the 2019-20 school year for each district (Table 6-1 and 6-2). The two districts had identical columns (education levels). However, the number of steps (years of service) or years to the top of the schedule were different. Millersburg Area's schedule provided for 20 steps including the top step. Upper Dauphin Area's schedule provided for 15 steps including the top step. According to the Millersburg Area CBA, the number of steps was expanded from 15 steps to 20 steps effective for 2016-17 year

**Table 6-1: Millersburg Area Collective Bargaining Agreement Schedule 2019-20**

Step	B	Inst II	M/MEQ	M+15	M+30	M+45
1	42,281	43,806	45,329	46,851	48,390	49,915
2	43,281	44,806	46,329	47,851	49,390	50,915
3	44,281	45,806	47,329	48,851	50,390	51,915
4	45,281	46,806	48,329	49,851	51,390	52,915
5	46,781	48,306	49,829	51,351	52,890	54,415
6	48,281	49,806	51,329	52,851	54,390	55,915
7	49,781	51,306	52,829	54,351	55,890	57,415
8	51,281	52,806	54,329	55,851	57,390	58,915
9	52,781	54,306	55,829	57,351	58,890	60,415
10	54,781	56,306	57,829	59,351	60,890	62,415
11	56,781	58,306	59,829	61,351	62,890	64,415
12	58,781	60,306	61,829	63,351	64,890	66,415
13	60,781	62,306	63,829	65,351	66,890	68,415
14	62,781	64,306	65,829	67,351	68,890	70,415
15	64,781	66,306	67,829	69,351	70,890	72,415
16	66,781	68,306	69,829	71,351	72,890	74,415
17	68,781	70,306	71,829	73,351	74,890	76,415
18	70,781	72,306	73,829	75,351	76,890	78,415
19	72,781	74,306	75,829	77,351	78,890	80,415
20	74,781	76,306	77,829	79,351	80,890	82,415

**Table 6-2: Upper Dauphin Area Collective Bargaining Agreement Schedule 2019-20**

Step	B	Inst II	M	M+15	M+30	M+45
1	43,001	49,071	52,873	55,372	57,872	60,372
2	43,796	49,839	53,640	56,140	58,640	61,140
3	44,538	50,608	54,409	56,909	59,409	61,909
4	45,306	51,376	55,177	57,677	60,177	62,677
5	46,074	52,144	55,945	58,445	60,954	63,445
6	46,842	52,912	56,713	59,213	61,713	64,213
7	47,633	53,703	57,504	60,004	62,504	65,004
8	48,456	54,526	58,327	60,827	63,327	65,827
9	49,553	55,623	59,424	61,924	64,424	66,924
10	50,928	56,998	60,799	63,299	65,799	68,299
11	52,304	58,374	62,175	64,675	67,175	69,675
12	53,679	59,749	63,550	66,050	68,550	71,050
13	55,055	61,125	64,926	67,426	69,929	72,426
14	56,430	62,500	66,301	68,801	71,301	73,801
15	58,006	64,076	67,877	70,377	72,877	75,377

The key differences between the two 2019-20 salary schedules is that Upper Dauphin Area has higher starting salary values while Millersburg Area has higher top of schedule salaries.

Upper Dauphin Area has reached an agreement for a one year contract extension which will add about \$94,000 to the cost of the district’s 2020-21 salaries under the current staffing. Millersburg Area has not reached an agreement on an extension at the time of writing of this report. As a result, the cost of salary schedules for Millersburg Area uses the 2019-20 schedule.

**Table 6-3: District Staffing 2018-19 Employee Rosters**

<b>Millersburg Area</b>							
<b>Step</b>	<b>B</b>	<b>Inst II</b>	<b>M</b>	<b>M +15</b>	<b>M +30</b>	<b>M +45</b>	<b>Total</b>
1	-	-	-	-	-	-	-
2	6	-	-	-	-	-	6
3	2	1	-	-	-	-	3
4	-	1	-	-	-	-	1
5	1	-	3	-	-	-	4
6	-	1	2	-	-	4	7
7	-	1	3	-	1	1	6
8	-	1	1	-	-	3	5
9	-	-	1	-	-	2	3
10	-	-	-	-	-	1	1
11	-	-	2	-	2	3	7
12	-	1	1	1	-	-	3
13	-	-	-	-	-	-	-
14	-	1	-	-	-	4	5
15	-	-	-	-	-	-	-
16	-	-	1	-	-	-	1
17	-	-	-	-	-	-	-
18	-	1	-	1	-	4	6
19	-	-	-	-	-	-	-
20	-	1	2	3	2	2	10
<b>Total</b>	<b>9</b>	<b>9</b>	<b>16</b>	<b>5</b>	<b>5</b>	<b>24</b>	<b>68</b>

<b>Upper Dauphin Area</b>							
<b>Step</b>	<b>B</b>	<b>Inst II</b>	<b>M</b>	<b>M +15</b>	<b>M +30</b>	<b>M +45</b>	<b>Total</b>
1	0	0	0	0	0	0	0
2	2	0	0	0	0	0	2
3	3	0	2	0	0	0	5
4	1	0	0	0	0	0	1
5	2	0	0	0	0	0	2
6	0	4	2	0	0	0	6
7	0	1	2	0	0	1	4
8	0	0	1	0	0	0	1
9	0	0	1	0	0	0	1
10	0	3	0	2	0	1	6
11	0	2	3	0	1	0	6
12	0	1	2	1	0	2	6
13	0	2	1	3	0	1	7
14	0	0	3	0	0	1	4
15	0	12	15	7	5	8	47
<b>Total</b>	<b>8</b>	<b>25</b>	<b>32</b>	<b>13</b>	<b>6</b>	<b>14</b>	<b>98</b>

The individual district staffing shows that Upper Dauphin Area has a larger number of staff on step 12 and above on the current salary schedule (64 of 98). Millersburg Area has just over half of its staff from step 1 to step 10 on the current schedule. (36 of 68)

For the 2018-2019 school year the average salary for a teacher in Millersburg Area was \$61,135, while the average salary in Upper Dauphin Area was \$63,847.

**Table 6-4: Average Salary 2019-20 Calculation**

	Total Salary	Professional Staff	Average Salary
Millersburg	\$4,157,212	68	\$ 61,135
Upper Dauphin	6,257,047	98	63,847
Totals	\$10,414,259	166	\$ 62,737

Merger will require the negotiation of a new CBA with a new schedule. The differences between the two schedules will need to be resolved. A number of different actions may be needed to accomplish this task. The following is merely a list of potential options that can be considered. Any final decision will require agreement with a combined local Education Association. One of the difficulties that needs to be addressed is the limitation of the School Code regarding the reduction of salaries for current professional staff without due process and hearings. Any action regarding changes to the contract and salary schedule should be discussed with appropriate legal counsel.

One option would be to combine the districts using one of the current schedules. Such as placing everyone on either the current Millersburg ASD schedule or the Upper Dauphin ASD schedule. In this case salaries may be frozen for individuals whose current salary exceeds the new schedule until the schedule catches up over time. Another option could be to place individuals on appropriate steps where the current salary agrees with the existing schedule without regard to years of service for the current steps.

A second option could be to continue the two schedules with the ultimate merging of the schedules over several years. This option could be combined with salary freezes while the schedules catch up over time.

Third would be to combine the two schedules using the highest or lowest amount from the two current schedules and using an early retirement incentive to reduce the costs to cover increases that could result from this option.

While similar benefits are offered to the professional staff in both districts, the combined district’s CBA will need to reconcile the differences in the benefits offered.

**Professional Staff Requirements**

The combined district will strive to maintain class sizes to range between 20-23 pupils in grades K to 2 and 23-26 in grades 3 to 8. Based on these ranges, professional staff needs and savings are shown in Table 6-5. Average salary for 2018-2019 (calculated above) was rounded to \$63,000 for purposes of calculating savings. Total savings will vary based on the individual salaries of the positions that are reduced.



**Table 6-5: Professional Staff Requirements**

	<b>Current</b>	<b>Option 5 Staffing</b>	<b>Change</b>
<b>Pre-K</b>	<b>1</b>	<b>2</b>	<b>1</b>
Classroom Teachers	62	52	-10
Related Arts	15	10	-5
Librarians	2	1	-1
Reading specialists	4	2	-2
Guidance	2	3	1
Nurse	2	2	0
Special Ed Staff	17	17	0
<b>Professional Staff K-8</b>	<b>104</b>	<b>87</b>	<b>-17</b>
High School			
Content Staff	50	39	-11
Special Ed Staff	5	6	1
Librarians	2	1	-1
Guidance	2	2	0
Nurse	2	1	-1
<b>Professional Staff High School</b>	<b>61</b>	<b>49</b>	<b>-12</b>
<b>Total</b>	<b>166</b>	<b>138</b>	<b>-28</b>
<b>Average Salary Professional Staff</b>			\$63,000
<b>Savings</b>			\$1,764,000

**Support Staff Requirements**

The support staff in each district has similar positions with different titles and in some cases each district has unique staff positions. The analysis of the district support staff compensation consolidated the staffing into similar job titles. Where there were individual titles they are presented without comparison. (Table 6-6)

**Table 6-6: Comparison of Support Staff Positions**

<b>Job Title</b>	<b>Millersburg</b>	<b>Upper Dauphin</b>	<b>Total</b>
Aides-Paraprofessionals FT	12	20	32
Aides-Paraprofessionals PT	7	7	14
Aides-Paraprofessionals PT Title I	3	0	3
<b>Total Aides-Paraprofessionals</b>	<b>22</b>	<b>27</b>	<b>49</b>
Custodian-Cleaning	6	9	15
Custodian-Cleaning Helper	1	0	1
Custodian-Cleaning Outside Grounds Keeper	1	0	1
Custodian-Cleaning Supervisor	1	0	1
<b>Total Custodial-Cleaning</b>	<b>9</b>	<b>9</b>	<b>18</b>
Secretaries	9	11	20
High School Reference Librarian	1	0	1
Nurse Assistant	1	2	3
Maintenance	0	3	3
Cafeteria	0	4	4
<b>Total Other</b>	<b>11</b>	<b>20</b>	<b>31</b>
<b>Total Support Staff</b>	<b>42</b>	<b>56</b>	<b>98</b>

Millersburg Area compensates the support staff based on annual compensation or salary. Upper Dauphin Area compensates the support staff based on hourly rate. As a result of the different methods of compensation, both districts were evaluated using both annual and hourly compensation. A summary of the compensation is presented in Table 6-7 showing ranges for similar positions (minimum and maximum amounts) as well as the median for that position. The comparison includes both the hourly rate and the annual rate. In some cases, individuals are paid additional compensation for additional activities such as checking the furnaces on weekends. The added compensation was excluded from the analysis. The comparison is based on the hourly rates for both 2018-19 and 2019-20 years. Rates for 2019-20 include the anticipated increases, which are still subject to final budgetary approval and evaluation results.

**Table 6-7: Comparison of Support Staff Wages**

	Hourly Rate 2018-19	2018-19 Annual	Hourly Rate 2019-20	2019-20 Annual	2018-19 Total	2019-20 Total
<b>Aides-Paraprofessionals</b>						
UD Min	9.15	9,786	9.35	10,000		
UD Max	17.80	23,176	18.00	23,436	370,755	377,460
UD Median	9.66	12,577	9.86	12,838		
MA Min	9.00	8,100	9.50	8,550		
MA Max	15.43	18,053	15.93	18,638	240,791	255,214
MA Median	9.75	10,530	10.50	11,115		
Variance of Median	0.09	2,047.32	0.64	1,722.72		
<b>Combined</b>					<b>611,546</b>	<b>632,674</b>
<b>Secretaries</b>						
UD Min	11.40	17,968	11.60	18,257		
UD Max	17.96	35,776	18.16	36,175	305,493	309,767
UD Median	13.21	26,314	13.00	26,713		
MA Min	13.58	23,829	12.52	21,961		
MA Max	23.50	41,234	24.09	43,852	243,622	279,177
MA Median	15.86	27,823	16.00	28,177		
Variance of Median	2.65	1,508.68	2.65	1,464.28		
<b>Combined</b>					<b>549,115</b>	<b>588,944</b>
<b>Custodian-Cleaning</b>						
UD Min	9.85	20,567	10.05	20,984		
UD Max	16.15	33,721	16.35	34,139	205,000	208,758
UD Median	10.05	20,984	10.25	21,402		
MA Min	11.38	22,570	10.42	20,665		
MA Max	17.64	35,000	18.09	35,900	212,444	242,278
MA Median	12.14	24,089	12.82	25,434		
Variance of Median	2.09	3,105.10	2.57	4,032.00		
<b>Combined</b>					<b>417,444</b>	<b>451,036</b>
<b>All other positions</b>						
UD					250,668	253,159
MA					54,826	25,864
<b>Combined</b>					<b>305,494</b>	<b>279,023</b>
<b>Total both districts</b>					<b>1,883,599</b>	<b>1,951,677</b>

*Upper Dauphin Area board approved an increase for 2019-20 of \$0.20 per hour or \$0.30 if individual receives outstanding on evaluation. Projection for Upper Dauphin Area is based on an increase of \$0.20 per hour*

In the first part of the analysis, the minimum and maximum hourly compensation was determined for each group. It is interesting to note that neither district was the consistent highest or lowest compensation. It is also noted that within each job title group, one district would have the lowest and the other district would have the highest.

In the second part of the support staff analysis, the median for each job title and district were compared. The variances of the medians are relatively small and, given the nature of the districts, are most likely due to the longevity of individuals within the districts and job classification. In the largest group of employees (aides/paraprofessionals), the 2018-19 variance of the median was \$0.09 and for 2019-20 the variance is estimated at \$0.64. Overall the support staffs of the individual districts are very close in compensation.

Administrative and building configurations dictate the number of secretaries and other support staff necessary. Custodial staff reductions are related to the closing of Lenkerville Elementary. (See Table 6-8.)

**Table 6-8: Support Staff Changes and Expense Reduction**

<b>Support Staff</b>	<b>Current</b>	<b>Option 5 Staffing</b>	<b>Change</b>
Secretaries	20	16	-4
Average Salary			\$26,713
<b>Expense Reduction</b>			<b>\$106,852</b>
Custodial	18	15	-3
Average Salary			\$26,920
<b>Expense Reduction</b>			<b>\$80,760</b>
Other Positions	11	9	-2
Average Salary			\$27,772
<b>Expense Reduction</b>			<b>\$55,544</b>
Total	49	40	-9
<b>Expense Reduction</b>			<b>\$243,156</b>

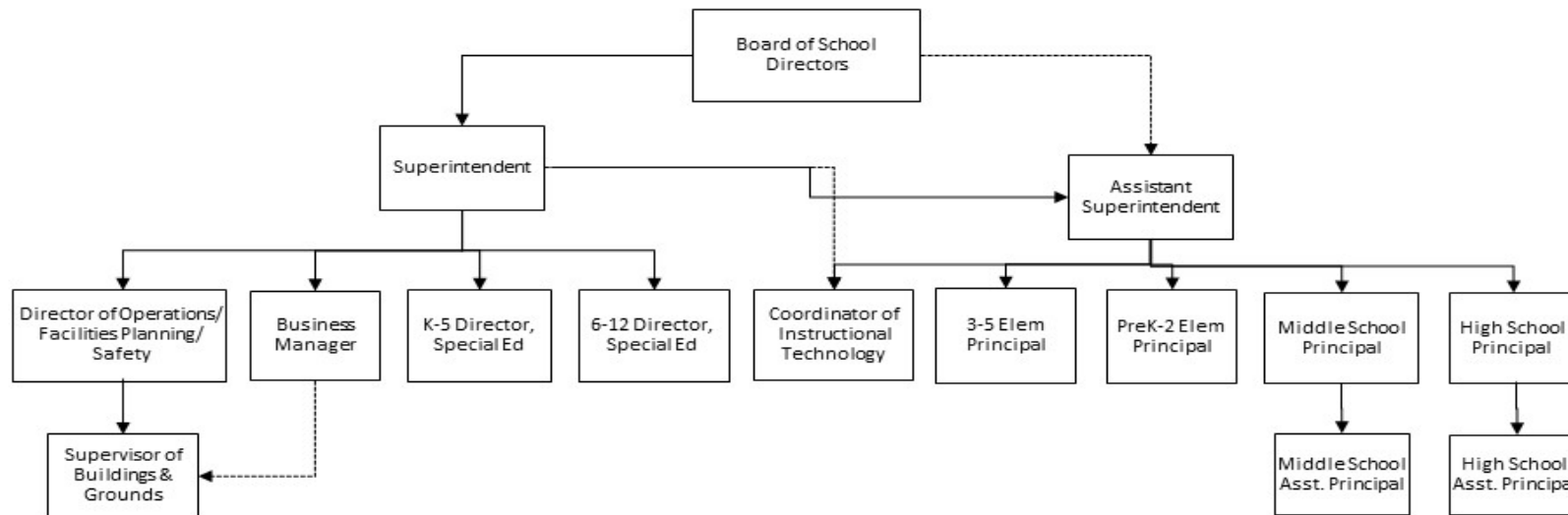
**Administration Staff Requirements**

The administrative structures of the individual school districts are similar and there will be potential cost savings in combining the districts through elimination of duplicate positions. However, given the existing relatively “lean” structure in both districts, those savings will not have a large impact on the total costs required to operate the merged district.

The following Organizational Chart was developed and proposed by the consultants based on the elementary, middle and high school model proposed for the merged district. The consultants considered the administrative requirements for the three separate educational systems and age cohorts. (Chart 6-1 and Table 6-9).

Chart 6-1: Proposed Organizational Chart for a Merged District

Merged District Organizational Chart  
Draft, April 2020



**Table 6-9: Administrative Changes**

Millersburg Area	Upper Dauphin Area	Combined School District	Change
Superintendent	Superintendent	Superintendent	-1
		Assistant Superintendent	+1
Director of Curriculum, Instruction and Assessment		n/a	-1
Elementary Principal	Elementary Principal	<ul style="list-style-type: none"> <li>◦ Elementary School Principal PreK-2</li> <li>◦ Elementary School Principal 3-5</li> </ul>	0
Assistant Middle School Principal/Secondary Dean of Students/Athletic Director (10-month position)	Middle School Principal	<ul style="list-style-type: none"> <li>◦ Middle School Principal</li> <li>◦ Middle School Asst. Principal</li> </ul>	-1
◦ High School/Middle School Principal	<ul style="list-style-type: none"> <li>◦ High School Principal</li> <li>◦ Director, Administrative Services/Athletics</li> </ul>	<ul style="list-style-type: none"> <li>◦ High School Principal</li> <li>◦ Assistant High School Principal</li> <li>◦ Athletic Director</li> </ul>	+1
Business Manager	Director, Business and Operations Services	Business Manager	-1
Coordinator of Instructional Technology	IT Contracted to Capital Area IU	Coordinator of Instructional Technology	Elimination of contract
Supervisor of Special Education	Director, Special Education and Student Services	<ul style="list-style-type: none"> <li>◦ Director of Special Ed K-5</li> <li>◦ Director of Special Ed 6-12</li> </ul>	0
Supervisor Building and Grounds	Supervisor of Buildings and Grounds (shared by two employees)	<ul style="list-style-type: none"> <li>◦ Director of Operations/Facilities</li> <li>◦ Supervisor of Building &amp; Grounds</li> </ul>	-1

Using this structure for administration, cost savings could be achieved through reduction in staff and/or elimination of the need for contracted services. For this analysis, we used the median of the salary range that is included in the Millersburg Area Act 93 agreement. The Act 93 salaries at Upper Dauphin Area generally fall within the ranges in the Millersburg Area agreement. The superintendents and business administrators in both districts are excluded from the Act 93 agreements. In the short term, it is recommended that the combined district retain the capacities of both Business Administrator positions for at least the first two years of the combination. It would be prudent for one business administrator to wrap up the accounting and any audits for the individual districts, while the other assists in managing the combined operations. (See Table 6-10.)

**Table 6-10: Potential Administrative Position Changes and Expense Reduction**

<b>Administrative Positions</b>	<b>Change</b>
Superintendent	-1
Asst. Superintendent	1
High School Asst. Principal	1
Director of Curriculum, Instruction and Assessment	-1
High School Principal	-1
Business Administrator	-1
Supervisor Building and Grounds	-1
Net Administrative Position Change	-3
Estimated Salary*	\$80,000
<b>Expense Reduction</b>	<b>\$240,000</b>

\* Estimate based on average of median salaries for administrators.

**Total Personnel Savings**

Additional savings for healthcare, pensions and employment taxes would increase the estimated reduction. (Table 6-11.)

**Table 6-11: Summary of Potential Position and Expense Reductions for the 2021-22 School Year**

<b>Savings</b>	<b>Change in Positions</b>	<b>Savings</b>
Administrative	-3	\$240,000
Professional Staff	-28	1,764,000
Support Staff	-9	243,156
<b>Staff/Salary Reductions</b>	<b>-40</b>	<b>2,247,156</b>
Healthcare		351,902
SS/PSERS/UC/WC (23.08%)		518,644
<b>Total Recurring Savings</b>		<b>\$3,117,702</b>

**Non-personnel/Transportation Expenditures**

Transportation is one of the larger non-personnel expenditures. An analysis can be found in the Transportation Chapter.

**Combined Expenditures**

For purposes of this analysis, it is assumed that non-personnel expenditures were maintained at the current level. Reductions in non-personnel expenditures may be achieved based upon the

grade options chosen, building closings, structural realignment and other factors. Expenditures of the combined district are shown by function and object. (Tables 6-12 and 6-13.)

**Table 6-12: Combined Expenditures by Function Estimated 2021-22**

	<b>Millersburg</b>	<b>Upper Dauphin</b>	<b>Combined</b>
	<b>2021-22</b>	<b>2021-22</b>	<b>2021-22</b>
Instruction	\$9,967,189	\$13,631,860	\$23,599,049
Support Service	4,735,605	6,132,243	10,867,849
Operation of Noninstruct Services	355,433	453,650	809,083
Facilities Acq, Const, & Imp Services	30,000	0	30,000
Other Expenditures & Financing Uses	783,850	978,300	1,762,150
<b>Total Expenditures</b>	<b>\$15,872,077</b>	<b>\$21,196,053</b>	<b>\$37,068,130</b>

**Table 6-13: Combined Expenditures by Object Estimated 2021-22**

	<b>Millersburg</b>	<b>Upper Dauphin</b>	<b>Combined</b>
	<b>2021-22</b>	<b>2021-22</b>	<b>2021-22</b>
Personnel Services - Salaries	\$6,380,925	\$8,565,857	\$14,946,782
Personnel Services - Employee Benefits	4,834,705	6,577,260	11,411,965
Purchased Professional and Technical Services	1,060,763	728,059	1,788,822
Purchased Property Services	353,755	501,424	855,180
Other Purchased Services	1,778,021	2,891,169	4,669,190
Supplies	475,377	730,471	1,205,848
Property	179,170	202,959	382,128
Other Objects	309,361	20,555	329,915
Other Uses of Funds	500,000	978,300	1,478,300
<b>Total Expenditures</b>	<b>\$15,872,077</b>	<b>\$21,196,053</b>	<b>\$37,068,130</b>

### Revenue Impacts

When districts combine, they are required to develop a combined budget and related financial plan. Typically, the individual districts’ financial information from the prior year is used as a starting point. Using data from the year prior to the actual combination creates a base for adjusting taxes if necessary and equalizes taxes between the two districts for the first year of the combined district. The following analysis uses the 2021-22 budget year estimates for the individual districts as the basis for financial data.

#### Local Tax Collection

Millage rates, set by each of the existing school boards, have a direct influence on taxes anticipated and taxes collected. Both districts now enjoy a moderate rate of tax collection: Millersburg Area collects approximately 93 percent of levied property taxes on a current basis; Upper Dauphin Area collects about 91 percent on a current basis.

The Pennsylvania Constitution requires that tax rates be uniform throughout a taxing district and upon subjects of taxation, meaning that a single millage rate for real estate tax will be levied across the combined district, regardless of the prior tax rate. Expenditure savings listed above may allow the combined district to lower the millage rate for all taxpayers.



As shown in Table 6-14, combining the tax bases of the individual districts at the lower rate of 18.8775 mills and maintaining the other tax rates at current levels will result in a loss of real estate revenue of approximately \$570,662.

**Table 6-14: Revenue Adjustment**

		Revenue	Revenue	Tax Revenue
	Current Mills	@ Current Mills	@ 18.8775 Mills	Variance
Millersburg Area School District	21.0190	\$5,214,138	\$4,643,476	-\$570,662
Upper Dauphin Area School District	18.8775	6,412,145	6,412,145	0
<b>Total</b>		<b>\$11,626,283</b>	<b>\$11,055,621</b>	<b>-\$570,662</b>

All other local tax rates are the same in both districts (Table 6-15).

**Table 6-15: 2019-20 Other Tax Rates**

	Millersburg	Upper Dauphin
Occupational Assessment	\$250	\$250
Earned Income Tax	0.50%	0.50%
Local Services Tax	\$0	\$0
Per Capita-511 (6141)	\$5	\$5
Per Capita- SC (6120)	\$5	\$5
RE Transfer Rate	0.50%	0.50%

Total local tax revenue estimates using each districts’ current real estimate millage for 2021-22 are shown in Table 6-16.

**Table 6-16: Local Revenue Summary Estimate for 2021-22 Before Millage Adjustment**

	Millersburg Area	Upper Dauphin Area	Total
Current Real Estate Taxes at 2019-20 Millage	\$5,214,138	\$6,412,145	\$11,626,283
Interim Real Estate Taxes	8,500	20,000	28,500
Public Utility Realty Taxes	6,900	7,500	14,400
PILOTS - State / Local	315	13,000	13,315
Current Per Capita Taxes, Section 679	18,500	25,000	43,500
Current Act 511 Taxes - Flat Rate Assessments	18,500	25,000	43,500
Current Act 511 Taxes – Proport Assessments	1,312,200	1,773,520	3,085,720
Delinquencies on Taxes Levied	490,000	720,000	1,210,000
Other Local Revenue	648,175	543,100	1,191,275
<b>Total Local Revenue at 2019-20 Millage</b>	<b>\$7,717,228</b>	<b>\$9,539,265</b>	<b>\$17,256,493</b>

**State Revenues - Expected Changes in the Aid Ratio**

The aid ratio is defined and calculated by the Pennsylvania Department of Education (PDE) for the individual districts. For this report, an estimated aid ratio was calculated for a combined district using state aid ratio data for the existing school districts. Assuming no changes in the methodology used by PDE to calculate the aid ratios, PDE will sum the market value, personal

income and Weighted Average Daily Membership (WADM) for the existing districts to produce an aid ratio for a combined district. Table 6-17 shows the Market Value/Weighted Average Daily Membership, the Personal Income/Weighted Average Daily Membership, and the Aid Ratios using this method.

**Table 6-17: Market Value/Personal Income and Total Aid Ratios**

	<b>Millersburg</b>	<b>Upper Dauphin</b>	<b>Combined</b>
District MV	\$323,660,748	\$489,930,701	\$813,591,449
State MV	\$841,859,300,511	\$841,859,300,511	\$841,859,300,511
District WADM	962.366	1,416.642	2,379.008
State WADM	1,995,432.440	1,995,432.440	1,995,432.440
District PI	\$144,862,990	\$184,349,145	329,212,135
State PI	\$352,789,390,440	\$352,789,390,440	\$352,789,390,440
District MV/WADM	336,318	345,839	341,988
State MV/WADM	421,893	421,893	421,893
District PI/WADM	150,528	130,131	138,382
State PI/WADM	176,798	176,798	176,798
District PIAR	0.6014	0.5901	0.5947
District MVAR	0.5743	0.6320	0.6086
District MVPIAR	0.5906	0.6069	0.6003
District MVPIAR	\$323,660,748	\$489,930,701	\$813,591,449

**Federal and Other Revenues**

Federal and other revenues are not anticipated to change and remain at current levels for the individual school districts.

**Summary of Revenue Impact**

It is estimated that the combination of the two individual districts into a single school district will have some effects upon the total revenue available. Table 6-18 provides the revenue summary estimates for 2021-22.

**Table 6-18: Total Revenue Summary Estimate for 2021-22 Before Millage Adjustment**

	<b>Millersburg</b>	<b>Upper Dauphin</b>	<b>Total Before Adjustment</b>
Total Local Revenue	\$7,717,228	\$9,539,265	\$17,256,493
Total State Revenue	6,878,569	10,132,595	17,011,163
Total Federal Revenue	212,233	517,431	729,664
Total Other Revenue	0	0	0
<b>Total All Revenue</b>	<b>\$14,808,030</b>	<b>\$20,189,291</b>	<b>\$34,997,321</b>

The amount of total revenue necessary will depend to a large extent on decisions made relative to the millage rate, the combining of salary schedules, employment agreements and PDE calculations.

**Summary of Impact on Property Tax Levels**

It is estimated that the combination of the two individual districts into a single school district will have some effects upon the local property tax rate and property taxes. Table 6-19 provides the revenue summary estimates and the impact of the merged millage rates on properties.

**Table 6-19: Revenue Summary and Tax Rate Impact Estimate for FY 2021-22**

<b>Total Assessed Value Combined District</b>		<b>\$662,885,800</b>		
<b>Value of One Mill @ 92% Collection Rate</b>		<b>\$609,855</b>		
		<b>Taxes on Properties Valued</b>		
<b>Combined District Tax Rate</b>	<b>Tax Revenue</b>	<b>Reduction in Revenue</b>	<b>@\$75,000</b>	<b>@\$100,000</b>
@ Current Rates	\$11,626,283			
<b>@ 18.8775 Mills UDA</b>			<b>\$1,416</b>	<b>\$1,888</b>
<b>@ 21.0190 Mills MA</b>			<b>\$1,576</b>	<b>\$2,102</b>
@ 18 Mills	\$10,477,792	-\$1,148,896	\$1,350	\$1,800
@ 18.125 Mills	\$10,555,202	-\$1,071,081	\$1,359	\$1,813
@ 18.25 Mills	\$10,632,611	-\$993,672	\$1,369	\$1,825
@ 18.375 Mills	\$10,710,021	-\$916,262	\$1,378	\$1,838
@ 18.5 Mills	\$10,787,431	-\$838,852	\$1,388	\$1,850
@ 18.75 Mills	\$10,942,251	-\$684,032	\$1,406	\$1,875
@ 18.8775 Mills	\$11,021,209	-\$605,074	\$1,416	\$1,888
@ 19 Mills	\$11,097,070	-\$529,213	\$1,425	\$1,900

**Conclusion and Summary**

**Individual Surplus/(Deficit)**

Both districts will face significant deficits over the next several years whether or not they merge as shown in Chapter 2. For the 2021-22 school year, the deficits for each of the districts are estimated at over \$1.0 million. Real estate tax increases are inevitable as both districts show deficits into the future regardless of the merger outcome. (Table 6-20)

**Table 6-20: Revenue and Expense Summary Estimate for 2021-22**

	<b>Millersburg</b>	<b>Upper Dauphin</b>	<b>Unadjusted Combined</b>
	<b>2021-22</b>	<b>2021-22</b>	<b>2021-22</b>
Revenues	\$14,808,030	\$20,189,291	\$34,997,321
Expenditures	15,872,077	21,196,053	\$37,068,130
Surplus/(Deficit)	<b>-\$1,064,048</b>	<b>-\$1,006,762</b>	

**Combined Surplus/(Deficit)**

The merger of the two districts is expected to produce a budget surplus over the operating expenses for the two districts separately. When consideration is given to the revenue

adjustments and expenditure changes as a result of the merger, the combined district will produce a positive impact on the cost of public education.

This projection uses the current Upper Dauphin Area real estate tax millage of 18.8775 mills for all residents of the merged district and includes average estimated staff savings. As noted previously, actual savings from staff consolidation will depend on the final negotiated CBA for the merged district.

When combined, the EIT and Real Estate tax bases should provide adequate and larger natural growth which will create more budget flexibility and reduce pressure for real estate tax increases that may be necessary under Act 1 limitations. (Table 6-21)

**Table 6-21: Combined Surplus/Deficit Estimate for 2021-22 at 18.8775 Millage Rate**

	<b>Combined</b>
	<b>2021-22</b>
Combined Revenues at 2019-20 Millage	\$34,997,321
Less: RE Tax Revenue Adjustment	<u>-570,662</u>
<b>Net Revenues</b>	<b>\$34,426,658</b>
Combined Expenditures	\$37,068,130
Staff Savings from Combination	-3,117,702
Year One Transportation	<u>360,525</u>
<b>Net Expenditures</b>	<b>\$34,310,953</b>
<b>Surplus/(Deficit)</b>	<b>\$115,705</b>

As discussed in the Transportation Chapter, because in the lag of funding for transportation from the Commonwealth, the first year transportation costs may show an increase. It is estimated that the merged district will receive increased subsidies resulting net savings in transportation, depending on procurement, of up to \$125,000.

The projections above do not include any cost savings for discontinuing the Lenkerville Elementary building. Depending on the level of maintenance of that building, Millersburg Area officials estimate cost savings of \$55,000 per year compared to the \$90,000 cost for full building use today. The analysis of the combined surplus or deficit did not include the potential one-time revenue from a sale of the Lenkerville property.

The combined district should be able to slow expenditure growth through economies of scale and elimination of duplicative services while providing enhanced educational opportunities to students of both districts.

**CHAPTER 7**  
**PENNSYLVANIA DEPARTMENT OF EDUCATION**  
**SUBMISSION INFORMATION**

Chapter pending. This information is not required yet.

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# Appendices

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## APPENDIX I ENROLLMENT, DEMOGRAPHICS AND TAXES

The **Millersburg Area School District** is a rural, public school district of approximately 32 square miles located in the northwestern portion of Dauphin County. It encompasses Millersburg Borough and Upper Paxton Township. Millersburg operates three schools, Lenkerville Elementary (K-5), Millersburg Area Middle School (6-8) and Millersburg Area High School. It also offers online learning through the Capital Area Online Learning Association (CAOLA).

The **Upper Dauphin Area School District** is a rural, public school district of approximately 91 square miles located in north central and northeastern Dauphin County. It includes the boroughs of Berrysburg, Elizabethville, Gratz, Lykens and Pillow, and the townships of Jefferson, Lykens, Mifflin and Washington. Upper Dauphin operates three schools: Upper Dauphin Area Elementary School (K-4), Upper Dauphin Area Middle School (5-8), and Upper Dauphin Area High School (9-12).

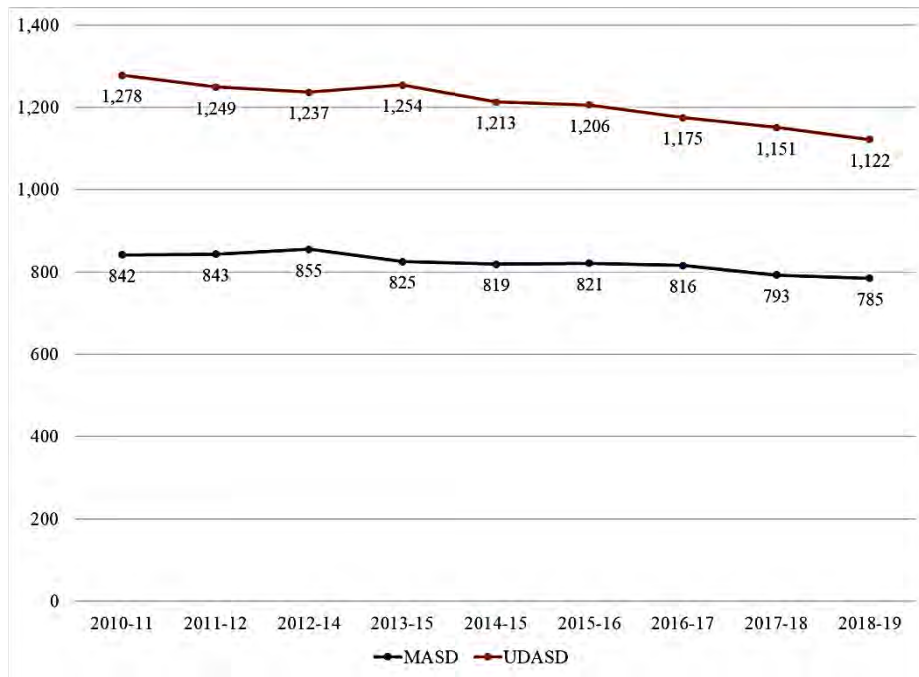
From 2006-07 through 2018-19, total enrollment in both districts declined. Millersburg's total enrollment fell 20.1 percent. Upper Dauphin's total enrollment fell 13.6 percent during the same time period.

Millersburg's enrollment fell from a high of 949 in 2006-07 to 816 in 2016-17, decreasing to fewer than 800 students in 2017-18. Upper Dauphin's total enrollment declined from a high of 1,282 in 2006-07 to a low of 1,122 in 2018-19.

### Student Enrollment as of October 1<sup>st</sup> Census

Year	Millersburg			Upper Dauphin			Combined		
	Enrollment	Change	% Change	Enrollment	Change	% Change	Enrollment	Change	% Change
2006-07	949			1,282			2,231		
2007-08	915	-34	-3.6	1,280	-2	-0.2	2,195	-36	-1.6
2008-09	882	-33	-3.6	1,267	-13	-1.0	2,149	-46	-2.1
2009-10	855	-27	-3.1	1,255	-12	-0.9	2,110	-39	-1.8
2010-11	842	-13	-1.5	1,278	23	1.8	2,120	10	0.5
2011-12	843	1	0.1	1,249	-29	-2.3	2,092	-28	-1.3
2012-13	855	12	1.4	1,237	-12	-1.0	2,092	0	0.0
2013-14	825	-30	-3.5	1,254	17	1.4	2,079	-13	-0.6
2014-15	819	-6	-0.7	1,213	-41	-3.3	2,032	-47	-2.3
2015-16	821	2	0.2	1,206	-7	-0.6	2,027	-5	-0.2
2016-17	816	-5	-0.6	1,175	-31	-2.6	1,991	-36	-1.8
2017-18	793	-23	-2.8	1,151	-24	-2.0	1,944	-47	-2.4
2018-19	785	-8	-1.0	1,122	-29	-2.5	1,907	-37	-1.9
<b>Change 2006-07 to 2018-19</b>		<b>-164</b>	<b>-17.3</b>		<b>-160</b>	<b>-12.5</b>		<b>-324</b>	<b>-14.5</b>

**Student Enrollment Trend**



**Enrollment Projections**

Enrollment trends for Millersburg and Upper Dauphin were provided by the Pennsylvania Department of Education (PDE). The following notes are specified by PDE when considering the projections:

1. Excludes students in full-time out-of-district special education, comprehensive AVTSs, charter schools, state-owned schools, consortium-operated alternative high schools, and juvenile correctional institutions.
2. Enrollment projections beyond five years are subject to errors in the lower grades resulting from inconsistencies between actual and projected live births and should be reviewed closely.
3. Four-year-old kindergarten students, if any, added to K enrollments.

The data sources for the projections include:

1. Pennsylvania Information Management System (PIMS).
2. Resident Live Birth file supplied by the Division of Health Statistics, Pennsylvania Department of Health. The Department of Health specifically disclaims responsibility for any analyses, interpretations or conclusions

### K-12 Projections

PDE projects that total enrollment in both districts will continue to decline. Total enrollment is anticipated to drop by 136 students or 7.4 percent from 2018-19 to 2023-24.

PDE K-12 Projections					
	MASD	UDASD	Combined	Change	
				#	%
2018-19 (Actual)	785	1,122	1,907		
2019-20	748	1,097	1,845	-62	-3.3
2020-21	767	1,089	1,856	11	0.6
2021-22	744	1,084	1,828	-28	-1.5
2022-23	740	1,067	1,807	-21	-1.1
2023-24	730	1,041	1,771	-36	-2.0
<b>Change 2018-19 to 2023-24</b>				<b>-136</b>	<b>-7.4</b>

### Elementary Projections

Three configurations of elementary projections are presented below based on options outlined elsewhere in this report. K-4 enrollments are projected to decrease by 56 students or 8.3 percent during the projection period. K-5 enrollments are projected to decrease by 75 students or 9.1 percent. K-8 enrollments are projected to decrease by 140 students or 10.8 percent.

K-4 Elementary Projections					
	MASD	UDASD	Combined	#	%
2018-19 (Actual)	278	394	672		
2019-20	255	389	644	-28	-4.2
2020-21	264	393	657	13	2.0
2021-22	237	396	633	-24	-3.7
2022-23	242	391	633	0	0.0
2023-24	241	375	616	-17	-2.7
<b>Change 2018-19 to 2023-24</b>				<b>-56</b>	<b>-8.3</b>

K-5 Projections					
	MASD	UDASD	Combined	#	%
2018-19 (Actual)	343	482	825		
2019-20	314	474	788	-37	-4.5
2020-21	314	471	785	-3	-0.4
2021-22	303	477	780	-5	-0.6
2022-23	288	465	753	-27	-3.5
2023-24	292	458	750	-3	-0.4
<b>Change 2018-19 to 2023-24</b>				<b>-75</b>	<b>-9.1</b>

K-8 Projections					
	MASD	UDASD	Combined	#	%
2018-19 (Actual)	537	759	1,296		
2019-20	514	745	1,259	-37	-2.9
2020-21	515	741	1,256	-3	-0.2
2021-22	484	733	1,217	-39	-3.1
2022-23	469	714	1,183	-34	-2.8
2023-24	460	696	1,156	-27	-2.3
<b>Change 2018-19 to 2023-24</b>				<b>-140</b>	<b>-10.8</b>

### Middle School Projections

The two middle school options, grades 5-8 and grades 6-8, are projected here. Middle school enrollments for grades 5-8 are projected to decrease by 84 students or 13.5 percent during the projection period. Enrollments in grades 6-8 decrease by 65 or 13.8 percent.

Grades 5-8 Projections					
	MASD	UDASD	Combined	#	%
2018-19 (Actual)	259	365	624		
2019-20	259	356	615	-9	-1.4
2020-21	251	348	599	-16	-2.6
2021-22	247	337	584	-15	-2.5
2022-23	227	323	550	-34	-5.8
2023-24	219	321	540	-10	-1.8
<b>Change 2018-19 to 2023-24</b>				<b>-84</b>	<b>-13.5</b>

Grades 6-8 Projections					
	MASD	UDASD	Combined	#	%
2018-19 (Actual)	194	277	471		
2019-20	200	271	471	0	0.0
2020-21	201	270	471	0	0.0
2021-22	181	256	437	-34	-7.2
2022-23	181	249	430	-7	-1.6
2023-24	168	238	406	-24	-5.6
<b>Change 2018-19 to 2023-24</b>				<b>-65</b>	<b>-13.8</b>

### High School Projections

High school enrollments during the projection period fluctuate, increasing to a projected high of 624 in 2022-23 before decreasing to 615 in 2023-24. The overall projected increase over the projection period is 4 enrollments or 0.6 percent.

9-12 Projections					
	MASD	UDASD	Combined	#	%
2018-19 (Actual)	248	363	611		
2019-20	234	352	586	-25	-4.1
2020-21	252	348	600	14	2.4
2021-22	260	351	611	11	1.8
2022-23	271	353	624	13	2.1
2023-24	270	345	615	-9	-1.4
<b>Change 2018-19 to 2023-24</b>				<b>4</b>	<b>0.6</b>

### Demographic Profile

Total population in the Millersburg Area School District grew by 226 or 3.5 percent from 2000 to 2010, with a slight decrease in the under 18 population and increases in the 18 to 64 and 65 and over populations. Millersburg remains predominately white.

#### Millersburg Demographic Profile

	2000		2010		Change 2000 to 2010	
Male	3,086	47.5%	3,242	48.3%	156	5.1%
Female	3,406	52.5%	3,476	51.7%	70	2.1%
<b>Total</b>	<b>6,492</b>	<b>100.0%</b>	<b>6,718</b>	<b>100.0%</b>	<b>226</b>	<b>3.5%</b>
	2000		2010		Change 2000 to 2010	
Under 18	1,442	22.2%	1,421	21.2%	-21	-1.5%
18-64	3,771	58.1%	3,921	58.4%	150	4.0%
65 & over	1,279	19.7%	1,376	20.5%	97	7.6%
<b>Total</b>	<b>6,492</b>	<b>100.0%</b>	<b>6,718</b>	<b>100.0%</b>	<b>226</b>	<b>3.5%</b>
	2000		2010		Change 2000 to 2010	
White	6,383	98.3%	6,586	98.1%	203	3.2%
Black	22	0.3%	57	0.8%	35	159.1%
Hispanic	23	0.4%	0	0.0%	-23	-100.0%
Other	64	1.0%	73	1.1%	9	14.1%
<b>Total</b>	<b>6,492</b>	<b>100.0%</b>	<b>6,716</b>	<b>100.0%</b>	<b>224</b>	<b>3.5%</b>

Source: Census data accessed 07.31.2019 website: [http://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)

Total population in the Upper Dauphin Area School District grew by 986 or 11.2 percent from 2000 to 2010, with increases at every age level. The 18-64 population experienced the most growth. Upper Dauphin remains predominately white.

#### Upper Dauphin Demographic Profile

	2000		2010		2000 to 2010 Change	
Male	4,400	50.2%	4,908	50.3%	508	11.5%
Female	4,366	49.8%	4,844	49.7%	478	10.9%
<b>Total</b>	<b>8,766</b>	<b>100.0%</b>	<b>9,752</b>	<b>100.0%</b>	<b>986</b>	<b>11.2%</b>
	2000		2010		2000 to 2010 Change	
Under 18	2,174	24.8%	2,492	25.6%	318	14.6%
18-64	5,146	58.7%	5,637	57.8%	491	9.5%
65 & over	1,446	16.5%	1,623	16.6%	177	12.2%
<b>Total</b>	<b>8,766</b>	<b>100.0%</b>	<b>9,752</b>	<b>100.0%</b>	<b>986</b>	<b>11.2%</b>
	2000		2010		2000 to 2010 Change	
White	8,593	98.0%	9,513	97.5%	920	10.7%
Black	38	0.4%	34	0.3%	-4	-10.5%
Hispanic	56	0.6%	130	1.3%	74	132.1%
Other	79	0.9%	75	0.8%	-4	-5.1%
<b>Total</b>	<b>8,766</b>	<b>100.0%</b>	<b>9,752</b>	<b>100.0%</b>	<b>986</b>	<b>11.2%</b>

Total combined population grew by 1,244 or 8.2 percent from 2000 to 2010, with increases at every age level. The 18-64 population experienced the most growth. The combined district remains predominately white.

**Combined Demographic Profile**

	<b>2000</b>		<b>2010</b>		<b>2000 to 2010 Change</b>	
Male	7,486	49.1%	8,150	49.5%	664	8.9%
Female	7,772	50.9%	8,320	50.5%	548	7.1%
<b>Total</b>	<b>15,258</b>	<b>100.0%</b>	<b>16,502</b>	<b>100.0%</b>	<b>1,244</b>	<b>8.2%</b>
	<b>2000</b>		<b>2010</b>		<b>2000 to 2010 Change</b>	
Under 18	3,616	23.7%	3,913	23.8%	297	8.2%
18-64	8,917	58.4%	9,558	58.0%	641	7.2%
65 & over	2,725	17.9%	2,999	18.2%	274	10.1%
<b>Total</b>	<b>15,258</b>	<b>100.0%</b>	<b>16,470</b>	<b>100.0%</b>	<b>1,212</b>	<b>7.9%</b>
	<b>2000</b>		<b>2010</b>		<b>2000 to 2010 Change</b>	
White	14,976	98.2%	16,099	97.6%	1,123	7.5%
Black	60	0.4%	91	0.6%	31	51.7%
Hispanic	79	0.5%	130	0.8%	51	64.6%
Other	143	0.9%	182	1.1%	39	27.3%
<b>Total</b>	<b>15,258</b>	<b>100.0%</b>	<b>16,502</b>	<b>100.0%</b>	<b>1,244</b>	<b>8.2%</b>

## Housing Profile 2000 and 2010 Census Figures

The total number of housing units in Millersburg increased from 2000 to 2010 by 231 or 8.1 percent. For 2010, the majority of homes (62.5 percent) are owner occupied with rental units at 28.6 percent of the total. The number of owner occupied and vacant units increased from 2000 to 2010, while renter occupied units decreased by 19.6 percent.

### Millersburg Housing Profile

	2000	% of Total		2010	% of Total		Change 2000-2010	% Change
Owner Occupied	1,576	55.4		1,920	62.5		344	21.8
Renter Occupied	1,095	38.5		880	28.6		-215	-19.6
Vacant Other	172	6.0		274	8.9		102	59.3
<b>Total</b>	<b>2,843</b>	<b>100.0</b>		<b>3,074</b>	<b>100.0</b>		<b>231</b>	<b>8.1</b>

Source: Census data accessed 07.31.2019, website: [http://factfinder.census.gov/faces/nav/jsf/pages/community\\_facts.xhtml](http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml)

The total number of housing units in Upper Dauphin increased from 2000 to 2010 by 498 or 13.5 percent. For 2010, the majority of homes (67.8 percent) are owner occupied with rental units at 22.8 percent of the total. The number of owner occupied and vacant units increased from 2000 to 2010, while renter occupied units decreased by 29.4 percent.

### Upper Dauphin Housing Profile

	2000	% of Total		2010	% of Total		Change 2000-2010	% Change
Owner Occupied	2,081	56.3		2,842	67.8		761	36.6
Renter Occupied	1,351	36.6		954	22.8		-397	-29.4
Vacant Other	263	7.1		397	9.5		134	51.0
<b>Total</b>	<b>3,695</b>	<b>100.0</b>		<b>4,193</b>	<b>100.0</b>		<b>498</b>	<b>13.5</b>

The total combined number of housing units increased from 2000 to 2010 by 729 or 11.2 percent. For 2010, the majority of homes (65.5 percent) are owner occupied with rental units at 25.2 percent of the total. The number of owner occupied and vacant units increased from 2000 to 2010, while renter occupied units decreased by 25 percent.

### Combined Housing Profile

	2000	% of Total		2010	% of Total		Change 2000-2010	% Change
Owner Occupied	3,657	55.9		4,762	65.5		1,105	30.2
Renter Occupied	2,446	37.4		1,834	25.2		-612	-25.0
Vacant Other	435	6.7		671	9.2		236	54.3
<b>Total</b>	<b>6,538</b>	<b>100.0</b>		<b>7,267</b>	<b>100.0</b>		<b>729</b>	<b>11.2</b>

The total number of houses has increased, which might be seen as an indicator of growth for the area; however, the increased number of vacant units from 2000 to 2010 indicates a trend of slower growth that could have negative implications for the overall tax base. Other positive indicators include a growth in owner occupied units and a decline in renter occupied units, which point to a more stable population.

### Median Household Income, Median Family Income, Poverty by Municipality

Median household income in the municipalities ranged from a high of \$62,933 in Washington Township to a low of \$38,207 in Lykens Borough. Upper Paxton Township had the highest median family income at \$77,000, while Lykens Borough was the lowest at \$45,536. Pillow Borough had the highest percentage of related children under 18 below the poverty line at 37.0 percent and Lykens Borough had the largest percentage of families below the poverty level at 24.7 percent.

Poverty levels for the majority of the municipalities are below the Dauphin County average. Most of the municipalities have a median household and family income levels that are below the county average. Comparison of the Municipal Household and Family median income and the Commonwealth’s data shows a similar profile to that of Dauphin County.

**Median Household Income, Median Family Income, Poverty by Municipality**

Municipality	Population	% of Population of Combined District	Median HH Income	Median Family Income	% Related Children under 18 Below Poverty Level	Percent Families Below Poverty Level
<b>Millersburg Area</b>						
Millersburg Borough	2,538	16.6%	\$45,086	\$60,833	7.5%	3.6%
Upper Paxton Township	4,205	27.6%	\$60,000	\$77,000	12.7%	5.8%
<b>Upper Dauphin Area</b>						
Berrysburg Borough	381	2.5%	\$52,232	\$67,083	0.0%	7.3%
Elizabethville Borough	1,698	11.1%	\$44,667	\$48,971	23.3%	13.5%
Gratz Borough	830	5.4%	\$59,338	\$65,625	2.2%	4.3%
Jefferson Township	276	1.8%	\$62,083	\$84,063	12.0%	4.6%
Lykens Borough	1,726	11.3%	\$38,207	\$45,536	34.7%	24.7%
Lykens Township	1,704	11.2%	\$51,579	\$54,333	12.0%	7.7%
Mifflin Township	734	4.8%	\$57,981	\$70,938	14.9%	10.1%
Pillow Borough	246	1.6%	\$46,750	\$56,875	37.0%	15.3%
Washington Township	2,092	13.7%	\$62,933	\$71,067	10.5%	6.2%
Total Population	16,430					
Dauphin County	273,329		\$57,071	\$71,273	15.4%	8.9%
Pennsylvania	12,790,505		\$56,951	\$72,692	15.1%	8.9%

Source: 2017 American Community Services 5-year Estimates, 08.21.2019.



### Free and Reduced-Price Lunch Students

The proportion of students eligible for the free and reduced-price lunch program more than doubled in both districts throughout the period. In Millersburg, the number of students eligible for free and reduced lunch grew from 19.8 percent in 2006-07 to 41.2 percent in 2018-19. In Upper Dauphin, the amount grew from 21.5 percent in 2006-07 to 46.2 percent in 2018-19.

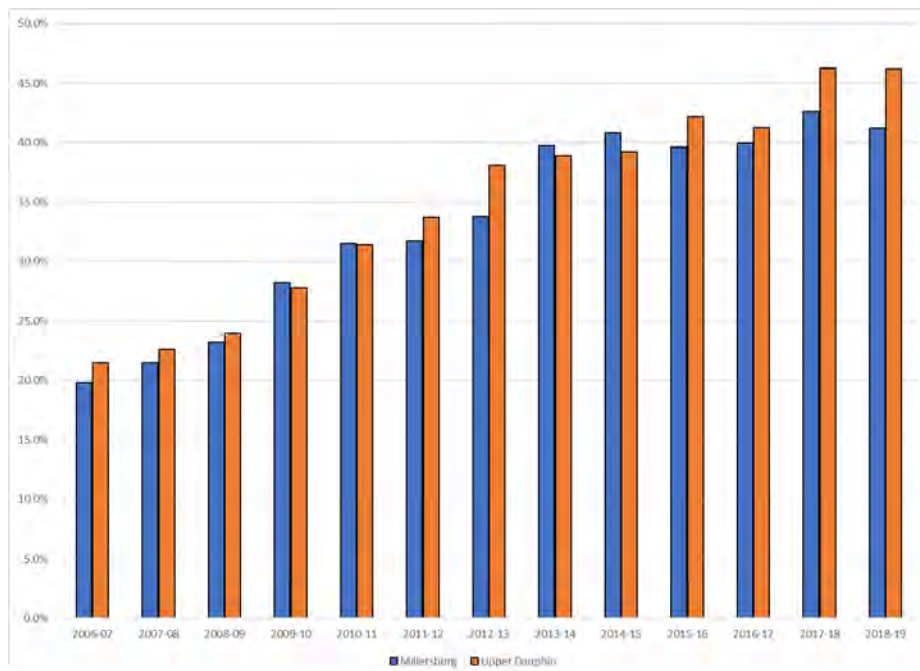
#### Millersburg

Year	Total Students	Free Lunch	Reduced Price Lunch	% Free	% Reduced	% Free & Reduced
2006-07	874	129	44	14.8	5.0	19.8
2007-08	857	135	49	15.8	5.7	21.5
2008-09	815	131	58	16.1	7.1	23.2
2009-10	793	165	59	20.8	7.4	28.2
2010-11	777	178	67	22.9	8.6	31.5
2011-12	788	194	56	24.6	7.1	31.7
2012-13	767	200	59	26.1	7.7	33.8
2013-14	750	229	69	30.5	9.2	39.7
2014-15	761	250	61	32.9	8.0	40.9
2015-16	764	254	49	33.2	6.4	39.7
2016-17	813	284	41	34.9	5.0	40.0
2017-18	795	292	47	36.7	5.9	42.6
2018-19	781	279	43	35.7	5.5	41.2

#### Upper Dauphin

Year	Total Students	Free Lunch	Reduced Price Lunch	% Free	% Reduced	% Free & Reduced
2006-07	1,287	217	60	16.9	4.7	21.5
2007-08	1,244	216	66	17.4	5.3	22.7
2008-09	1,252	228	72	18.2	5.8	24.0
2009-10	1,255	271	78	21.6	6.2	27.8
2010-11	1,283	336	67	26.2	5.2	31.4
2011-12	1,249	339	82	27.1	6.6	33.7
2012-13	1,242	375	98	30.2	7.9	38.1
2013-14	1,248	402	84	32.2	6.7	38.9
2014-15	1,197	394	76	32.9	6.3	39.3
2015-16	1,198	449	57	37.5	4.8	42.2
2016-17	1,180	431	56	36.5	4.7	41.3
2017-18	1,161	461	76	39.7	6.5	46.3
2018-19	1,121	449	69	40.1	6.2	46.2

Percentage Free and Reduced-Price Lunch Students



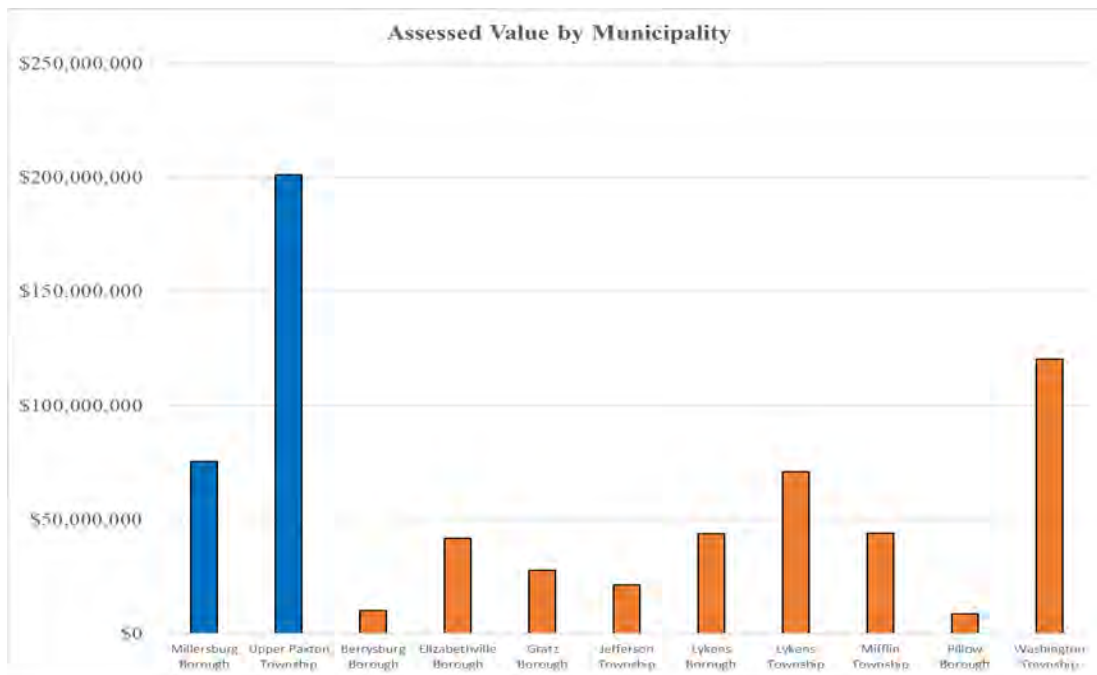
Source:<http://www.education.pa.gov/Teachers%20-%20Administrators/School%20Finances/Finances/AFR%20Data%20Summary/Pages/AFR-Data-Detailed-.aspx#.VZwC6mXD-Uk>, accessed 01.30.2019. Total Enrollment figures from Enrollment Data, Reduced & free lunch figures from building data.

### Assessed Property Value by Municipality, 2018

The majority of combined assessed property value for Millersburg and Upper Dauphin is in four municipalities: Upper Paxton Township (30.3 percent); Washington Township (18.1 percent); Millersburg (11.3 percent) and Lykens Boroughs (10.7 percent). Together these four municipalities account for 70.4 percent of the assessed property value of the two districts.

2018 Assessed Property Value by Municipality

	Assessed Value	% of Total
Millersburg Borough	\$75,221,500	11.3
Upper Paxton Township	201,113,100	30.3
Berrysburg Borough	9,971,400	1.5
Elizabethville Borough	41,797,600	6.3
Gratz Borough	27,736,900	4.2
Jefferson Township	21,417,400	3.2
Lykens Borough	43,614,100	6.6
Lykens Township	70,935,600	10.7
Mifflin Township	43,890,900	6.6
Pillow Borough	8,531,000	1.3
Washington Township	120,494,500	18.1
<b>Total</b>	<b>\$664,724,000</b>	<b>100.0</b>

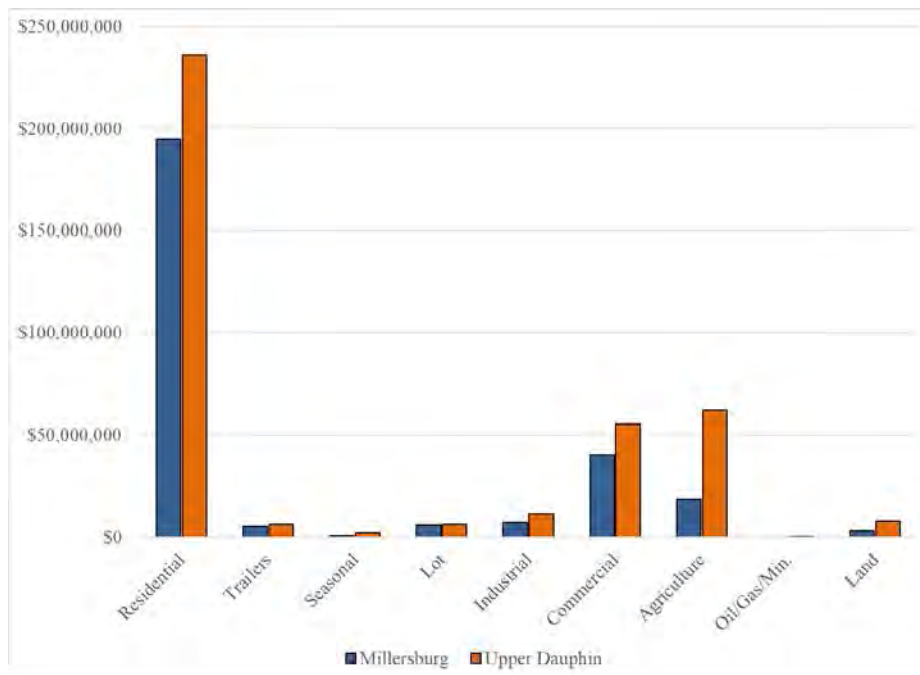


### Distribution of Assessed Value by Type and Use, 2018

The combined property tax base of Millersburg and Upper Dauphin is comprised of assessed value as determined by the Dauphin County assessment office. Residential property makes up the majority, accounting for approximately 71.6 percent of the tax base. The next largest categories are agriculture (9.6 percent) and industrial (5.5 percent)

2018 Distribution of Assessed Value by Type and Use

	Millersburg		Upper Dauphin	
	Value	% of Total	Value	% of Total
Residential	\$194,781,500	70.5	\$235,936,100	60.7
Trailers	5,451,600	2.0	6,382,200	1.6
Seasonal	615,800	0.2	2,384,100	0.6
Lot	6,042,800	2.2	6,563,900	1.7
Industrial	7,458,600	2.7	11,548,500	3.0
Commercial	40,073,900	14.5	55,378,500	14.3
Agriculture	18,557,000	6.7	62,200,800	16.0
Oil/Gas/Min.	0	0.0	141,400	0.0
Land	3,353,400	1.2	7,853,900	2.0
<b>TOTAL</b>	<b>\$276,334,600</b>	<b>100.0</b>	<b>\$388,389,400</b>	<b>100.0</b>



### Market Value vs. Assessed Value, 2008 - 2018

Market and assessed valuations have grown since 2008; however, the area’s property tax base is not growing at the same rate as the market value of real estate. Millersburg market value has grown by 20.6 percent or \$56.0 million, while assessed values grew by 2.3 percent or \$6.2 million. Assessed value in 2018 was 85.2 percent of market value, down from 99.2 percent in 2008. As a result, tax revenues do not grow with the increase in market values. Upper Dauphin’s market and assessed values showed similar trends. Market value grew by \$117.5 million or 30.5 percent while assessed value increased by 6.5 percent or \$23.9 million. Assessed value percent of market value fell from 94.6% in 2008 to 77.3% in 2018.

This lack of assessed value growth puts pressure on the districts to raise the property tax millage to increase revenue from real estate taxes. District real estate tax increases are restrained by state law (Act 1 of 2006) which limits annual increases. The establishment of assessed valuation is the responsibility of Dauphin County, not the school districts or municipalities.

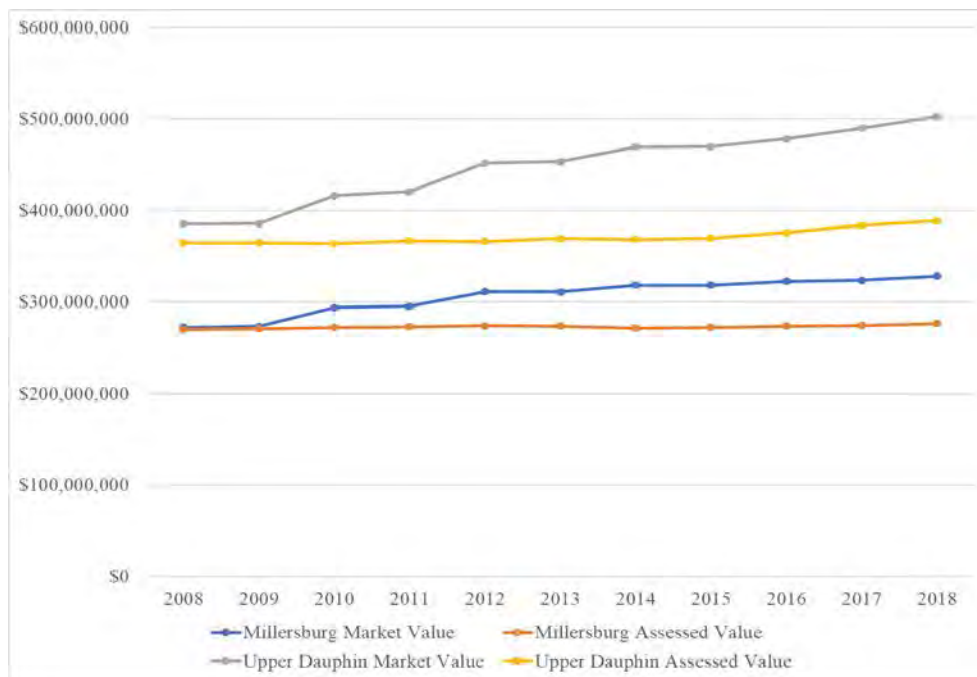
#### Millersburg Area

Year	Market Value	Change	% Change	Assessed Value	Change	% Change	Ratio of Assessed To Market Value
2008	272,329,328			270,110,300			99.2%
2009	273,102,987	773,659	0.3	270,622,200	511,900	0.2	99.1%
2010	293,943,540	20,840,552	7.6	272,106,700	1,484,500	0.5	92.6%
2011	295,203,674	1,260,135	0.4	272,842,900	736,200	0.3	92.4%
2012	311,191,171	15,987,497	5.4	274,033,800	1,190,900	0.4	88.1%
2013	310,830,180	-360,991	-0.1	273,625,200	-408,600	-0.1	88.0%
2014	318,395,104	7,564,924	2.4	271,605,400	-2,019,800	-0.7	85.3%
2015	318,462,003	66,898	0.0	272,078,600	473,200	0.2	85.4%
2016	322,858,588	4,396,585	1.4	273,774,100	1,695,500	0.6	84.8%
2017	323,660,748	802,160	0.2	274,429,700	655,600	0.2	84.8%
2018	328,334,261	4,673,513	1.4	276,334,600	1,904,900	0.7	84.2%
<b>Change 2008 - 2018</b>		<b>56,004,933</b>	<b>20.6</b>		<b>6,224,300</b>	<b>2.3</b>	

Upper Dauphin Area

Year	Market Value	Change	% Change	Assessed Value	Change	% Change	Ratio of Assessed To Market Value
2008	385,163,299			364,522,000			94.6%
2009	385,547,947	384,649	0.1	364,567,100	45,100	0.0	94.6%
2010	416,123,378	30,575,431	7.9	363,973,500	-593,600	-0.2	87.5%
2011	420,695,215	4,571,837	1.1	366,823,100	2,849,600	0.8	87.2%
2012	451,858,868	31,163,653	7.4	366,077,300	-745,800	-0.2	81.0%
2013	453,179,320	1,320,452	0.3	369,411,300	3,334,000	0.9	81.5%
2014	469,296,857	16,117,537	3.6	368,356,700	-1,054,600	-0.3	78.5%
2015	469,748,997	452,140	0.1	369,606,800	1,250,100	0.3	78.7%
2016	478,060,811	8,311,814	1.8	375,612,800	6,006,000	1.6	78.6%
2017	489,930,701	11,869,890	2.5	383,504,900	7,892,100	2.1	78.3%
2018	502,758,676	12,827,975	2.6	388,389,400	4,884,500	1.3	77.3%
<b>Change 2008 - 2018</b>		117,595,377	30.5		23,867,400	6.5	

Market vs. Assessed Value  
2008 - 2018



Source: State Tax Equalization Board, Accessed 07.29.2019. Most recent data available.

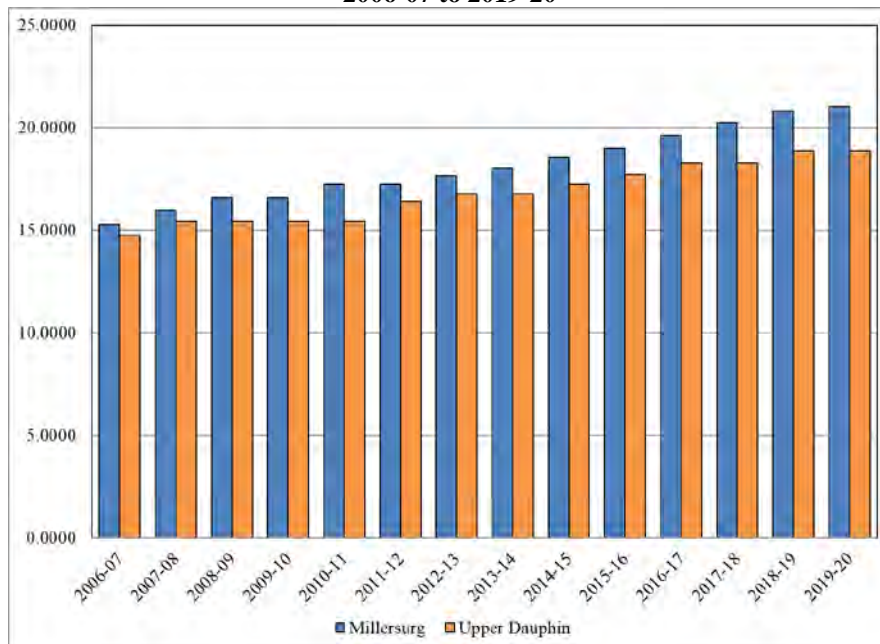
### Real Estate Tax Rates

As stated above, the lack of assessed value growth puts pressure on the two districts to raise the property tax millage to increase revenue from real estate taxes. Both districts have increased their millage to meet rising costs. Millersburg increased from 15.26 mills in 2006-07 to 21.019 mills for the 2019-20 school year or 37.7 percent. Upper Dauphin has increased from 14.75 mills in 2006 -07 to 18.8775 mills in 2019-20 or 28.0 percent.

Real Estate Tax Rates

Year	Millersburg		Upper Dauphin	
	Millage	% Change	Millage	% Change
2006-07	15.2600		14.7500	
2007-08	15.9460	4.5%	15.4000	4.4%
2008-09	16.5750	3.9%	15.4000	0.0%
2009-10	16.5750	0.0%	15.4000	0.0%
2010-11	17.2210	3.9%	15.4000	0.0%
2011-12	17.2210	0.0%	16.3800	6.4%
2012-13	17.6170	2.3%	16.7566	2.3%
2013-14	18.0221	2.3%	16.7566	0.0%
2014-15	18.5267	2.8%	17.2425	2.9%
2015-16	18.9898	2.5%	17.6908	2.6%
2016-17	19.5974	3.2%	18.2745	3.3%
2017-18	20.2441	3.3%	18.2745	0.0%
2018-19	20.8109	2.8%	18.8775	3.3%
2019-20	21.0190	1.0%	18.8775	0.0%
<b>Change 2006-2007 to 2019-20</b>	<b>5.7590</b>	<b>37.7%</b>	<b>4.1275</b>	<b>28.0%</b>

Real Estate Tax Rates  
2006-07 to 2019-20



### Act 1 Index and History

District real estate tax increases are restrained by Act 1 of 2006, which limits annual increases. The Act provided for a base index that districts must use to determine the maximum tax increases for each tax the school district levies before any exceptions or voter approval are required.

According to the PA Department of Education, the base index is calculated by averaging the percent increases in the statewide average weekly wage (SAWW) and the federal employment cost index (ECI) for elementary/secondary schools. If a school district has a market value/ personal income aid ratio (MV/PI AR) greater than 0.4000, the value of the district’s index is adjusted upward by multiplying the base index by the sum of 0.75 and the district’s MV/PI AR.

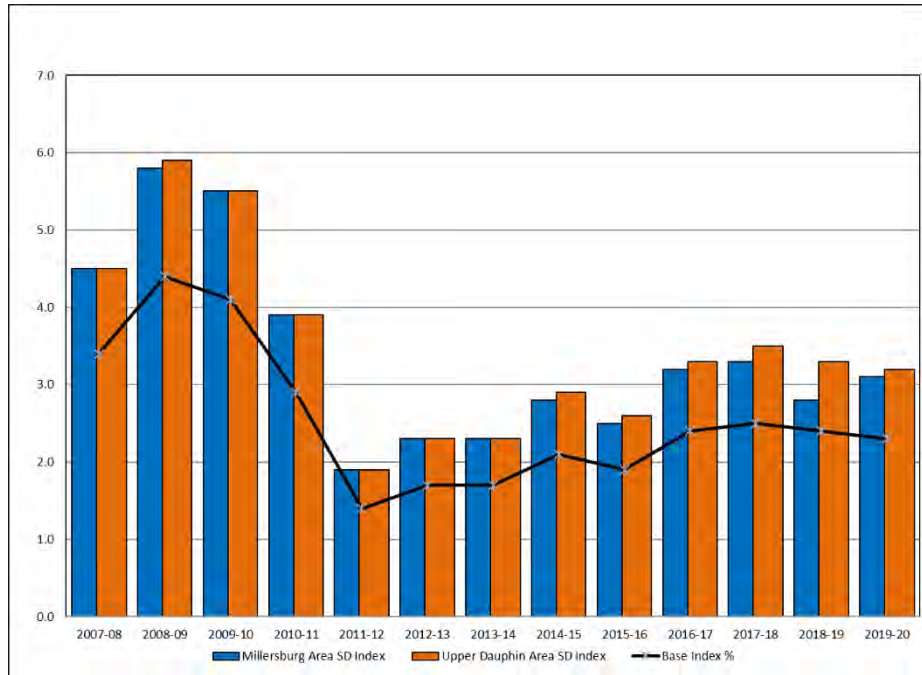
The 2019-20 Act 1 base index is 2.4 percent. For 2019-20, Millersburg’s Act 1 index of 2.8 and Upper Dauphin’s of 3.3 are both larger than the statewide base index. This indicates that both districts’ MV/PI AR are higher than 0.4000. A district with a higher index than the base index is relatively poorer compared to others in the state.

#### Act 1 Index and History

For use in school year:	Statewide Average Weekly Wage \$	Employment Cost Index	SAWW % Increase	ECI % Increase	Base Index %	Millersburg Area SD Index %	Upper Dauphin Area SD Index %
2007-08	756.18	100.5	2.8	4	3.4	4.5	4.5
2008-09	788.47	105.0	4.3	4.5	4.4	5.8	5.9
2009-10	824.79	108.8	4.6	3.6	4.1	5.5	5.5
2010-11	846.71	112.1	2.7	3	2.9	3.9	3.9
2011-12	854.53	114.2	0.9	1.9	1.4	1.9	1.9
2012-13	872.08	115.7	2.1	1.3	1.7	2.3	2.3
2013-14	874.59	117.3	2.0	1.4	1.7	2.3	2.3
2014-15	897.74	119.2	2.6	1.6	2.1	2.8	2.9
2015-16	919.40	120.9	2.4	1.4	1.9	2.5	2.6
2016-17	942.40	123.6	2.5	2.2	2.4	3.2	3.3
2017-18	966.00	126.5	2.6	2.3	2.5	3.3	3.5
2018-19	988.43	129.8	2.2	2.6	2.4	2.8	3.3



Act 1 Index Base  
Adjusted Index Millersburg, Upper Dauphin



### District Aid Ratios

According to the PA Department of Education, a district’s aid ratio is the general term for three numerical values — market value aid ratio (MVAR), personal income aid ratio (PIAR), and market value/personal income aid ratio (MVPIAR), calculated in accordance with the school code. Various state educational subsidies use aid ratios in their calculations. The MV/PI AR represents the relative wealth (market value and income) in relation to the state average for each pupil in a school district. The calculation of the aid ratio uses base year data for market value and personal income that is two years old. Therefore, the 2017-18 ratio uses data from 2015.

#### Millersburg Aid Ratios<sup>1</sup>

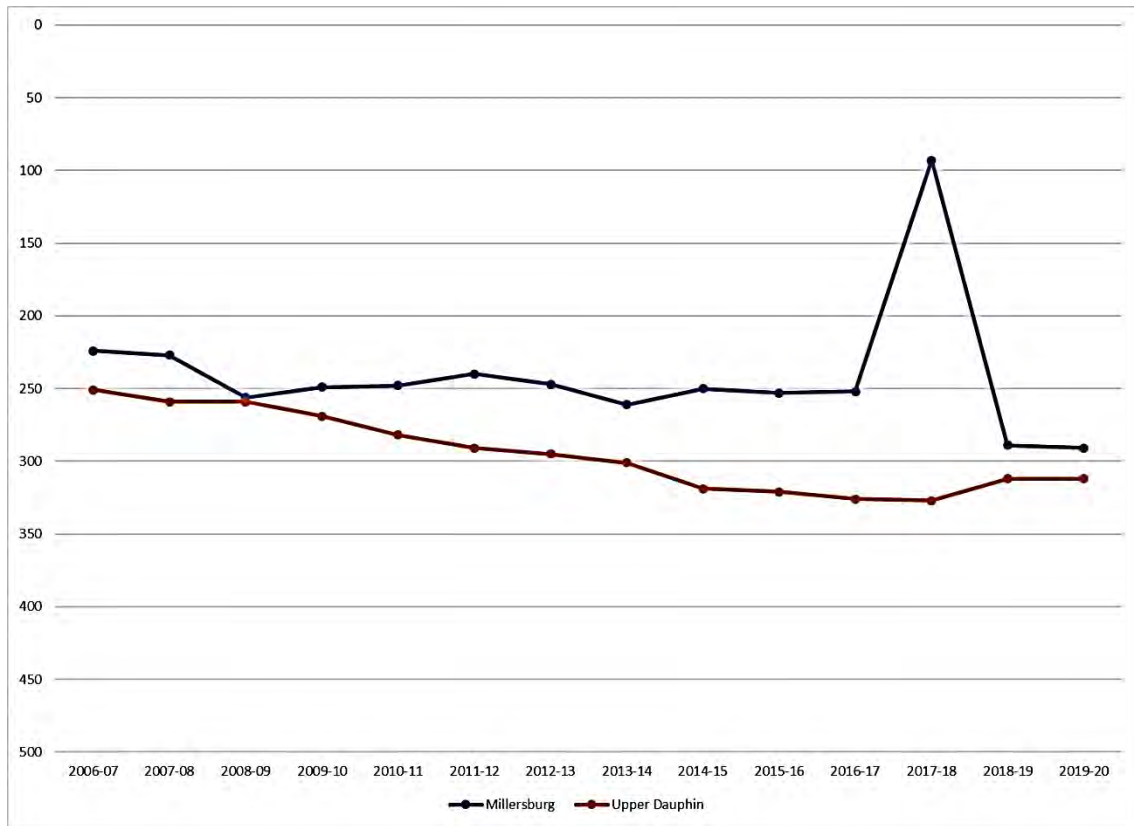
Year	MV / PI Aid Ratio	MV Aid Ratio	PI Aid Ratio	Rank
2006-07	0.5656	0.5856	0.5359	224
2007-08	0.5682	0.5820	0.5476	227
2008-09	0.5943	0.6169	0.5606	256
2009-10	0.5880	0.6117	0.5525	249
2010-11	0.5860	0.6144	0.5436	248
2011-12	0.5780	0.6017	0.5426	240
2012-13	0.5812	0.6023	0.5499	247
2013-14	0.5913	0.6052	0.5707	261
2014-15	0.5816	0.5938	0.5635	250
2015-16	0.5783	0.5926	0.5572	253
2016-17	0.5794	0.6004	0.5482	252
2017-18	0.4016	0.6027	0.1000	93
2018-19	0.6024	0.6147	0.5841	289
2019-20	0.6021	0.6120	0.5873	291

#### Upper Dauphin Aid Ratios

Year	MV / PI Aid Ratio	MV Aid Ratio	PI Aid Ratio	Rank
2006-07	0.5872	0.5987	0.5701	251
2007-08	0.5898	0.6028	0.5705	259
2008-09	0.5959	0.6128	0.5708	259
2009-10	0.6054	0.6048	0.6067	269
2010-11	0.6155	0.6197	0.6094	282
2011-12	0.6248	0.6310	0.6156	291
2012-13	0.6260	0.6246	0.6284	295
2013-14	0.6262	0.6221	0.6325	301
2014-15	0.6345	0.6155	0.6632	319
2015-16	0.6317	0.6192	0.6506	321
2016-17	0.6315	0.6155	0.6555	326
2017-18	0.6318	0.6188	0.6517	327
2018-19	0.6249	0.6125	0.6435	312
2019-20	0.6178	0.6010	0.6432	312

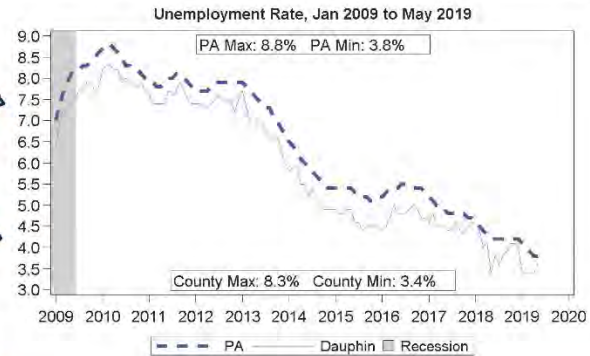
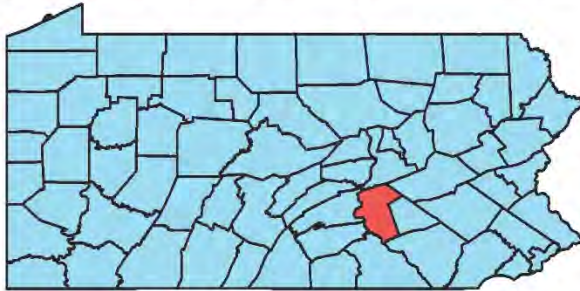
<sup>1</sup> Note: Millersburg had a one-time spike in personal income that impacted the aid ratio for 2017-18.

Aid Ratio Relative Ranking



# Dauphin County Profile

July 2019



2017 Population		
Demographic	County	PA
Total Population	273,329	12,790,505
Female	140,999	6,530,345
Male	132,330	6,260,160
Population by Race		
White	71.4%	81.1%
Black	18.7%	11.1%
Other	9.9%	7.8%
Hispanic Origin (all races)	8.5%	6.8%
Population by Age		
Ages 0 to 17	22.5%	21.0%
Ages 18 to 24	8.4%	9.5%
Ages 25 to 34	13.6%	12.9%
Ages 35 to 44	12.0%	11.7%
Ages 45 to 54	13.7%	13.8%
Ages 55 to 64	14.0%	13.9%
Ages 65 to 74	9.0%	9.3%
Ages 75 and Older	6.7%	7.7%
Median Age	39.6	40.7

Source: U.S. Census 5 Year Estimate 2013-2017 (Tables: DP05 and B01001)

2017 Veterans	County	PA
Total Veterans	17,463	803,420
Median Veteran Income	\$40,142	\$35,981
Median Non-Veteran Income	\$31,179	\$28,833
Veteran Unemployment Rate	4.6%	6.4%

Source: U.S. Census 5 Year Estimate 2013-2017 (Table: S2101)

Online Job Postings	County	PA
May 2019	11,314	314,442
May 2018	11,070	298,595
Annual Volume Change	244	15,847
Annual Percent Change	2.2%	5.3%

Source: The Conference Board Help Wanted OnLine™

Income	County	PA
Per Capita Personal Income	\$48,699	\$53,300
Total Personal Income	\$13,426,791	\$682,533,744
Median Household Income	\$57,071	\$56,951
Median Family Income	\$71,273	\$72,692

Note: Total Personal Income is displayed in thousands.  
 Note: Median Incomes are in 2017 adjusted dollars.  
 Source: Personal Incomes - Bureau of Economic Analysis (BEA) - 2017  
 Source: Median Incomes - U.S. Census 2013-2017 (Tables: B19013 & B19113)

Local Area Unemployment Statistics		
May 2019	County	PA
Unemployment Rate	3.6%	3.8%
Labor Force	142,700	6,471,000
Employed	137,500	6,223,000
Unemployed	5,100	248,000

Notes: Current month's data are preliminary. Data are Seasonally Adjusted.

Unemployment Compensation Exhaustees				
Jun 2018 to May 2019 Pre-UC Industry	Volume		Percent of Total	
	County	PA	County	PA
Natural Resources & Mining	0	720	0.0%	1.0%
Construction	120	9,270	7.5%	11.5%
Manufacturing	160	9,340	9.5%	11.5%
Trade, Transportation & Utilities	380	16,530	23.0%	20.0%
Information	20	1,340	1.0%	1.5%
Financial Activities	120	4,890	7.5%	6.0%
Professional & Business Services	400	15,410	24.0%	19.0%
Education & Health Services	210	13,380	12.5%	16.5%
Leisure & Hospitality	120	6,160	7.5%	7.5%
Other Services	40	2,300	2.5%	3.0%
Government	40	830	2.5%	1.0%
Info Not Available	40	1,830	2.5%	2.0%
<b>Total</b>	<b>1,650</b>	<b>82,000</b>	<b>100%</b>	<b>100%</b>

Note: Percentages less than 0.5% will be displayed as 0.0%.  
 Source: Pennsylvania Unemployment Compensation System

Top 10 Employers by Employment in Q4 of 2018
State Government
Milton S Hershey Medical Center
Hershey Entertainment & Resorts Co
The Hershey Company
UPMC Pinnacle Hospitals
Federal Government
United Parcel Service Inc
Pennsylvania State University
PHEAA
Tyco Electronics Corporation

Source: Quarterly Census of Employment and Wages

Center for Workforce Information & Analysis



Dauphin County Profile

July 2019

Quarterly Census of Employment and Wages, 2018 Annual Averages									
NAICS	NAICS Description	Estab.		Employment		Employment %		Wages	
		County	LQ	County	PA	County	PA	County	PA
	Total, All Industries	7,489	1.00	184,699	5,867,726	100.0%	100.0%	\$54,789	\$55,629
11	Agriculture, Forestry, Fishing and Hunting	27	ND	ND	24,751	ND	0.4%	ND	\$36,188
21	Mining, Quarrying, and Oil & Gas	3	ND	ND	27,958	ND	0.5%	ND	\$86,482
22	Utilities	24	1.12	1,236	34,978	0.7%	0.6%	\$111,080	\$100,616
23	Construction	471	0.69	5,764	264,020	3.1%	4.5%	\$62,067	\$66,393
31-33	Manufacturing	202	0.68	12,144	570,413	6.6%	9.7%	\$62,665	\$62,579
42	Wholesale Trade	334	1.00	6,832	217,402	3.7%	3.7%	\$67,710	\$80,071
44-45	Retail Trade	906	0.76	14,895	624,398	8.1%	10.6%	\$27,428	\$29,152
48-49	Transportation and Warehousing	237	1.26	12,148	305,129	6.6%	5.2%	\$52,829	\$49,360
51	Information	101	0.67	1,879	89,392	1.0%	1.5%	\$69,182	\$85,618
52	Finance and Insurance	404	1.39	11,502	263,309	6.2%	4.5%	\$74,127	\$95,378
53	Real Estate and Rental and Leasing	244	0.76	1,556	65,008	0.8%	1.1%	\$45,847	\$60,962
54	Professional and Technical Services	777	0.71	8,112	360,715	4.4%	6.1%	\$81,191	\$94,554
55	Management of Companies and Enterprises	91	0.96	4,142	136,850	2.2%	2.3%	\$147,322	\$129,250
56	Administrative and Waste Services	390	1.02	10,239	318,562	5.5%	5.4%	\$36,374	\$36,829
61	Educational Services	216	0.80	12,207	484,624	6.6%	8.3%	\$52,549	\$57,065
62	Health Care and Social Assistance	1,226	0.95	32,000	1,068,523	17.3%	18.2%	\$60,938	\$50,742
71	Arts, Entertainment, and Recreation	130	2.11	6,661	100,493	3.6%	1.7%	\$23,045	\$32,704
72	Accommodation and Food Services	711	0.93	13,907	474,640	7.5%	8.1%	\$19,794	\$18,745
81	Other Services (Except Public Administration)	841	1.01	6,426	201,356	3.5%	3.4%	\$42,193	\$34,094
92	Public Administration	153	3.07	22,751	235,204	12.3%	4.0%	\$59,491	\$61,665
	Total, Suppressed Local Industries	30		238			0.1%		
Company Ownership									
	Total, All Ownership	7,489	1.00	184,699	5,867,726	100.0%	100.0%	\$54,789	\$55,629
	Private Ownership	7,160	0.90	147,290	5,193,917	79.7%	88.5%	\$53,913	\$55,293
	Federal Ownership	68	0.87	2,659	96,947	1.4%	1.7%	\$73,721	\$76,983
	State Ownership	72	5.76	23,678	130,700	12.8%	2.2%	\$60,065	\$62,352
	Local Ownership	189	0.79	11,072	446,162	6.0%	7.6%	\$50,607	\$52,928

Notes: 'Eslab' - Establishments. 'LQ' - (Location Quotient) is the percent of county employment by sector divided by the percent of PA's employment by sector.

Occupational Wages, 2018 Annual Averages					
SOC Code	Major Occupational Group	Entry-Level Wage		Average Wage	
		County	PA	County	PA
00-0000	Total, All Occupations	\$23,082	\$22,410	\$51,143	\$50,030
11-0000	Management	\$63,248	\$62,560	\$113,249	\$125,800
13-0000	Business & Financial Operations	\$45,143	\$44,670	\$67,409	\$74,800
15-0000	Computer & Mathematical	\$49,734	\$50,440	\$77,528	\$84,800
17-0000	Architecture & Engineering	\$49,316	\$47,870	\$78,595	\$80,040
19-0000	Life, Physical & Social Science	\$41,356	\$40,530	\$65,949	\$76,930
21-0000	Community & Social Services	\$29,221	\$29,490	\$47,641	\$45,440
23-0000	Legal	\$43,328	\$41,880	\$94,057	\$102,750
25-0000	Education, Training & Library	\$29,508	\$27,340	\$57,412	\$59,870
27-0000	Arts, Design, Entertainment, Sports & Media	\$29,982	\$23,560	\$56,161	\$51,080
29-0000	Healthcare Practitioners & Technical	\$42,154	\$39,010	\$79,079	\$75,860
31-0000	Healthcare Support	\$23,279	\$23,760	\$31,218	\$31,910
33-0000	Protective Service	\$23,840	\$22,480	\$46,828	\$45,870
35-0000	Food Preparation & Serving Related	\$17,501	\$17,510	\$23,587	\$24,400
37-0000	Building & Grounds Cleaning & Maintenance	\$18,447	\$19,920	\$25,817	\$29,260
39-0000	Personal Care & Service	\$17,676	\$18,910	\$25,330	\$26,320
41-0000	Sales & Related	\$18,513	\$18,820	\$41,831	\$41,670
43-0000	Office & Administrative Support	\$25,287	\$23,710	\$40,520	\$38,190
45-0000	Farming, Fishing & Forestry	\$24,008	\$19,190	\$39,634	\$33,200
47-0000	Construction & Extraction	\$33,581	\$31,770	\$50,860	\$53,070
49-0000	Installation, Maintenance & Repair	\$30,205	\$29,360	\$49,440	\$48,770
51-0000	Production	\$25,435	\$24,950	\$39,681	\$39,950
53-0000	Transportation & Material Moving	\$24,236	\$22,430	\$37,769	\$37,040

Note: 'ND' represents Non-Disclosable information.



Website: [www.workstats.dli.pa.gov](http://www.workstats.dli.pa.gov) Email: [workforceinfo@pa.gov](mailto:workforceinfo@pa.gov) Phone: 877-4WF-DATA

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## **APPENDIX II**

### **FEASIBILITY STUDY TIMELINE AND BACKGROUND**

#### **September and October 2019: Feasibility Report Presented**

As a result of the curriculum, facility, and financial analyses, together with our collaborative dialogue with district administrators, the consulting team identified the following five facility options for further consideration:

- |          |   |
|----------|---|
| Option 1 | Status Quo Facility Option with Lenkerville Closure   |
| Option 2 | District-wide Consolidation Grade Pre-K to 4, 5 to 8, and 9 to 12<br>(Utilizing Upper Dauphin Elementary, Middle, and High Schools, Only) |
| Option 3 | Two - Grade Pre-K to 8 Attendance Areas<br>with Grade 9 to 12 Consolidation   |
| Option 4 | District-wide Consolidation Grade Pre-K to 4, 5 to 8, and 9 to 12   |
| Option 5 | District-wide Consolidation Grade Pre-K to 5, 6 to 8, and 9 to 12   |

These options were presented in a Feasibility Report dated September 2019, which documents initial findings from the educational assessments, facility condition assessments, and analysis of school capacity versus projected enrollment. The Feasibility Report also provides detail on each of the five facilities options. Each school consolidation option (excepting status quo option for high schools) proposes to consolidate grades 9 to 12 district wide at Upper Dauphin Area High School, while discontinuing use of Lenkerville Elementary School. The architect's condition assessment of Lenkerville Elementary School identified \$7.3 million in systemic renovation costs within the next five years based on 49,500 sq.ft. times \$120/sq.ft. equaling \$5.9 million base construction cost times 123 percent for non-construction "soft" costs (including design and construction contingencies, printing, financing, professional fees, testing, etc.).

The Feasibility Report was presented in public meetings at Upper Dauphin Area Middle School auditorium on October 14, 2019, and at Millersburg Area High School auditorium on October 21, 2019.

#### **November 2019: Three District-wide Options Selected for Comparative Analysis**

On November 21, 2019, the School Boards of Millersburg Area and Upper Dauphin Area met in a joint meeting regarding merger options as presented in the *Millersburg Area and Upper Dauphin Area School District Combination Feasibility Report* prepared by the Pennsylvania Economy League and Thompson Associates Architects and Planners (Feasibility Report). At this meeting, an identical motion was approved by both School Boards:

*It is recommended that the Joint Boards of the Millersburg Area And Upper Dauphin Area School Districts authorize the Pennsylvania Economy League to proceed with Phase II of the Feasibility Study with a focus on Merger Option Five and cost estimates of Merger Options Two and Three as outlined in the Phase I Study.*

#### **Summary of Option Analysis:**

We analyzed and compared Options 2, 3, and 5 at the choice of the Millersburg Area and the Upper Dauphin Area School Boards from a facilities perspective:

**Option 2 District-wide Consolidation Grade Pre-K to 4, 5 to 8, and 9 to 12  
(Utilizing Upper Dauphin Elementary, Middle, and High Schools, Only)**

- Adaptation costs estimated at \$1,600,000.
- Consolidates into the smallest building inventory.
- District-wide grade configurations improve classroom size equity, grade-level teacher planning, and annual responsiveness to shifting special education needs.
- Overcrowded elementary school requires added classrooms.
- Must convert related arts (music and family and consumer science) spaces for regular middle school classroom use for PDE projected enrollment.
- Too few dedicated spaces are available for middle school special education and pupil support.

**Option 3 Two - Grade Pre-K to 8 Attendance Areas with Grade 9 to 12 Consolidation**

- Adaptation costs estimated at \$600,000.
- Maintains walk-to, neighborhood school for Millersburg downtown families.
- Related arts at Upper Dauphin Area Middle School duplicates needed instructional material, space, and equipment at Millersburg. The district will have similar challenges with duplicated Pre-K and special education support services.
- Breaking a small school district into two attendance areas promotes class section size inequity.
- The middle school programs will run on a different schedule than the elementary programs. Intermixing of Millersburg Pre-K to 8 elementary and middle school students (particularly in the cafeteria, library, nurse office, and toilet rooms) creates scheduling and student supervision challenges.

**Option 5 District-wide Consolidation Grade Pre-K to 5, 6 to 8, and 9 to 12**

- Adaptation costs estimated at \$133,000.
- District-wide grade configurations improve classroom size equity, grade-level teacher planning, and annual responsiveness to shifting special education needs.
- We prefer the Pre-K to 5 grade configuration to the Pre-K to 4. Improved pupil support services better-prepare 5<sup>th</sup> graders for middle school.
- Best adaptive use of Millersburg Area Middle and High School campus, including use of two gyms, signature weight room, auditorium, and stadium complex to ease pressure on the consolidated high school's facilities for extra-curricular activities (and for community use).
- Ample space to accommodate special education and pupil support services, and unforeseeable enrollment 'bubbles'.

**Considering all benefits and challenges of Options 2, 3, and 5, we recommend Option 5 as the preferred facility solution.**



## **APPENDIX III**

### **ADDITIONAL DETAIL FOR OPTION 2 AND OPTION 3**

#### **Option 2      District-wide Consolidation Grade Pre-K to 4, 5 to 8, and 9 to 12 (Utilizing Upper Dauphin Elementary, Middle, and High Schools, Only)**

Option 2 combines the enrollments of both Millersburg Area and Upper Dauphin Area student bodies into Upper Dauphin Area Elementary School (Pre-K to 4), Upper Dauphin Area Middle School (5 to 8), and Upper Dauphin Area High School (9 to 12). Option 2 discontinues the use of both Millersburg Area School District schools: Lenkerville Elementary School and Millersburg Area Middle and High School.

We used projected enrollments through school years 2028-29 from the PA Department of Education (PDE) to gauge the current and expected classroom capacity for the combined enrollment. Using an average class size of 22 students, the elementary school side has insufficient capacity to house the projected combined K to 4 enrollment of 633 in fall 2021. By fall 2028, PDE enrollment projections indicate that the combined enrollment will be 556 students in the elementary side (105.3 percent of capacity) and 510 students at the middle school (78.8 percent of capacity) for a total of 1,066 students at an overall capacity of 90.7 percent.

Although Upper Dauphin Area Elementary and Middle School share a campus, the two schools operate independently, with a secured wall between. Students do not currently circulate between the two separate schools. As a result, combining the capacity of the two schools (1175 students) is not a practical solution to ease overcrowding in the elementary Pre-K to 4 grades.

In addition, we calculate that any excess capacity in the middle school in Fall 2021 will be in existing related arts program space. We recommend adapting a cluster of related arts (music and family and consumer science) spaces to regular classrooms, just to accommodate the need for regular classrooms in the middle school.

Considering all these factors, combined capacity of the elementary and middle schools will be insufficient in the long-term (up to ten years) to meet the projected enrollment. We recommend permanent or temporary (modular) construction of classrooms to increase capacity, subject to PDE requirements and at additional costs.

#### ***Option 2 adaptation-related costs (\$1.6 million):***

- New seven-classroom addition to house all of 4<sup>th</sup> grade: \$1.5 million (850 sq.ft. per classroom x 7 classrooms x 1.4 net to gross sq.ft. = 8,330 sq.ft. x \$150/sq.ft. = \$1.2 million x 1.23 for soft costs = \$1.5 million). The cost of modular construction would be somewhat less. However, PDE enrollment projections suggest that added capacity will need to be permanent.
- New toilet rooms in four classrooms (for Pre-K and K): \$45,000 (64 sq.ft. x 4 x 1.2 net to gross sq.ft. = 307 sq.ft. x \$120/sq.ft. x 1.23 for soft costs)
- Relocate Head Start playground equipment to new fenced, poured-surface soft play area (displaced by the new addition): \$47,000 (2,000 sq.ft. x \$20/sq.ft. x 1.18 for soft costs)
- Adapt the existing family and consumer science lab to regular classroom use: \$49,000 (1,000 sq.ft. x \$40/sq.ft. x 1.23 for soft costs)

***Option 2 other subjective factors:***

- Organizing the district in grade-level buildings promotes class section size equity. The district can more efficiently address unforeseen changes in needed special education services, in grade-level buildings. Faculty can conduct face-to-face, grade-level planning, without coordinating technology and schedules.
- Annual loss of \$250,000 in PlanCon reimbursement x 13 years between 2021-22 and 2033-34
- The larger this elementary school gets, the more challenging that sharing the multi-purpose room for elementary food service and physical education becomes. There is land available to add a gym to the south of the existing elementary school multi-purpose room, but would require significant site excavation.
- We recommend a K to 5 elementary versus K to 4 grade configuration, for better 5<sup>th</sup> grade pupil support.
- The middle school would require 21 core content teachers for grade-level, multi-disciplinary teams (English, reading, social studies, math, and science) to share 18 classrooms in the two-story wing. A small cluster of 5<sup>th</sup> grade classrooms could be located near the district administration office.
- The middle school would have minimal dedicated classroom space for special education and pupil support services. We do not anticipate vacant classrooms available for flexible assignment of pupil support services.
- The Johnson Memorial Library branch of the Dauphin County Library will continue to occupy the Johnson Memorial Building in Millersburg.
- The district could convert existing Millersburg Area High School industrial arts shops to district maintenance use.
- The existing Millersburg Area Middle and High School features two gyms, a signature weight room, an auditorium, and stadium complex that would be valuable to ease pressure on the consolidated high school's facilities for extra-curricular activities (and community use).

**Option 3 Two - Grade Pre-K to 8 Attendance Areas with Grade 9 to 12 Consolidation**

Under Option 3, the merged district will continue to operate a Pre-K to 8 campus at Loyalton, in the existing Pre-K to 4 elementary school and 5 to 8 middle school configuration. The district will adapt the existing Millersburg secondary building to support a Pre-K to 8 Millersburg attendance area. The district will organize elementary grades Pre-K to 4 with stand-alone regular classroom sections, and middle school grades 5 to 8 in multi-disciplinary teams (of English, reading, math, social studies, and science), at both the Loyalton and the Millersburg campuses.

At the Loyalton campus, a secured wall separates Pre-K to 4 elementary functions from 5 to 8 secondary functions (both regular classrooms and related arts). At the Millersburg campus, elementary and middle schools are clustered by grade level and segregated into separate wings, but generally intermixed (particularly in the cafeteria, nurse office, library, and toilet rooms). The district can schedule the Millersburg cafeteria and library to separate the use by elementary versus middle school students. Millersburg elementary students can use the existing gym in the Johnson Memorial Building, and middle school students can use the gym in the one-story wing (together with locker rooms and signature weight room).

Small grade-level cohorts at Millersburg could lead to class section size inequities. Over the next ten years, PDE projects a 12% decline in enrollment. Small and shrinking enrollment offers several challenges:

- Class section size can vary greatly from grade to grade within the same school. In an effort to hold maximum class size at 25 students, a grade level with 50 students could have two sections of 25, while another grade level with 51 students could have three sections of 17 students. PDE enrollment projections exceed 50 students per grade level for Millersburg elementary students about one third of the time, over the next ten years.
- Class section size can vary greatly between Millersburg and Upper Dauphin. For example, second grade class sections in Millersburg could have 17 students, while second grade class sections at Upper Dauphin could have 23 students.

The district could consider attendance area re-alignment to adjust class section size inequities, or to reduce transportation costs.

We recommend adapting the existing Millersburg two-story wing for grades Pre-K to 3, with pre-school, kindergarten, and 1<sup>st</sup> grade on the first floor of the two-story wing. To achieve three sections per grade, the district could convert the existing science lab to kindergarten use. All pre-school and kindergarten classrooms will need toilet rooms. The district could reconfigure portions of the existing Millersburg district administration office for pupil support services, if required.

The existing Millersburg art studio and tiered-floor band room in the one-story wing, are designed for secondary students. We recommend 2<sup>nd</sup> and 3<sup>rd</sup> grade on the second floor of the two-story wing and adapting the existing science lab for use as an elementary music/art flex studio. The district would equip this studio with age-appropriate storage and furniture for elementary students. The second floor would also have two open classrooms for needed elementary-level special education and pupil support.

We recommend a cluster of three 4<sup>th</sup> grade, stand-alone classrooms in the Millersburg one-story wing. The remaining regular classrooms and science labs in the one-story wing will serve the 5<sup>th</sup> to 8<sup>th</sup> grade middle school multi-disciplinary teams. The existing secondary related arts shops and labs in the one-story wing will serve the middle school. The district will adapt the high school building trades shop for middle school tech ed programming.

***Option 3 adaptation-related costs (\$600,000):***

- Adapt the first-floor science lab in the Millersburg two-story wing for kindergarten: \$148,000 (1,500 sq.ft. x \$80/sq.ft. x 1.23 for soft costs)
- Adapt the second-floor science lab in the Millersburg two-story wing for art/music flex studio: \$118,000 (1,200 sq.ft. x \$80/sq.ft. x 1.23 for soft costs)
- Adapt the Millersburg building trades shop for middle school tech ed: \$74,000 (3,000 sq.ft. x \$20/sq.ft. x 1.23 for soft costs)
- Adapt the administration office space for special education and pupil support use: \$90,000 (1,800 sq.ft. x \$40/sq.ft. x 1.23 for soft costs)
- New toilet rooms in three classrooms (for Pre-K and K): \$34,000 (64 sq.ft. x 3 x 1.2 net to gross sq.ft. = 230 sq.ft. x \$120/sq.ft. x 1.23 for soft costs)
- New soft-surface playground (for two grade levels): \$118,000 (100 children x \$1,000/child x 1.18 for soft costs)

***Option 3 other subjective factors:***

- In the Millersburg Pre-K to 8, grades Pre-K to 4 do not entirely fit in the two-story wing. A cluster of 4<sup>th</sup> grade classrooms will intermix with the 5<sup>th</sup> and 6<sup>th</sup> grade, middle school classrooms.
- Unlike the Upper Dauphin Elementary and Middle Schools, there is no secured wall between 4<sup>th</sup> grade and 5<sup>th</sup> grade students in the Millersburg Pre-K to 8. Elementary and middle school students will intermix in the cafeteria; 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> grade toilets; nurse; and library.
- Related arts at Upper Dauphin Area Middle School duplicates needed instructional material, space, and equipment at Millersburg.
- We recommend Pre-K to 5 elementary versus Pre-K to 4 grade configuration, for better 5<sup>th</sup> grade pupil support.

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