Millersburg Area
And
Upper Dauphin Area

School District Combination Feasibility

Phase I Background Research

&

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EXECUTIVE SUMMARY

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

The team determined that the decision to merge at this point is a sound and practical choice and the best configuration is grades Pre-K-5 at the Upper Dauphin Elementary Middle School, grades 6-8 at Millersburg Area Middle School/High School and grades 9-12 at the Upper Dauphin High School.

PEL examined the current conditions of the school districts to understand what led to the decision to explore a merger. Both districts have seen declining enrollments over the last forty years from 1,780 to 1,122 (a drop of 658 or 37.0 percent) in Upper Dauphin Area; and from 1,132 to 785 (347 or 30.8 percent). This loss of students leads to excess capacity or a lot of empty seats in the districts buildings. The loss of students can also lead to reduced opportunities for students. Less students participating in an activity or opting for certain classes can lead to the dropping of that program. Millersburg Area had already reduced some of its offerings in 2016-17. In an effort to be able to continue to offer sports programs the two districts have already started to co-op the athletic teams in 2019-20

Historically, both districts experienced at least one operating deficit in the review period from 2013-14 to 2017-18. In terms of historical revenues, the main local source for both districts was 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. 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 and fund balances.

Financial projections that assumed no tax increases 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. While both districts currently have stable fund balances, the ongoing projected deficits will deplete the balances, without continued tax increases. Merging the districts should help manage the increasing expenditures by providing economies of scale.

The two districts each focus their curriculum and student experience on preparing individuals for life post-high school, both as a member of the workforce and a member of society. Both Districts have similar curriculum goals and expected outcomes for student development at each level. At the elementary level the focus is on skills: learn to read and read to learn. During middle school the focus is on educating the "whole student" - mental, physical,

emotional, social. The high school curriculum prepares students on the college or career path and to be community ready. Special Education curriculum builds skills and strategies to address cognitive, physical, and emotional needs; promotes self-advocacy skills. Both districts agree on the importance of technology for all students.

While the goals of both districts are similar, the scope and sequence of the K-12 curriculum vary. The districts also have different graduation requirements. These areas will need to be reconciled as part of Phase II. The district will need to engage the various stakeholders and develop the best programs for the students in line with the requirements of Pennsylvania Department of Education.

As part of the study, Thompson and Associates did an analysis of the educational facilities in both districts to determine the best use and grade configurations of the existing buildings. Five options were considered based on student capacity, grade configuration, curriculum and financial implications. The curriculum considerations as noted above are the same in every option and did not have an impact on the decision for the optimal choice.

Options 2 through 5 all assume that the Lenkerville Elementary will close and the students in 9-12 attended the Upper Dauphin Area High School. Upper Dauphin Area High School was chosen based on the Vo-Tech/Agriculture offerings that are currently attended by Millersburg Area students as well. Lenkerville's looming renovations were reason for its discontinued use.

Merger Option 1 maintained all schools in both districts. This option was dismissed because it did not address the excess capacity in the buildings and did not provide any significant expenditure reductions. Looming renovations at the Lenkerville Elementary would add costs.

Merger Option 2 suggested all students attend the Upper Dauphin Area school buildings. This option was also dismissed. The fit was too tight, with all levels at 97% capacity in the first year. The potential for added cost for modular classrooms and the loss of $250,000 in state subsidies made this choice not feasible.

Merger Option 3 looked at providing Pre-K-8 schools at the Upper Dauphin Elementary/Middle School and at the Millersburg Area Middle School/High School. While this would provide for some economies of scale through the conversion of the Millersburg Area middle school to a Pre-K-5 school, it is not currently equipped for early childhood education and the conversion would be costly.

Merger Option 4 uses the Upper Dauphin Elementary/Middle School as a Pre-K-4 school, Millersburg Area Middle School/High School for grades 5-8 and the Upper Dauphin Area High School for grades 9-12. While this does provide for reduced administrative costs and improved economies of scale, the grade level multidisciplinary teams is a misfit for the Millersburg Area middle school side.

Merger Option 5 uses the Upper Dauphin Elementary/Middle School as a Pre-K-5 school, Millersburg Area Middle School/High School for grades 6-8 and the Upper Dauphin

Area High School for grades 9-12. This configuration provides for the best use of existing buildings and the greatest opportunity for economies of scale. Additionally, the merged district will be able to provide more diverse instructional content and maintain and enhance K-12 course offerings.

CHAPTER 1
CURRICULUM

Introduction

In order to successfully combine the Upper Dauphin Area School District (UDASD) and the Millersburg Area School District (MASD), curriculum and curriculum-related issues must be resolved. An analysis of the two districts indicates areas that would have to be aligned including grade level configuration, length of school day, schedule, various curriculum issues, graduation requirements and more. There are also areas that appear relatively easy to combine, from school mission and vision to the importance of technology and professional development. Based on an analysis of the available data, a K-5, grade 6-8, and grade 9-12 configuration would place the merged district in the best position to support its educational commitments while maintaining flexibility and capacity in teacher assignments.

School District Mission Statements

Upper Dauphin Area School District Mission Statement

"The mission of the Upper Dauphin Area School District is to empower our students to be lifelong learners in order to reach their greatest potential."

Millersburg Area Mission Statement (from the comprehensive plan)

"The District feels that a very simple, clear, and concise mission is more apt to be remembered by all district stakeholders and thus, more likely to guide decisions and actions. Therefore, the mission of the Millersburg Area School District is: "Inspiring. Learning. Every day.""

Millersburg Area Vision Statement (from the comprehensive plan)

"The District feels the best way to express its vision is through a profile of what a graduate of the district should possess. Therefore, the vision of the Millersburg Area School District is to "empower 21st century learners, one student at a time.""

While the statements differ in their approach, both districts focus on students achieving their personal best, as well as character development and preparation of individuals to achieve success in their life goals.

A Millersburg Area graphic captures the skills and characteristics a graduate should develop and demonstrate. The six areas (Critical Thinking and Problem Solving, Creativity and Innovation, Communication, Collaboration, Initiative and Self-Direction, and Personal Responsibility) are defined by goal statements in the graphic. While this is more specific than the Upper Dauphin Area statement, it is consistent with Upper Dauphin Area priorities.

The two districts each focus their curriculum and student experience on preparing individuals for life post-high school, both as a member of the workforce and a member of society.

Comparison of Grade Configurations

Upper Dauphin Area has a K-4 elementary school; grade 5-8 middle school; and grade 9-12 high school. It also provides a pre-K program (funded through state grants) available through an application process. Millersburg Area has a K-5 elementary school and a grade 6-12 middle/high school.

-Combining the districts requires a decision on grade configuration. After discussions with both districts, it appears the options worth exploring are:

1. Elementary Pre-K-8; high school grade 9-12
2. Elementary, middle school, high school
   a. Pre-K-4, grade 5-8, and grade 9-12
   b. Pre-K-5, grade 6-8, and grade 9-12

Facilities, teacher certifications, and educational philosophy must be considered in the decision.

Teacher Certification Considerations

While current teachers may have certifications that provide flexibility for a variety of grade configurations, the district must consider capacity and flexibility of teacher assignments when hiring new teachers with newer certifications. Grade configurations will impact capacity (due to facility considerations) and flexibility of assignments (due to certification parameters), particularly at the middle level.

Current certifications are Pre-K-4 (CSPG 69); grade 4-8, with a content area of concentration (CSPG 70); grades 7 to 9 middle school content specific (with the ability to teach that content in grade 6 if it is part of the middle school configuration) (CSPG 51 to 54); middle level English is a certification for grades 6-9 (CSPG 51); high school subjects require that teachers have 7-12 content specific certifications (i.e. CSPGs 30, 32, 34,40,43, 56, 42, 50, 58, 59) .

Certifications for related arts, such as music, art, world languages, Family and Consumer Science (FACS), physical education, etc. are K-12.

Configuration Consideration

Two Pre-K to 8; 9-12 consolidated: Creating an elementary and high school configuration of Pre-K-8 and grade 9-12 would entail having two elementary schools feeding into one high school. While the "elemiddle" model of K-8 has been researched, it presents several concerns in this merger. First, the interim nature means that students and the district would be required to transition to a new configuration down the road. Second, it would require replication of materials at each school, which is a cost that would be minimized by the economy of scale found in other configuration options. Third, while it would seem intuitive to have the staff of each district in grade K-8 remain in their current district's elementary building, doing so would not be as conducive to accomplishing all of the transition and collaboration work required to blend the staff and curriculum of both districts. Fourth, considering the amount of transition involved with the merger, it would be most beneficial for the combined district to establish and commit to a single grade configuration.

The option of an elementary, middle and high school would blend the two districts together with one elementary school feeding into one middle school feeding into one high school. Regarding

educational philosophy, both districts have established middle schools with middle school philosophies. While the middle schools may be most in need of attention regarding curriculum and student performance, it is worth keeping the middle school philosophy while focusing on improving academic performance. The middle school philosophy addresses development of the whole student (physical, social, and intellectual). Both districts are also committed to MTSS[1]/RTII[2] at the elementary level, providing differentiated instruction and support in language arts and mathematics.

Pre-K to 4, 5-8, 9-12: A Pre-K-4, grade 5-8, and grade 9-12 configuration could maintain a middle school philosophy by teaming in all four middle school grades (using a team of teachers from core content areas of math, science, language arts and social studies who work with the same cohort of students), or "departmentalizing" grades 5 and 6 (identifying specific teachers to handle language arts curriculum and math curriculum, while still teaching the other subjects) and teaming in grades 7 and 8. Considerations will be required for certification, especially for grades 5 and 6, and course sequence, particularly in math and related arts. Each district's math sequence is slightly different, so that would require discussion regardless of configuration. The type of opportunities in related arts and sequence of those opportunities are generally a component of the middle school schedule and would also require discussion if the decision was to have a grade 5 to 8 middle school.

Pre-K to 5, 6-8, 9-12: A Pre-K-5, grade 6-8, and grade 9-12 configuration would place the merged district in the best position to support its educational commitments while maintaining flexibility and capacity in teacher assignments. Pre-K to grade 4 certified teachers would be able to teach the primary grades (K-4). Teachers with grade 4-8 certification with content specialization would be able to teach grades 4 and 5. Teachers with this certification can teach all subjects in grades 4 through 6, and content specific subjects in grades 7 and 8. That capacity would support MTSS/RTII at the upper elementary level. At the grade 6-8 middle level, the district could use teachers that have grade 4-8 certification with content specialization or middle level content certification (grade 7-9 content specific). High school needs would be met through teachers with grade 7-12 content area certifications.

Enrollment and Configuration

A merger using a K-8 and grade 9-12 configuration would result in 1,259 students in the elementary level for 2019-20, which is a sizeable number of students. The K-8 configuration calls for two buildings to house Pre-K to grade 8 students (one in each district) as a transition to a merged elementary, middle and high school configuration. Although the total numbers are projected to decrease gradually over the next several years to mid-1,100s, this number of students and broad grade span would create a much larger elementary school community of learners than either district has experienced. (See Table 1-1.)

A K-4 and 5-8 grade configuration for elementary and middle levels would provide for relatively even enrollment in elementary and middle school. In 2019-20, the K-4 enrollment would be 644, while the grade 5-8 population would be 615. The middle school enrollment numbers are projected to decrease at a faster rate than the elementary numbers in this configuration.

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[1] Multiple-Tier Support System

[2] Response to Instruction and Intervention

If the merger had a K-5 and 6-8 grade configuration for elementary and middle levels, the numbers would be much larger in the elementary level than in the middle level. In 2019-20, the elementary school would have 788 students and the middle school would have 471. Although the numbers are projected to decrease over the next several years, the elementary level would still be more than 700 students and the middle level around 400.

None of these configurations take into account Pre-K enrollment numbers.

When considering each level and configuration, it is important to take into account the responsibilities and demands required of administrators. This includes building management, scheduling, teacher observations and evaluations, special education and IEP demands, student discipline, parent and community interactions. The enrollment numbers alone do not necessarily determine the most effective administrative structure.

A grade configuration using two K-8 elementary schools which would later be merged into an elementary and middle school was reviewed. Administratively, the district would need at least two building administrators at the Upper Dauphin Area elementary school and at least one building administrator at the Millersburg Area site. Beyond the administrators, it would be necessary to have guidance counselors that are specific to each building, with Upper Dauphin Area elementary requiring more than one guidance counselor. The total number of elementary students in this configuration is projected to gradually decrease from mid-1,200 to mid-1,100 over six years. Those numbers would require sustaining these levels of administrative and guidance support.

In all options, the high school should have at least two building level administrators to meet the expectations of scheduling, staff observations/evaluations, IEP meetings, student discipline, and parent/community interactions. The high school administration also has a large number of evening and after-school responsibilities related to athletics and extracurricular events that are not necessarily required of middle level and elementary level administration. This would require an athletic or activities director.

Considering enrollment and the configuration options, it appears that Pre-K to 5, 6-8, 9-12 remains the best alternative to meet the academic and curricular needs of the students.

Table 1-1: Projected enrollment for each configuration option

| | Option 3 | | | Option 4 | | Option 5 | |
	K-8 Total	Upper Dauphin Area	Millersburg Area	K-4	5-8	K-5	6-8
2019-20	1259	745	514	644	615	788	471
2020-21	1256	741	515	657	599	785	471
2021-22	1217	733	484	633	584	780	437
2022-23	1183	714	469	633	550	753	430
2023-24	1156	696	460	616	540	750	406
2024-25	1143	684	489	617	526	730	413

Schedule Comparison

The districts have different lengths of instructional days as shown in Table 1-2[3]. Upper Dauphin Area elementary instructional day is 7 hours and 5 minutes; Millersburg Area elementary instructional day is 6 hours and 40 minutes. Upper Dauphin Area secondary school instructional days are 7 hours and 10 minutes, compared to 7 hours total for Millersburg Area secondary schools. (See Table 1-2.)

Table 1-2: Comparison of 2019-20 school day schedules (elementary, middle, high schools)

	UDASD	MASD
Elementary	8:25 – 3:30 (7 hours, 5 min)	8:10 – 2:50 (6 hours, 40 min)
Middle School	7:25 – 2:35 (7 hours, 10 min)	8:05 – 3:05 (7 hours, 0 min)
High School	7:25 – 2:35 (7 hours, 10 min)	8:05 – 3:05 (7 hours, 0 min)

There is a difference regarding the number of minutes allocated to the core content areas of math, language arts/reading, social studies and science at each district as shown in Table 1-3. Upper Dauphin Area denotes time to whole group literacy and RTII, which is focused support for skills in literacy. Upper Dauphin Area allocates time for RTII in math to supplement its core instruction.

In Millersburg Area, a total amount of time is allocated for language arts. Millersburg Area allocates more time for language arts (150 minutes) in grades K-3 than Upper Dauphin Area (K = 110 minutes; grade 1 = 105 minutes; grade 2 = 135 minutes; grade 3 = 115 minutes). However, Upper Dauphin Area allocates significantly more time to literacy, RTII and writing (165 minutes) in grade 4 than Millersburg Area (80 minutes). Since Upper Dauphin Area offers both English and reading in grade 5 (43 minutes for each class), the time allocation in grade 5 is comparable for both districts. Upper Dauphin Area allocates significantly more time to math and math RTII in grades K-4 than Millersburg Area.

Table 1-3: Comparison of Minutes Allocated To Elementary Subjects[4]

UDASD						MASD						
8:25 a.m. – 3:30 p.m.						8:10 a.m. to 2:30 p.m.						
	K	1	2	3	4		K	1	2	3	4	5
Subject	Minutes					Subject	Minutes					
Lang Arts	110	105	135	115	165	**Lang Arts**	150	150	150	150	80	80
Whole Gr Lit	*80*	*60*	*60*	*115*	*75*							
RTII	*30*	*45*	*75*	*—*	*45*							
Writing	*—*	*—*	*—*	*—*	*45*							
Math+RTII	85	120	120	115	125	**Math**	60	60	60	60	80	80
Social Studies/Science	50	50	30	30	35	**Science**	22	22	22	22	40	40
—	—	—	—	—	—	**Social Studies**	22	22	22	22	40	40

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[3] Source: Upper Dauphin Area and Millersburg Area web sites

[4] Language arts for Upper Dauphin Area has a total minutes allocated on the top line (in bold) and the components that determine that allocation are listed below it (in italics). Millersburg Area has a total minute allocation for language arts.

Specials	45	50	50	50	50	**Specials[5]**	45	45	45	45	45	45

In the middle school, class periods are 43 minutes in Upper Dauphin Area and 45 minutes in Millersburg Area. The time used for lunch, flex, activities, etc. varies in each district.

The districts also have a different number of student instructional days as seen in Table 1-4. Upper Dauphin Area has scheduled 180 student instructional days, while Millersburg Area has 181 student instructional days scheduled. The districts have relatively the same vacation days off, although there is some variance in terms of the start and end Thanksgiving, Christmas and Easter breaks.

-The districts must determine a common length to the instructional day, which will lead to a determination of the common length for an instructional period. At the middle and high schools, the length of time per class is fairly close in each district. At the elementary level, the times allocated to core content need to be addressed.

In determining the length of the instructional day, the districts must also determine an agreed-upon allocation of instructional time for the core content areas of literacy/language arts and math. Millersburg Area administration explained that they use a multiple-tier support system (MTSS) to provide differentiation in instruction at the elementary level. This is comparable to RTII in many ways, so the districts should be able to agree on a structure of instructing and supporting students in the core content at the elementary level.

Table 1-4: Comparisons of School Closure Days for the 2018-19 School Year

	UDASD	MASD
Student Days	180	181
Faculty Days	190	190
Open/Close (Students)	8/27-6/5	8/20-5/31
School Closed	Labor Day, MLK, Presidents' Day, Memorial Day, Thanksgiving Break (11/22-26), Christmas Break (12/24-1/1), Easter Break (4/18-22)	Labor Day, Presidents' Day, March 11, Memorial Day, Thanksgiving Break (11/21-26), Christmas Break (12/24-1/1), Easter Break (4/18-23)
Act 80	10/8, 11/9, 4/23, 5/24	10/5, 2/15
Faculty In-Service	8/22-23, 1/18, 2/15, 5/3, 6/6-7	8/15-16, 10/4 (half day), 12/21 (half day), 3/8, 5/10, 6/3-4
Parent Conference	2/4, 4/17	11/19-20, 1/24 and 2/21 (evening hours)

Comparison of Program of Studies

Introduction

The following tables will compare the general offerings of each district. Both districts are focused on improving their elementary and middle school math programs. To that end, each

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[5] Five out of six days

district has implemented a new math series at the elementary level and each are planning to implement a new math series at the middle school level for the 2019-20 school year. However, they have implemented different math series at each district.

Millersburg Area has completed a comprehensive plan. The district developed a graphic representation of what a graduate should be able to demonstrate. The focus of high school curriculum is career-oriented, as demonstrated by the recently implemented career pathways approach to course choices. Students begin to choose their high school electives based on their career interest and explore career opportunities throughout their high school career, culminating in a senior presentation.

Upper Dauphin Area shares Millersburg Area's vision to develop students to the best of their abilities. Its focus, however, is community service-oriented. High school students are expected to demonstrate community service each of their four years, with a culminating project in their senior year.

The elementary and middle school level courses are very similar. Millersburg Area has a suggested sequence of courses beginning in grade 6, moving students in an academic or advanced sequence. Students have the ability to move from one sequence to the other throughout the middle school years based on performance, recommendation, and student ability. Even with this sequence, both districts offer very similar options throughout middle school, with the option available for grade 8 students to take Algebra I.

The high school offerings are also similar, but the sequences in math and science differ. Upper Dauphin Area offers an extensive catalog of student work-experiences, both within and outside of the school building, along with a well-developed agriculture and natural resources catalog of courses.

There are areas in the programs available in each district that need to be reconciled, particularly in the sequence of high school science courses and the number of credits required for graduation. For the most part, the differences are manageable, and, in many cases, addressing the differences will create a more robust catalog of opportunities for students.

Comparison of Curriculum Cycle

The curriculum cycles at Upper Dauphin Area and Millersburg Area are on different sequences and priorities as shown in Table 1-5. Upper Dauphin Area focuses on content areas, moving through a six-year cycle. Millersburg Area looks at core content areas during one year of review and all remaining subjects during a second year of review. Millersburg Area prioritizes its curriculum review through its budget process, allocating funds for specific content areas and grade levels over a seven-year cycle. Both Upper Dauphin Area and Millersburg Area have completed math reviews for grades K-8. Millersburg Area has prioritized K-5 language arts for review during the 2019-20 school year; Upper Dauphin Area, on the other hand, completed its language arts review during the 2014-15 and 2015-16 school years.

Table 1-5: Curriculum Review Cycle

	UDASD Curriculum	MASD Curriculum	MASD Budget
2014-15	ELA and Math, APE Review		
2015-16	ELA, Math, Biology		
2016-17	Sciences		
2017-18	Technology, Business		K-5 Math
2018-19	Arts, Health and Physical Education		6-8 Math
2019-20	Social Sciences, Vocational Education	K-12 Language Arts, Math, Science, Social Studies	K-5 Lang Arts
2020-21		All remaining subjects	9-12 Math 6-8 Lang Arts 6-12 Social Studies
2021-22			9-12 Lang Arts K-12 Science K-5 Social Studies
2022-23			K-12 Art/Music K-12 Guidance/Careers
2023-24			K-12 All remaining subjects

The districts must determine how they will establish a cycle for the development and review of curriculum. Elementary math was a priority for both schools, and they have each addressed this by implementing a new (but different) math series at each district's elementary level. In addition to their focus on elementary math, the districts must agree upon a math sequence for middle and high school. The math sequence and science sequence at the middle and high school level should be a priority in the curriculum review.

 Millersburg Area has prioritized specific curriculum areas for its budget over the next five fiscal cycles (2019-20 to 2023-24). It is critical to have a cycle of review and revision for the district's curriculum. Since all of the courses should be driven by PA Academic Standards, decisions related to the merged curricula should be workable.

As noted earlier, decisions related to math series at the elementary level, as well as the sequence of courses in math and science at the middle and high school levels, should be priority areas in curriculum review.

The merger will also present an opportune time to implement a consistent curriculum/instructional model as part of the review process. Common assessments, a uniform curriculum, and a consistent instructional model will prove beneficial to the merged district.

This is also an opportune time to assess dual enrollment and online options. Dual enrollment occurs when a student is concurrently enrolled in high school and an institution of higher education, receiving credit from both institutions for the course. This is usually done through an articulation agreement with the institution of higher education and the school district. Courses could be given on-site at the college or on-site in the school district (college in the classroom).

Presently, Upper Dauphin Area has a number of dual enrollment and college-option offerings while Millersburg Area has many online offerings for their respective students.

Presently, Upper Dauphin Area has more dual enrollment, college-option courses than Millersburg Area offers, while Millersburg Area has more online options than Upper Dauphin Area. The online options used at Millersburg Area are from CAOLA (through Capital Area IU), a resource both districts can access. Options are:

- **Online (CAOLA) Millersburg Area**
    - Health Sciences
    - Introduction to careers in Health Sciences
    - Introduction to careers in Human Services
    - Construction careers
- **Online (CAOLA) Millersburg Area/Upper Dauphin Area**
    - Foreign languages
- **Dual Enrollment/College Course (Penn College) Upper Dauphin Area**
    - Computer Technology
    - Introduction to Business Management
    - Sanitation
    - Fundamentals of Chemistry
    - Honors Intro to Web Page Development
    - Intro to Health Careers
    - Basic Medical Terminology
    - Honors English
- **Dual Enrollment/College Course (HACC/Harrisburg University) Upper Dauphin Area**
    - HACC CIS 105 *College in High School*
    - College Algebra *College in High School*
    - AP Calculus II *College in High School*

Looking for opportunities to integrate these options (online and dual enrollment) into the merged curriculum could prove very beneficial for students.

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Professional Development

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In Millersburg Area at the elementary level, one of the areas of focus for professional development in 2018-19 was introducing and implementing Ready Math. The district is anticipating that several days in the 2019-20 school year will be devoted to introducing and implementing Go Math at the middle level.

In Upper Dauphin Area, the professional development focus has been on technology and curriculum. The district expects that the professional development focus in 2019-20 will also be technology and curriculum.

Part of the curriculum review cycle cost would be for professional development time needed for curriculum review and revision. Millersburg Area has developed its curriculum budget priorities

based upon the curriculum review cycle. Upper Dauphin Area has developed its professional development priorities and budget based upon curriculum revisions and improving teachers' technology skills.

An important focus of the curriculum-related professional development is to establish an entirely new curriculum review cycle. All content areas will need to be reviewed to achieve some common approach, but some content areas — particularly math and science — will require prioritization to review and revise as part of combining the districts.

However, with the merger, it will be critical to use significant professional development time to blend the operations. This may require additional professional development focused on re-organization and team-building creating opportunities for teacher input on curriculum blending, common assessments, and instructional best practices. There should be ample time for follow-up and support as these conversations take place and final products are developed and tested.

Program of Study — Elementary Schools

The two school districts provide different amounts of time to the core subjects, particularly math and reading (language arts). Each school provides time for support and differentiation within the allocated time for math and language arts through their RTII/MTSS approach.

In the 2018-19 school year, improving math performance has been a priority for both districts at the elementary level. Based on the trend of PSSA scores over the last four years, math has been a challenge at both schools. Millersburg Area has implemented Ready Math in grades K-5 and is looking to introduce Go Math to grades 6-8 in the 2019-20 school year. Upper Dauphin Area has implemented My Math in grades K-4 and is looking to implement My Math in grades 5 and 6 in the 2019-20 school year. Both schools are hoping to see positive results in the 2018-19 PSSA scores.

Based on the trend of PSSA scores over the last few years, both districts should also examine the English/Language Arts (ELA) programs at the elementary level.

Millersburg Area PSSA science scores are very strong in grades 4 and 8. Upper Dauphin Area's grade 4 science PSSA scores are consistent and strong.

Upper Dauphin Area also offers a Pre-K program that is funded through state grants and is made available to parents though an application process.

The districts must determine a single, consistent curriculum for the elementary level for the core content areas, especially math. Teachers at both districts will require professional development to transition to the one curriculum and to plan collaboratively.

Once the math curriculum is determined, the combined district may see an initial cost increase to purchase enough materials, but the long-term cost should be reduced since the merged district will be supporting one series rather than two separate series. The consolidation of classrooms into one building could also reduce the number of classroom sets of material that are necessary.

The districts must also determine how they wish to handle the Pre-K program. Their enrollment population will increase, so they must decide if they will expand, maintain or eliminate the program. Since it is funded through federal funds, they should explore the possibility that the funding may increase with an increase in eligible students.

Program of Study — Middle School

Table 1-6 shows the comparison of middle school level courses in each district. As noted previously, Upper Dauphin Area's middle school configuration is grade 5-8, while Millersburg Area's middle school configuration is grade 6-8. Millersburg Area operates on a six-day cycle at the middle school.

An analysis of the courses and content for the districts show a strong similarity in content and expectation for grade 5. Should the merged district start middle school at grade 5, the curriculum would be compatible. One difference in terms of grade 5 is the time allocated to content, with more time allocated for math and communication arts in Millersburg Area's elementary grade configuration and less time allocated for science and social studies.

Should the merged district begin middle school in grade 6, the curriculum would still be compatible. This configuration (pre-K to 5 elementary) would provide additional, focused instructional time for math and literacy/language arts in grade 5.

With the elementary configuration including grades pre-K to 5, there is the added benefit that teachers certified after 2014 would have a concentration in a core content area (math, science, social studies, language arts/reading) in addition to their elementary areas. This content expertise would be beneficial to facilitate a multi-tiered support model in the upper elementary grades.

Table 1-6: Comparison of course offerings at middle school level

UDASD			MASD (Six Day Cycle)		
School Day is 7:25 a.m. to 2:35 p.m.			School Day is 8:05 a.m. to 3:05 p.m.		
Instructional Period: 43 minutes			Instructional Period: 45 minutes		
Subject	**Grade**	**Comments**	**Subject**	**Grade**	**Comments**
ENGLISH					
Reading	5, 6		Library; Reading	5	
English	5, 6, 7	7 = ELA 8 = PA Core Studies	English (Intro to Research)	6	
			English (Novel)	7	
			English (Text Analysis)	8	
MATH					
Math	5, 6, 7, 8	7 = Common Core Math	Math	5	
			General and Advanced Math	6	
			General and Advanced Math	7	
Algebra 1	8		Algebra 1	8	

UDASD			MASD (Six Day Cycle)		
School Day is 7:25 a.m. to 2:35 p.m.			School Day is 8:05 a.m. to 3:05 p.m.		
Instructional Period: 43 minutes			Instructional Period: 45 minutes		
Subject	Grade	Comments	Subject	Grade	Comments
			Pre-Algebra	7, 8	
SOCIAL STUDIES					
Social Studies	5		Social Studies	5	
Geography	6		Social Studies (Geography and World Cultures)	7	
Ancient Civilizations	7		World Culture (Ancient Civilizations)	6	
American Government	8		Pa History/Civics	8	
SCIENCE					
Science	5, 6, 7, 8		Intro to Physical Science	6	
			Intro to Life Science	7	
			Earth Science	8	
ART/MUSIC					
General Music	5, 7, 8		Music	7, 8	4 days out of 6/Quarter
Chorus	5, 6, 7, 8		Chorus	6,7,8	2 days out of 6 during Flex Period (Per 6)
			Band	6,7,8	
Art	5, 6, 7, 8		Art	6,7,8	
OTHER					
Keyboarding	5				
Wellness	5				
Computers	6, 8		Comp Apps	6, 7	
Research Paper	7		Library		1 day out of 6/Quarter
			MTSS	6,7, 8	2 days out of 6/Year
			Spanish (Intro)	6, 7, 8	
Technology Education	6, 7, 8				
Writing Workshop	6				
Wilson Reading	6				
Conflict Resolution	5		Clubs	6,7,8	
Science Club	5		Activities	6,7,8	
School Service	7, 8		Study Hall	6,7,8	
CASEF (Science Fair)	7				
Nature Trail	7, 8				
Speech/Drama	8				

Program of Study — High School

The course offerings in the core content areas are similar at the high school level in each district, although differences exist in the sequence of courses in social studies, math and science. Upper Dauphin Area offers more electives to all of its students, while Millersburg Area increases the number of electives each year in the student's academic career.

The following charts will present a comparison of the core content course options (Table 1-7) and a comparison of the non-core content course options (Table 1-8). A separate listing will highlight courses unique to each district that could be integrated into a merged course offering.

Upper Dauphin Area provides an extensive catalog of course offerings in agriculture and natural resource management. Millersburg Area presently has the opportunity to access these courses as part of a collaborative arrangement.

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. The sequence of courses in math and science are areas for prioritized discussion, particularly since this will not only impact the curriculum but also the grades for the Keystone Exams.

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.

Decisions will also 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. 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 consistent with Millersburg Area's career pathways model.

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. 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.

Table 1-7: Comparison of core content high school course options

	UDASD			MASD		
	Course	**Credit**	**Comment**	**Course**	**Credit**	**Comment**
	GRADE 9					
ENGLISH	Honors English	1	Weighted	Honors English 9	1	Weighted
	Academic English 1	1		English 9	1	
	Transition English (Sp/Ed)	1				
	Journalism	0.5	Elective			
	Mythology	0.5	Elective			
	Creative Writing	0.5	Elective			
	Transitional English 9	1	Permission Required			
	Functional English 9	1	Permission Required			
MATH	Algebra I	1		Algebra I	1	
	Algebra IA	1				
	Algebra II	1				
	Honors Algebra II	1	Weighted			
				Geometry	1	
				Honors Geometry	1	Weighted
				Keystone Algebra	0.5	Math or Elective
	Transitional Math 9 (Sp/Ed)	1	Permission Required	Pre-Algebra	1	Permission Required
	Functional Math 9 (Sp/Ed)	1	Permission Required			
SOCIAL STUDIES	Honors Modern World History	1	Weighted			
	Modern World History	1				
				Honors Civics and Government	1	Weighted
				Civics and Government	1	
				American History through Film	0.5	Elective
				PA Legislative System	0.5	Elective
				United States Geography	0.5	Elective
SCIENCE	Honors Biology (w/lab)	1.5	Weighted			
	Biology (w/lab)	1.5				
	General Biology	1				
				Environmental Science	1	
				Honors Environmental Science	1	Weighted
PHYS ED WELLNESS	Freshman Phys Ed	0.5		Physical Ed	0.5	
				Health Sciences 1	0.5	Elective
				Introduction to Careers in Health Sciences	0.5	Elective
				Introduction to	0.5	Elective

	UDASD			MASD		
	Course	**Credit**	**Comment**	**Course**	**Credit**	**Comment**
				Human Services		
	Freshman Health	0.5				
	Strength and Conditioning	0.5	Elective			
	GRADE 10					
ENGLISH	Honors English II	1	Weighted	Honors English 10	1	
	Academic English II	1		English 10	1	Weighted
	Creative Writing	0.5	Elective	Creative Writing	0.5	Elective/ Humanities
	Mythology	0.5	Elective	Greek Myth	0.5	Elective/ Humanities
	Journalism	0.5	Elective			
	Transitional English 10	1	Permission Required			
	Functional English 10	1	Permission Required			
MATH	Honors Algebra II	1	Weighted	Honors Algebra II	1	Weighted
	Academic Algebra II	1		Algebra II	1	
				Algebra I	1	
	Algebra IA	1		Algebra IA	1	
	Algebra IB	1				
	Honors Geometry	1	Weighted	Honors Geometry	1	Weighted
				Geometry	1	
	Honors Calculus	1	Weighted			
	Honors Pre-Calculus	1	Weighted			
	Pre-Calculus	1				
	Transition Math (Sp/Ed)	1				
	Keystone Algebra 1	0.5	Elective	Keystone Algebra	0.5	Math or Elective
	Transition Math 10	1	Permission Required			
	Functional Math 10	1	Permission Required			
SOCIAL STUDIES	American History I	1		20th C American History	1	
	Honors American History I	1	Weighted	Honors 20th C American History	1	Weighted
				American History through Film	0.5	Elective
				PA Legislative System	0.5	Elective
				Psychology	0.5	Elective
				Sociology	0.5	Elective
				United States Geography	0.5	Elective
	Local History	0.5	Elective			
	Intro to Economics	0.5				
	US Conflicts	0.5				

	UDASD			MASD		
	Course	**Credit**	**Comment**	**Course**	**Credit**	**Comment**
SCIENCE				Biology	1	
	CP Chemistry (w/lab)	1.5	Weighted			
	Penn College Fundamentals of Chemistry (w/lab)	1.5	College Credit Option Weighted			
	Penn College Into to Health Careers	0.5	College Credit Option Weighted			
	Earth Science	1		Earth Science	0.5	
	Environmental Science	0.5				
	Astronomy	0.5		Introduction to Atmosphere and Astronomy	0.5	
	Physical Science	1				
				Forensic Science	0.5	
	Keystone Biology Remediation	0.5	Elective			
WELLNESS	Sophomore Health	0.5		Health	0.5	
WELLNESS	Sophomore Phys Ed	0.5		Phys Ed	0.5	
	Wellness 10	1				
				Health Sciences 1	0.5	Elective; Online
				Introduction to Careers in Health Sciences	0.5	Elective; Online
				Introduction to Human Services	0.5	Elective; Online
	Strength and Conditioning	0.5	Elective			
			GRADE 11			
ENGLISH	Honors English III	1	Weighted	Honors English 11	1	Weighted
	Academic English III	1		English 11	1	
	Creative Writing	0.05	Elective	Creative Writing	0.5	Elective/ Humanities
	Mythology	0.5	Elective	Greek Myth	0.5	Elective/ Humanities
	Journalism	0.5	Elective			
				Yearbook	1	Elective
	Keystone Literature Remediation	0.5	Elective	Keystone Literature	0.5	English Elective
	Transitional English 11	1	Permission Required			
	Functional English 11	1	Permission Required			
MATH	Honors Geometry	1	Weighted	Honors Geometry	1	Weighted
	Geometry	1		Geometry	1	
	Math 120 College Algebra	1	College Credit Weighted			
				Honors Algebra II	1	Weighted
				Algebra II	1	

	UDASD			MASD		
	Course	**Credit**	**Comment**	**Course**	**Credit**	**Comment**
				Algebra I	1	
	Algebra IB	1		Algebra I-B	1	
	Honors Calculus I	1	Weighted			
	Honors Pre-Calculus	1	Weighted	Honors Pre-Calculus	1	Weighted
	Pre-Calculus	1				
				Statistics	1	
				Trigonometry	1	
				STEM Engineering and Design	0.5	Math or Elective
				STEM Engineering and Fabrication	0.5	Math or Elective
	Basic Geometry	1				
	Keystone Algebra 1	0.5	Elective	Keystone Algebra	0.5	Math or Elective
	Transition Math 11	1	Permission Req.			
	Functional Math 11	1	Permission Req.			
SOCIAL STUDIES	Honors AP US History	1	Weighted			
	American History II	1		Modern Am History	0.5	Elective
				Honors World History	1	Weighted
	Psychology	0.5		Psychology	0.5	Elective
	Sociology	0.5		Sociology	0.5	Elective
				World History	1	
	Intro to Economics	0.5				
	CP Principles of Microeconomics	0.5	Weighted			
				Am History through Film	0.5	Elective
				Contemporary Global Issues	0.5	Elective
	Local History	0.5	Elective			
				United States Geography	0.5	Elective
				PA Legislative System	0.5	Elective
				WWII and the Holocaust	0.5	Elective
	Freedom: Understanding the Nation	0.5				
	US Conflicts	0.5				
	Honors Humanity 100	1	Two-Year, Multi-Disciplinary, Art & Music Weighted			
	Honors Humanity 101	1	Two-Year, Multi-Disciplinary, Art & Music Weighted			
SCIENCE	CP Chemistry (w/lab)	1.5	Weighted	Chemistry	1	

	UDASD			MASD		
	Course	**Credit**	**Comment**	**Course**	**Credit**	**Comment**
	DE Fund of Chemistry (CHM 100 PC 4 college credits)	1.5	Weighted			
	Hon Advanced Chemistry	0.5	*** (lab)			
	Earth Science	1		Earth Science	0.5	
				Honors Biotechnology	1	Weighted
				Forensic Science	0.5	
				Introduction to Atmosphere and Astronomy	0.5	
	Anatomy and Phys	1				
	CP Physics (w/lab)	1.5				
	AP Bio (w/lab)	1.5	Weighted			
	Honors Elect and Magnet	0.5	Weighted			
	Honors Wave, Sound Opt	0.5	Weighted			
	Penn College Basics of Med Terminology (PC 3 College Credits)	0.5	College Credit Option Weighted			
	Penn College Into to Health Careers	0.5	College Credit Option Weighted			
	Physical Science	1				
	Environmental Science	0.5				
	Astronomy	0.5				
				Keystone Biology	0.5	Science or Elective
WELLNESS	Wellness 11	0.5		Lifetime Fitness/Wellness 1	1	
				Health Sciences 1	0.5	Elective; Online
				Introduction to Careers in Health Sciences	0.5	Elective; Online
				Introduction to Human Services	0.5	Elective; Online
	Strength and Conditioning	0.5	Elective			
	GRADE 12					
ENGLISH	Penn College Honors English	1	3 College Credits Weighted			
	AP English	1	Weighted	AP English Lit	1	College Course/Credit Weighted
	Academic English	1		English 12	1	
	Mythology	0.5	Elective	Greek Myth	0.5	Elective/ Humanities
	Creative Writing	0.5	Elective	Creative Writing	0.5	Elective/ Humanities
				Yearbook	1	Elective
	Journalism	0.5	Elective			

	UDASD			MASD		
	Course	**Credit**	**Comment**	**Course**	**Credit**	**Comment**
	Business English	1				
				Keystone Literature	0.5	English Elective
	Transitional English 12	1	Permission Required			
	Functional English 12	1	Permission Required			
MATH	Hon Calculus I (Harrisburg Univ Math 120)	1	College Credit Weighted			
	Honors AP Calculus or Math 220 Harrisburg Univ Calculus II	1	College Credit or AP Calculus AB Exam Weighted			
	Honors Pre-Calculus	1	Weighted	Honors Pre-Calculus	1	Weighted
	Pre-Calculus	1				
				Honors Geometry	1	Weighted
				Honors Algebra II	1	Weighted
				Calculus	1	Weighted
	Statistics	1		Statistics	1	
				Trigonometry	1	
				Algebra II	1	
				Algebra I	1	
				Geometry	1	
				STEM Engineering and Design	0.5	Math or Elective
				STEM Engineering and Fabrication	0.5	Math or Elective
	Consumer Math	1				
				Pre-Algebra	1	
				Keystone Algebra	0.5	Math or Elective
	Transition Math 12	1	Permission Required			
	Functional Math 12	1	Permission Required			
SOCIAL STUDIES	Psychology	0.5		Psychology	0.5	Elective
	Intro to Economics	0.5		Economics	1	
				Consumer Economics	1	
	CP Principles of Microeconomics	0.5	Weighted			
	CP Principles of Macroeconomics	0.5	Weighted			
	Local history	0.5				
	Freedom: Understanding the Nation	0.5				
	US Conflicts	0.5				
				Modern Am History	0.5	Elective

	UDASD			MASD		
	Course	**Credit**	**Comment**	**Course**	**Credit**	**Comment**
				PA Legislative System	0.5	Elective
				Sociology	0.5	Elective
				United States Geography	0.5	Elective
	Honors Humanities 100	1	Weighted			
	Honors Humanities 101	1	Weighted	Am History through Film	0.5	Elective
				Contemporary Global Issues	0.5	Elective
				WWII and the Holocaust	0.5	Elective
SCIENCE	CP Physics (w/lab)	1.5	Weighted	Honors Physics	1	Weighted
	Hon Advanced Chemistry	0.5	Weighted	Honors Organic Chemistry	1	Weighted
				Chemistry	1	
				Forensic Science	0.5	
				Honors Biotechnology	1	Weighted
	Hon Elect and Magnet	0.5	Weighted			
	Honors Wave, Sound Opt	0.5	Weighted			
	Anatomy and Physics	1				
	Astronomy	0.5		Introduction to Atmosphere and Astronomy	0.5	
	Penn College Basics of Med Terminology (PC 3 college credits)	0.5	College Credit Option Weighted			
	Penn College Into to Health Careers	0.5	College Credit Option Weighted			
				Earth Science	0.5	
	Environmental Science	0.5				
				Keystone Bio	0.5	Science or Elective
Wellness				Introduction to Careers in Health Sciences	0.5	Elective; Online
				Introduction to Human Services	0.5	Elective; Online
				Lifetime Fitness/ Wellness 2	1	
				Health Sciences 1	0.5	Elective; Online
	Strength and Conditioning	0.5	Elective			

Table 1-8: Comparison of Non-Core Content and Elective High School Courses

SUBJECT/DISTRICT	COURSE	CR	COMMENT	9	10	11	12
Art							
UDASD	Studio A/B	0.50		X	X	X	X
	Studio Art	0.50		X	X	X	X
	Studio Art	1.00		X	X	X	X
	Advanced Studio	0.25		X	X	X	X
	Life Drawing	0.25		X	X	X	X
	Nature Draw	0.25		X	X	X	X
	Intro To Watercolor	0.25		X	X	X	X
	Advanced Watercolor	0.25		X	X	X	X
	Ceramics	0.25		X	X	X	X
	Graphics	0.25		X	X	X	X
	Brush Draw	0.25		X	X	X	X
	Art Theory	0.50		X	X	X	X
	Oil Paint	0.25		X	X	X	X
	Advanced Drawing	1.00					X
MASD	Art Foundations	1.00	Humanities or Elect	X	X	X	X
	Ceramics and Sculpture	1.00			X	X	X
	Ceramics and Sculpture II	1.00			X	X	X
	Ceramics and Sculpture III	1.00				X	X
	Drawing and Painting I	1.00			X	X	X
	Drawing and Painting II	1.00			X	X	X
	Drawing and Painting III	1.00				X	X
	Graphic Design I	0.50			X	X	X
	Graphic Design II	0.50			X	X	X
	Photography and Photo Shop I	0.50			X	X	X
	Photography and Photo Shop II	0.50			X	X	X
	Portfolio Study	1.00					X
Business							
UDASD	Accounting I	1.00			X	X	X
	Accounting II	1.00				X	X
	Principals of Marketing	0.50			X	X	X
	Sports Entert and Marketing	0.50			X	X	X
	Essential Skills in Business World	0.50			X	X	X
	Penn College Intro to Bus	0.50	college credit option		X	X	X
MASD	Accounting	0.50			X	X	X
	Entrepreneurship and Marketing	0.50				X	X
	Intro to Bus	0.50		X	X	X	X
	Introduction to Careers in Finance	0.50	online course	X	X	X	X
	Fundamentals of Programming	0.50	online course	X	X	X	X
	Business and Personal Finance	0.50			X	X	X

SUBJECT/DISTRICT	COURSE	CR	COMMENT	9	10	11	12
Information Technology							
UDASD	Computer Applications I	0.50	Word proc/presentation basics (self-paced and remediation)	X	X	X	X
	Computer Applications II	0.50	Word Proc/ presentation/spreadsheet	X	X	X	X
	HACC CIS Introduction to Computer Applications	0.50	dual enrollment; weighted; college credit option			X	X
	Emerging Tech: Web 2.0	0.50			X	X	X
	Penn College: Intro to Web Page Development	1.00	dual enrollment; weighted; college credit option			X	X
	Penn College: Information, Technology and Society	1.00	dual enrollment; weighted; college credit option		X	X	X
	Comp App: Graphic and Tech Design	0.50		X	X	X	X
MASD	PC Applications	0.25	quarter credit	X			
	Excel	0.50		X	X	X	X
	Web Page Design	0.50		X	X	X	X
	Fundamentals of Digital Media	0.50	online course	X	X	X	X
	Network System Design	0.50	online course	X	X	X	X
	Fundamentals of Computer Systems	0.50	online course	X	X	X	X
Video Production							
UDASD	Video Production	0.50			X	X	X
	VPC: Trojan News	0.50			X	X	X
	Trojan Sports News	0.50	semester	X	X	X	X
	Trojan Sports News	1.00	year	X	X	X	X
	Student help Desk	0.50	semester		X	X	X
	Student help Desk	1.00	year		X	X	X
Driver Ed							
UDASD	offered through CAIU for no credit						
MASD	Driver Education (Classroom)	0.25	quarter credit; quarter year	X	X	X	X
FACS							
UDASD	Nutrition and You	0.50		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
Industrial Arts							
UDASD	Basic Drafting I	0.50		X	X	X	X
	Basic Drafting II	0.50		X	X	X	X
	Basic AutoCAD	0.50			X	X	X
	Advanced AutoCAD	0.50			X	X	X

SUBJECT/DISTRICT	COURSE	CR	COMMENT	9	10	11	12
	Architectural Drafting	1.00				X	X
	Basic Cabinetmaking I	0.50		X	X	X	X
	Basic Cabinetmaking II	1.00			X	X	X
	Advanced Cabinetmaking	1.00				X	X
MASD	Basic Drafting	0.50		X	X	X	X
	Advanced Drafting 1	0.50		X	X	X	X
	Advanced Drafting 2	0.50		X	X	X	X
	Advanced Drafting 3	0.50		X	X	X	X
	Basic Woodworking	1.00		X	X	X	X
	Advanced Woodworking 1	1.00		X	X	X	X
	Advanced Woodworking 2	1.00		X	X	X	X
	Advanced Woodworking 3	1.00		X	X	X	X
	Construction Careers	0.50	online course	X	X	X	X
	Intro to Basic Construction	0.50		X	X	X	X
CTE							
UDASD	Building Trades I	3.00			X	X	
	Building Trades II	3.00	prep for NOCTI			X	X
	Building Trades III	3.00					X
Music							
UDASD	Concert Band	0.50	full year A/B days	X	X	X	X
	Choir Ensemble	0.50	full year A/B days	X	X	X	X
	Foundations of Music Theory	0.50			X	X	X
	Hon Adv Music Theory	0.50				X	X
	Broadway Musical Production	0.50		X	X	X	X
	Music Appreciation	0.50		X	X	X	X
	Instrumental Musicianship	0.50		X	X	X	X
	Music Tech	0.50	not offered 2019-20	X	X	X	X
	Instrumental Study	0.25	quarter credit; semester A/B	X	X	X	X
	Advanced Instrumental Study	0.50				X	X
	Piano/Keyboard Techniques I	0.50		X	X	X	X
	Piano/Keyboard Techniques II	0.50			X	X	X
	Piano/Keyboard Techniques III	0.50				X	X
	Piano/Keyboard Techniques IV	0.50					X
MASD	Band	0.50	meets days 1-3-5 all year; serves as marching band	X	X	X	X
	Choir	0.50	meets days 2-4-6 all year	X	X	X	X
	Music Theory I	0.50	half-year	X	X	X	X
	Music Theory II	0.50	half-year				X
	Musical Theater	0.50	half-year	X	X	X	X
	Jazz to Rock History	0.50	half-year	X	X	X	X
World Language							
UDASD	Spanish 1	1.00		X			

SUBJECT/DISTRICT	COURSE	CR	COMMENT	9	10	11	12
	Spanish 2	1.00			X		
	Spanish 3	1.00				X	
	Honors Spanish 4	1.00					X
	Honors Independent Spanish 5	1.00					X
	French 1	1.00	online; monitored	X			
	French 2	1.00	online; monitored		X		
	French 3	1.00	online; monitored			X	
	Honors French 4	1.00	online; monitored				X
	German 1	1.00	online; monitored	X			
	German 2	1.00	online; monitored		X		
MASD	Spanish 1	1.00		X	X	X	X
	Spanish 2	1.00			X	X	X
	Spanish 3	1.00				X	X
	Spanish 4	1.00					X
	French 1	1.00	Online	X	X	X	X
	French 2	1.00	Online		X	X	X
	French 3	1.00	Online			X	X
	French 4	1.00	Online			X	X
	German 1	1.00	Online	X	X	X	X
	German 2	1.00	online		X	X	X
Agriculture and Natural Resources							
UDASD	*Afternoon Vo-Ag program available to non-UDA students*						
	Foundations in Agriculture & Natural Resources	0.50		X			
	Intro to Agricultural Mechanics & Technology (*Sci)	0.50		X	X		
	Intro to Animal, Plant and Soil Science (*Sci)	0.50		X	X		
	Basic Welding	0.50		X	X	X	X
	Small Gas Engines	0.50			X	X	X
	Engine & Machine Technology	0.50			X	X	X
	Advanced Agriculture Mechanics	0.50			X	X	X
	Crop and Soil Science (*Sci)	0.50			X	X	X
	Forestry	0.50			X	X	X
	Wildlife Mgt. & Conservation	0.50			X	X	X
	Advanced Horticulture	0.50			X	X	X
	Greenhouse Production & Management	0.50			X	X	X
	Dairy and Livestock Production & Mgt. (Offered 2019-2020)	0.50			X	X	X
	Equine Management (NOT Offered 2019-2020)	0.50			X	X	X
	Animal Science (*Sci)	0.50			X	X	X
	Meat & Food	0.50			X	X	X
	Supervised Agriculture Experience (A/B)	0.50			X	X	X

SUBJECT/DISTRICT	COURSE	CR	COMMENT	9	10	11	12
	Supervised Agriculture Experience (sem)	0.50			X	X	X
	Supervised Agriculture Experience	1.00			X	X	X
	Advanced Welding	0.50				X	X
Student internship/ on the job experience							
UDASD	Diversified Occupations I	1.00	classroom requirement for DO II				X
	Diversified Occupations II	3.00	half-day on-site experience				X
	Career Exploration & Job Acquisition	0.25	semester A/B	X	X	X	X
	Elementary Education Internship	3.00					X
Student Assistant							
UDASD	Teacher Assistant	0.50	semester	X	X	X	X
	Teacher Assistant	1.00	year	X	X	X	X
	Elementary Education Internship	3.00	full year				X

Science and Math High School Sequence

The districts must determine the sequence of required math and science courses. Both districts offer flexibility and options, so an approved sequence should give students the opportunity to explore various science and math areas in addition to acquiring college credits from some courses. Course donated with * are eligible for college credit.

Upper Dauphin Area Advanced Math Sequence

- Grade 9: Honors Algebra II or Honors Geometry
- Grade 10: Honors Geometry or Honors Algebra II or Honors Pre-calculus
- Grade 11: Honors Pre-Calculus or Honors Calculus
- Grade 12: Honors Pre-Calculus or Honors Calculus* or AP Calculus II
- Electives: College Algebra* (11, 12), Statistics (12)

Millersburg Area Advanced Math Sequence

- Grade 9: Honors Geometry
- Grade 10: Honors Algebra II
- Grade 11: Honors Pre-Calculus
- Grade 12: AP Calculus AB
- Electives: Statistics (11, 12), STEM Engineering and Design (11, 12), STEM Engineering and Fabrication (11, 12), Trigonometry (11, 12)

Upper Dauphin Area Academic Math Sequence

- Grade 9: Algebra I
- Grade 10: Algebra II
- Grade 11: Geometry or Pre-Calculus

- Grade 12: Pre-Calculus or Statistics
- Electives: Consumer Math (12), Pre-Calculus, College Algebra* (11-12), Statistics (12)

Millersburg Area Math Academic Sequence

- Grade 9: Algebra I
- Grade 10: Geometry
- Grade 11: Algebra II
- Grade 12: Math Elective
- Electives: Statistics (11, 12), STEM Engineering and Design (11, 12), STEM Engineering and Fabrication (11, 12), Trigonometry (11, 12)

Upper Dauphin Area Advanced Science Sequence

- Grade 9: Honors Bio with lab (1.5 credits)
- Grade 10: PC Fundamentals of Chemistry* (1.5 credits) or choice
- Grade 11: Choice – Honors Electricity and Magnetism (.5), Honors waves, sound and Optics (.5), Honors Advance Chemistry (.5) , AP Bio with lab (1.5 credits)
- Grade 12: Choice - Honors Electricity and Magnetism (.5), Honors waves, sound and Optics (.5), Honors Advance Chemistry (.5) , AP Bio with lab (11, 12) (1.5 credits)
- Electives: Honors Electricity and Magnetism (.5) 11, 12: Honors waves, sound and Optics (.5) 11-12; Honors Advanced Chemistry (.5) 11-12, AP Bio with lab (1.5 credit) 11-12, Introduction to Health Careers* (.5 credit) 10-12: Introduction to Medical Terminology* (.5 credit) 11-12; Anatomy and Physiology (1 credit) 10-12

Millersburg Area Advanced Science Sequence

- Grade 9: Honors Environmental Science
- Grade 10: Honors Biology
- Grade 11: Honors Chemistry
- Grade 12: Advanced Placement (TBD)
- Electives: Astronomy (.5) 10-12; Earth Science (.5) 10-12; Honors Bio-Technology 11-12; .Honors Anatomy 11-12; Honors Physics 12; Honors Organic Chemistry 12

Upper Dauphin Area Academic Science Sequence

- Grade 9: Biology with lab (1.5 credits)
- Grade 10: Earth and Space
- Grade 11: Earth and Space or Anatomy and Physiology
- Grade 12: Anatomy and Physiology
- Electives: PC Fund of Chemistry (1.5)* 10-12; Environmental Science (.5) 10-12; Astronomy (.5) 10-12; PC Intro to Health Careers (.5)* 11-12; CP Chemistry w/lab (1.5)* 11-12; Honors Advanced Chemistry (.5) 11-12; CP Physics w/lab 1.5; PC Basics of Med Terminology (.5)*

Millersburg Area Academic Science Sequence

- Grade 9: Environmental Science
- Grade 10: Biology
- Grade 11: Chemistry
- Grade 12: Science Elective
- Electives: Astronomy (.5) 10-12; Earth Science (.5) 10-12; Honors Bio-Technology 11-12; Honors Anatomy 11-12; Honors Physics 12; Honors Organic Chemistry 12

Weighting of High School Courses

Upper Dauphin Area weights honors, Advanced Placement, and dual enrollment classes. Millersburg Area weights honors and Advanced Placement courses. The weighting is slightly different at each district.

This is one area that will need consistency, but the adjustment should be fairly easy since there is agreement on the level of courses that should receive weighting.

Special Opportunities for High School Seniors

Each district provides special opportunities for its seniors that have been outlined previously. At Upper Dauphin Area, students have opportunities to work with elementary and middle school teachers as teacher interns. There are also opportunities for dual enrollment/college level courses. Upper Dauphin Area also provides an extensive catalog of courses in agriculture and natural resource management. At Millersburg Area, seniors have the opportunity for off-school-site work experiences, which they expect will increase as their career pathways model is fully implemented

Graduation Requirements

The graduation requirements at each district differ. Millersburg Area requires more credits to graduate. Both districts require a graduation project to be developed and presented in a student's senior year as part of their graduation requirements. The focus of the graduation project differs in each district, with Upper Dauphin Area's focus on community service and Millersburg Area's on career exploration. The differences are workable but will require conversations on the purpose and expectations related to graduation projects. (See Table 1-9.)

Graduation Requirements for Upper Dauphin Area

In order to be eligible for graduation from the Upper Dauphin Area High School, a student must have successfully passed twenty-five (25) credits in grades nine through twelve. Those credits must include the following:

English	4 Credits
Mathematics	4 Credits
Science	3 Credits
Social Studies	4 Credits
Wellness	2.5 Credits
Electives	7.5 Credits
Total Required	25 credits

In addition to credit requirements, all students must submit an approved, acceptable graduation project. The purpose of the project is to give students an opportunity to apply, analyze, synthesize and evaluate information and communicate significant knowledge and understanding. At Upper Dauphin Area, these projects are career-related and include research, a presentation, resume writing, and an interview.

Graduation Requirement for Millersburg Area

In order to graduate from Millersburg Area, a student must demonstrate achievement of the student learning standards under Chapter 4 section 4.24a (relating to state standards and the student learning required by the school district and specified in the Millersburg Area's Comprehensive Plan). Students need 26.5 credits.

Graduation requirements will consist of successful completion of planned courses in the following content areas:

English	4 credits
Science	4 credits
Mathematics	4 credits
Social Studies	4 credits
Health	0.5 credit
Physical Education	3 credits
Arts and Humanities	1 credit
Safety Education	0.25 credit
Electives	5.75 credits
Total Required	26.5 credits

+ 20 hours of community service, culminating in a presentation given in 12th grade

Millersburg Area allows alternative ways to meet course requirements for graduation, although these are rarely used. These include the following options for graduation requirements:

- Course completion.
- Assessment.
- Independent study.
- Other educational experiences
- Higher education courses.

Table 1-9: Comparison of Graduation Credit Requirements

Course	UDASD Credits Required	MASD Credits Required
English	4	4
Science	3	4
Mathematics	4	4
Social Studies	4	4
Health	—	.5
Physical Education	—	3
Wellness	2.5	—
Arts and Humanities	—	1
Safety Education	—	.25
Electives	7.5	5.75

Total credits needed	25	26.5

The districts must agree on the number of credits required for a student to meet graduation requirements. They must also agree upon the areas in which those credits are earned. (See Table 1-9.)

Millersburg Area requires more credits in science, wellness and humanities than Upper Dauphin Area. Upper Dauphin Area requires more elective credits than Millersburg Area. The aggregate difference is 1.5 credits. If one considers Millersburg Area's humanities course an elective, then the major decision that remains is to determine how many (and which) science courses are required.

Millersburg Area offers a number of quarter-credit courses, so it must examine its quarter-credit courses to determine their role and value in the merged 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 placement. The district's life skills program can accommodate students in grades K-6 and 7-12. The in-district special education population is 12 percent of the total enrollment.

The number of identified students has a direct impact upon special education staffing and services. The districts need to examine the grade levels and needs of their special education population.

By merging districts, the special education population will be consolidated into a single building, depending upon 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 levels will be located in the same respective building.

Technology Plan

Upper Dauphin Area has approached its technology needs with an extensive study, resulting in a roadmap entitled *Trojan Enhanced Learning Initiative* (TELI). With implementation beginning in the 2016-17 school year, the plan anticipated expending $445,475 on equipment/infrastructure and professional development. Of that $445,475, approximately $235,000 is budgeted for the 2019-20 and 2020-21 school years.

Millersburg Area has established a three-year plan to improve the district infrastructure and to improve the teacher's skill set in using technology in the classroom. To meet the goal of incorporating STEAM and 21st Century skills throughout the curriculum at all levels, Millersburg Area has developed a three-year plan (2018-19, 2019-20 and 2010-21) to improve equipment and infrastructure, as well as provide professional development. To meet these targets, the district has allocated approximately $340,000.

Upper Dauphin Area has established a solid infrastructure to support expanding technology. The district has committed to Apple-based technology to support its 1:1 initiative. Millersburg Area

has determined it would use Chromebooks and iPads. The technology platform should not be much of an issue, but it will be an important conversation to have regarding a consistent approach in a merged district.

Unique High School Courses

There are a number of courses unique to one district or the other (Table 1-10). Some of these courses offer great opportunities for students from each district. Some of these courses are online courses which should be easily made available. Others are related to dual enrollment agreements that should be beneficial to students at both districts. (See Table 1-10.)

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

Table 1-10: Courses Unique to Each District

Subject/ District	Course	CR	Comment	9	10	11	12
Art							
MASD	Photography and Photoshop I	0.5			X	X	X
	Photography and Photoshop II	0.5			X	X	X
Business/IT							
UDASD	Penn College Intro to Bus	0.5	college credit option		X	X	X
	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
	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
FACS							
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
Industrial Arts							
UDASD	Basic Cabinetmaking I	0.5		X	X	X	X
	Basic Cabinetmaking II	1.0			X	X	X
	Advanced Cabinetmaking	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

Subject/ District	Course	CR	Comment	9	10	11	12
	Building Trades III	3					X
MASD	Construction Careers	0.5	online course	X	X	X	X
Music							
UDASD	Foundations of Music Theory	0.5			X	X	X
	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
Agriculture							
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
Diversified Occupation							
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

Subject/ District	Course	CR	Comment	9	10	11	12
	Teacher Assistant	0.5	semester	X	X	X	X
	Teacher Assistant	0.1.0	year	X	X	X	X
	Elementary Education Internship	3	full year				X
English							
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
Social Studies							
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
	CP Principles of Microeconomics	0.5				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
Wellness							
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
Math							
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
Science							
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
	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

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	1.0	Weighted			X	X

Conclusion

The merger of the two districts will require attention to the following areas:

- o Grade level configuration
- o Length of school day
- o School schedule
- o Allocation of instructional time at the elementary level for core content areas
- o Science and math sequence
- o Consistently implemented curriculum and instructional model
- o Agreement of math and literacy approach at elementary level
- o Development of a curriculum cycle
- o Graduation requirements
- o Course options and selection by grade level
- o Special education population and programming
- o Course options and classroom availability, particularly as it relates to science labs, art rooms and music rooms
- o Handling high school students, especially graduating seniors, during the transition to a merged district

In addition, decisions must be made requiring special education staffing and contracted services. Meanwhile, there are areas in which the districts are closely aligned or that should be relatively easy to merge:

- o School vision and mission
- o Middle level course sequences
- o Importance of technology (infrastructure and resources)
- o Importance of professional development
- o Dual enrollment and online options for students
- o Some already shared programming

Introduction

To successfully combine the Millersburg Area School District and the Upper Dauphin Area School District, school district decision makers must resolve issues related to enrollment and facilities:

- Identify facility condition deficiencies with cost of remediations
    - Provide age-appropriate settings for proposed grade configurations
    - Identify regulatory impediments to proposed facility changes
- Identify school educational deficiencies with cost of alterations:
    - Provide sufficient student capacity to educate projected enrollment
    - Provide the right mix of regular and science classrooms, science labs, and special subject space for the proposed curriculum
    - Provide dedicated space for proposed special education and pupil support services

School districts rely on a variety of educational facility planning and design guidelines, including Pennsylvania Department of Education (PlanCon), Association for Learning Environments, model educational specifications, and school district Board Policies. A variety of regulations govern facility design, construction, and operation. These regulations guide architects, engineers, and school district facility managers:

- Local Building Codes (including energy codes and barrier-free design codes)
- Community Zoning Ordinances
- County Health Department
- National standards (including relevant American National Standards Institute, National Fire Protection Association, and National Sanitation Foundation standards, for example)

As part of the feasibility analysis our educational facility planners conducted educational assessments of school district facilities, met with school district administrators, and conducted walk-throughs of:

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

The project's architect conducted facility condition assessments of school district facilities. He met with school district administrators and conducted interior and exterior walk-throughs of the same four school buildings, plus stadium, maintenance, and storage (house and former church) facilities at the Millersburg Area Middle School and High School campus.

Millersburg Area Middle and High School and District Administration Office

799 Center St
Millersburg PA 17061

Millersburg Borough
Dauphin County
Commonwealth of Pennsylvania

David Shover, Principal
shoverd@mlbgsd.k12.pa.us
Jeff Prouse, M.S. Assistant Principal, Secondary Dean of Students, Athletic Director
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Millersburg Area School District operates the middle school independently of the high school. The two schools operate in two separate areas of the same building, sharing cafeteria/kitchen, and other facilities on a scheduled basis. We assess the schools separately for their suitability to present current educational programming offerings.

Student capacity based on Thompson Associates Architects and Planners analysis:
- Middle school 6th to 8th grade: 334 students
- High school 9th to 12th grade: 466 students

Current enrollment:
- 194 - 6th grade to 8th grade students (58.1% of 334-student capacity)
- 248 - 9th grade to 12th grade students (53.2% of 466-student capacity)

High school and middle school combined area: 141,726 sq.ft.
Site area: 20 acres; under-sized, based on Pennsylvania Department of Education recommended site size of 40 acres.
Setting: Small town

Millersburg Area Middle and High School Student Capacity Analysis:

Student capacity is calculated based on student teacher ratios and the number of available classrooms.

Special education and pupil support services: The school district operates Millersburg Area Middle School and High School with primarily push-in services (to the regular classroom), and limited pull-out services. Push-in services require staff office space and seminar-size spaces for one-on-one instruction or testing/assessments. Millersburg Area Middle and High School classrooms are adequate in size to accommodate push-in services.

We observed that the school district currently dedicates six full-size classrooms for special education and pupil support services distributed throughout the school, including:

- Learning support (four: two on the middle school side, two on the high school side)
- Life skills (occupies two family and consumer science labs, also utilized for a morning café program)

Based on the 2018-19 (grades 6 to 12) enrollment of 442 students, this amounts to one full-size classroom per 74 students at Millersburg Area Middle School and High School. This number of students per full-size classroom supports the school district's push-in service philosophy. Two additional seminar-size spaces are available for reading support services and in-school suspension.

Basis for middle school and high school student capacity: For grades 6-8, student capacity includes regular classrooms, science labs, and certain special subjects (music, art, computer lab, and physical education). For a grade 9-12 high school, student capacity includes regular classrooms, science labs, and certain special subjects (music, art, computer lab, building trades, industrial arts, health, and physical education). We do not attribute capacity to three large group instruction spaces. As the overall enrollment in the school district declined family and consumer science programming was eliminated and the district adapted the family and consumer science labs for life skills programming. The school district also discontinued tech ed programming at the middle school, as enrollment declined. The school district adapted the tech ed lab for use as a high school building trades shop.

Total capacity of a combined middle school / high school is factored to account for scheduling inefficiencies of teaching stations. The middle school is organized into multi-disciplinary teams. The high school is organized departmentally, enhancing the Principal's ability to schedule classrooms for optimum efficiency. Based on our experience with combined middle / high school facilities of this size, we factor the sum of the capacities of all instructional spaces by an 85% utilization rate to account for scheduling inefficiencies. We rate the total student capacity of Millersburg Area Middle School at 334 students summarized in Table 2-1. We rate the total student capacity of Millersburg Area High School at 466 students summarized in Table 2-2.

Table 2-1 Millersburg Area Middle School Student Capacity

Room Name	Total Rooms	Students per Room	Total Students
Science labs	2	20	40
Science classrooms	0	25	0
Auditorium	0	0	0
Stage	0	0	0
Cafeteria/kitchen	0.5	0	0
Library	1	0	0
Regular classrooms	9	25	225
Computer lab	1	25	25
Television studio	0	0	0
Music	1	25	25
Art	0.5	25	12.5
Family and Consumer Science	0	20	0
Tech Ed	0	20	0
Health classroom	0	25	0
Physical Ed	2	33	66
Weight room	1	0	0
Wrestling room	0	0	0
Large Group Instruction	0	0	0
Seminar – small group	1	0	0
Spec Education/Math/Read/Gifted	2	0	0
Faculty room	1	0	0
Administration	1	0	0
Nurse suite	0.5	0	0
Subtotal			393.5
Utilization Factor:			85.0%
Total Student Capacity:			**334**

Table 2-2 Millersburg Area High School Student Capacity

Room Name	Total Rooms	Students per Room	Total Students
Science labs	3	20	60
Science classrooms	0	25	0
Auditorium	1	0	0
Stage	1	0	0
Cafeteria/kitchen	0.5	0	0
Library	1	0	0
Regular classrooms	10	25	250
Computer lab	2	25	50
Television studio	0	0	0
Music	1	25	25
Art	0.5	25	12.5
Family and Consumer Science	0	25	0
Building Trades	1	20	20
Industrial Arts	2	20	40
Health classroom	1	25	25
Physical Ed	2	33	66
Weight room	1	0	0
Wrestling room	0	0	0
Large Group Instruction	3	0	0
Seminar – small group	1	0	0
Spec Education/Math/Read/Gifted	4	0	0
Faculty room	1	0	0
Administration	1	0	0
Nurse suite	0.5	0	0
Subtotal			548.5
Utilization Factor:			85.0%
Total Student Capacity:			**466**

Millersburg Area Middle School Educational Assessment:

Facility Summary: Millersburg Area School District constructed the original high school and library in 1931. The school district adapted the original high school for the current middle school students. This is a very small middle school (2018-19 enrollment 194 students). With a rated student capacity of 334 students, there is no pressure to schedule classrooms efficiently (teachers do not vacate un-used classrooms during planning periods, for example). Regular classroom size and science lab size are appropriate and well-equipped.

The middle school has a well-marked main entrance directly into the middle school Principal's office, for security. The two-story classroom wing is an efficient double-loaded corridor design. The middle school has a science lab on each floor, intermixed with regular classrooms (ideal for multi-disciplinary teaming). The middle school gym is located together with the library in the historic Johnson Memorial Building. The middle school gym is isolated from other high school athletics facilities, but it is zoned for community use.

Some of the special subject areas are conveniently located between the middle school and high school. Art, life skills, nurse's office, and the café serve both the high school and middle school students. To gain admittance to the District Administration Office (located in the shared area), visitors pass through the security at the middle school. There is no off-street parking on the Center Street side of the school.

The middle school and high school share a library with the Dauphin County Library System. The library is open to only students, during normal school hours. The library opens to the public at 3:05 pm on school days. The library and a reference library are isolated at the far end of the middle school and are not convenient to high school students.

Millersburg Area High School Educational Assessment:

Facility Summary: The school district renovated and added-on to the 1931 original in 1960, 1972 and 1991. The latest renovation occurred in 2015. This is a small high school (2018-19 enrollment 248 students). With a rated student capacity of 466 students, there is no pressure to schedule classrooms efficiently (teachers do not vacate un-used classrooms during planning periods, for example). Regular classrooms size and science labs are generously sized and well-equipped.

The high school has a well-marked main entrance directly into the Principal's office, for security. The high school is organized around a loop corridor, with the auditorium and large group instruction spaces in the center and regular classrooms and science labs to the exterior.

The high school gym, locker rooms, and wrestling room adjoin the café and kitchen between the middle school and the high school. In addition to the nurse's office, special subjects in this shared area include art, music, building trades, and industrial arts (wood and metal shops, and a CAD lab). Millersburg Area high school students who want to participate in vocational agriculture programming already attend Upper Dauphin Area High School for offered courses.

Millersburg Area Middle School, High School, and
District Administration Office Facility Condition Assessment:

The school district is currently completing a roofing replacement, conducted in multiple phases. In addition, the school district recently replaced mechanical/electrical systems, including coal-fired boilers, which had reached the end of their useful life. The extent of recent roofing and mechanical replacement work necessitated upgrade of many interior finishes, particularly ceilings. We rate these newly-replaced systems as 'excellent'; being in like-new condition. We provide a system-by-system assessment in the Millersburg Area Middle School, High School, and District Administration Office Facility Condition Assessment table.

Barrier-free design: The two-story wing of the 1931 original school is served by an elevator. The shared area between the middle school and the high school is single-story. Nevertheless, the 'first floor' is interrupted by intercommunicating stairs up and down, throughout the high school and the shared area. Some of these level changes have accessible ramps, but not all. The lower level of the Johnson Memorial Building (below the library) houses a reference library for the use of middle and high school students. This level is not accessible from the first floor.

Accessible parking and an accessible entrance is available at the high school Principal's entrance. Visitors to the main entrance to the middle school utilize Center Street, for on-street parking. There is no designated accessible parking on Center Street. There is no barrier-free path to the middle school main entrance. Visitors to the middle school or to the District Administration Office, who require barrier-free access must locate the accessible parking near the high school entrance and utilize an alternative, accessible entrance (number 16).

Over time, the door finishing hardware, toilet room configurations, and mounting heights of accessories and devices have been upgraded for improved barrier-free access. Nevertheless, many pre-existing accessories (and door finishing hardware) fall short of current accessibility guidelines. The school district should strive to continue to improve accessibility with each project undertaken, to remove remaining barriers. For example, upgrade stadium seating to current accessibility guidelines, when current seating reaches the end of its useful life.

Millersburg Area Middle School, High School, and District Administration Office Condition:

Survey Date: July 2019
Surveyor: James R Thompson AIA
Roof survey date: July 2019 (Thompson)
Building Location: 799 Center St, Millersburg PA 17061
GSF: 141,726 sq.ft.
Construction Type: Masonry load-bearing and steel frame
Construction Year: 1931 B, 1959 A/R, 1972 A/R, 1991 A/R
Number of Stories: Two

Building Exterior - 2019:

E	Roofs
G/FX	Walls – Masonry
F/PX	Soffit/Fascia Panels
G	Steps/Entrances
G	Landscape walls
G	Windows
G	Doors/Hardware
F	Painting & Sealant

Building Interior – 2019:

G	Floors
G	Walls
E	Ceilings
F	Doors/Hardware
G	Stairs
G	Elevator
NE	Stair lifts
G	Painting & Caulking

G	Student Lockers

Plumbing – 2019:

G	Fixtures
E	Domestic Hot Water
G	Sanitary Sewer
G	Storm Water

Site/Landscaping – 2019:

G	Sidewalks
G	Accessibility
FX	Parking Lot
G	Fencing
G	Trees/Shrubs
G	Lawns
PX	Signage
FX	Stadium Seating

HVAC – 2019:

E	Boiler
E	Air-conditioning

E	Distribution
E	Ventilation

Custodial – 2019:

G	Custodial Closet
G	Level of Cleanliness

Electrical – 2019:

G	Electrical Service
G	Telephone System
E	Computer Systems
G	Electrical Distribution
G	Wiring Devices
G	Interior Lighting
G/PX	Exterior Lighting
G	Emergency Lighting
G	Fire Alarm
G	Security System

Condition Codes:

E - Excellent – Conditions generally at 'like-new' level; exemplary maintenance and appropriate funding required to maintain this level.

G - Good – Conditions generally at an acceptable level. Routine maintenance effort and appropriate funding required to maintain this level.

F - Fair – Conditions at a minimally-acceptable levels. Improvements involving greater than routine maintenance effort and additional funding required.

P - Poor – Conditions below minimally acceptable levels. Conditions require substantial capital repair and funding.

X – In addition to the condition code (E, G, F or P) X denotes element/system is of original design/construction and is of vintage age or is approaching the end of its normal life expectancy. Improvements might be required in the near future.

NE – Non-Existent

Safety and security: The main entrances at both the middle school and high school principal offices feature passive security measures with electronic latching and video. Millersburg Area School District uses extensive video surveillance to monitor student and visitor activity. This video is not actively monitored, but can be referenced, when needed.

Students use this facility intensely, long after regular school hours. The Dauphin County Library in the Johnson Memorial Building is designed to restrict the public from accessing the middle school, especially during normal school hours. The middle school gym can be isolated from the rest of the middle school for community use.

Millersburg Area Middle School, High School, and District Administration Office have numerous entrances, which are locked during the school day. Door entrances are numerically identified, for the benefit of emergency first-responders. We recommend adding room numbers to windows. Selected doors (those used for café receiving, physical education, and teacher parking, for example) should have proximity readers controlling electronic latching. Electronic latching systems should be controlled by central computer technology, during emergency situations.

Teachers use a variety of methods to protect students from intrusion danger. Classrooms may not be locked from the inside, by Building Code. Classrooms are, however, typically locked from the corridor to restrict access. Each classroom should have an area where teachers and students can conceal themselves from the view of an intruder.

Lenkerville Elementary School

520 S Market St
Millersburg PA 17061

Millersburg Borough
Dauphin County
Commonwealth of Pennsylvania

Mike Lyter, Elementary Principal
lyterm@mlbgsd.k12.pa.us
717.692.3072 phone

Millersburg Area School District operates Lenkerville Elementary School for grades K to 5. We assess the elementary school for its suitability to present current educational program offerings.

Student capacity based on Thompson Associates Architects and Planners analysis:
Elementary school K to 5th grade: 525 students
Current enrollment:
343 - K grade to 5th grade students (65% of 525-student capacity)

Elementary School area: 49,500 square feet
Site area: 16.2 acres; adequately sized, based on Pennsylvania Department of Education recommended site size of 14 acres.
Setting: Suburban

Lenkerville Elementary School Student Capacity Analysis:

Student capacity is calculated based on student teacher ratios and the number of available classrooms.

Special education and pupil support services: Millersburg Area School District operates Lenkerville Elementary School with a combination of push-in services (to the regular classroom), and pull-out services. Push-in services require staff office space and seminar-size spaces for one-on-one instruction or testing/assessments. Lenkerville Elementary School classrooms are adequate in size to accommodate push-in type services.

The school district currently dedicates 3 full-size classrooms for special education and pupil support services distributed throughout the school. Based on the 2018-19 (grades K to 5) enrollment of 343 students, this amounts to one full-size classroom per 114 students at Lenkerville Elementary School. This number of students per full-size classroom supports the school district's special education and pupil support philosophy. Four additional seminar-size spaces are available.

Basis for elementary school student capacity: For grades K to 5, student capacity includes kindergarten classrooms and regular classrooms. Elementary students participate in special subjects for art, music, physical education, library, and computer. Spaces utilized for these special subjects do not count toward additional elementary student capacity. We rate the total student capacity of Lenkerville Elementary School at 525 students summarized in Table 2-3.

Table 2-3 Lenkerville Elementary School Student Capacity

Room Name	Total Rooms	Students per Room	Total Students
Library	1	0	0
Half-day kindergarten	0	50	0
Kindergarten	2	25	50
Regular classrooms	19	25	475
Computer lab	1	0	0
Music	1	0	0
Art	1	0	0
Café/kitchen	1	0	0
Physical education	1	0	0
Large group instruction	0	0	0
Seminar – small group instruction	4	0	0
Spec education/math/read/gifted	3	0	0
Administration/guidance	1	0	0
Nurse's suite	1	0	0
Faculty	1	0	0
Total Student Capacity:			525

Lenkerville Elementary School Educational Assessment:

Facility Summary: Millersburg Area School District constructed a new two-story elementary school in 1935. This 1935 original remains the core of the current Lenkerville Elementary School. Lenkerville Elementary School has grown in increments, with additions and renovations in 1950, 1960, 1972, and 1992. Today, this is a small elementary school (current 2018-19 enrollment 278 students). Kindergarten and regular classroom size are appropriate and well-equipped.

Lenkerville Elementary School has a well-marked main entrance, which enters directly into the Principal's office, for security. The main entrance serves as the after-hours entrance for community use of the gym/stage, library, or cafeteria. The school is not zoned to restrict movement during after-hours activity. The multiple additions resulted in a confusing layout with several short corridors with small classroom clusters.

Lenkerville Elementary School Facility Condition Assessment:

The school district's last significant renovation of Lenkerville Elementary School was 28 years ago in 1991. This building will soon need new mechanical/electrical systems, roofing, and parking lot repaving. Coal-fired boilers have reached the end of their useful lives. Stair (wheelchair) lifts are near the end of their useful lives. Replace wheelchair lifts with new lifts, or a multi-sided elevator and additional corridor ramps, to provide barrier-free access. The extent of mechanical work will necessitate comprehensive upgrade of most interior finishes.

Following is a system-by-system assessment of the Lenkerville Elementary School Condition.

Lenkerville Elementary School Condition:

Survey Date: July 2019
Surveyor: James R Thompson AIA
Roof survey date: July 2019 (Thompson)
Building Location: 520 S Market St, Millersburg PA 17061
GSF: 49,500 sf
Construction Type: Masonry load-bearing and steel frame
Construction Year: 1935 B, 1950 A/R, 1960 A/R, 1971 A/R, 1991 A/R
Number of Stories: Two

Building Exterior - 2019:
PX   Roofs
F   Walls – Masonry
G/PX   Steps/Entrances
F   Landscape walls
G   Windows
G/F   Doors/Hardware
F   Painting & Sealant

Building Interior – 2019:
F   Floors
G   Walls
G   Ceilings
F   Doors/Hardware
G   Stairs
NE   Elevator
FX   Stair lifts
G   Painting & Caulking

G   Student Cubbies

Plumbing – 2019:
G   Fixtures
G   Domestic Hot Water
G   Sanitary Sewer
F   Storm Water

Site/Landscaping – 2019:
G/FX   Sidewalks
FX   Accessibility
FX   Parking Lot
G   Fencing
G   Trees/Shrubs
G   Lawns
F   Signage

HVAC – 2019:
PX   Boiler
NE   Air-conditioning

FX   Distribution
FX   Ventilation

Custodial – 2019:
G   Custodial Closet
G   Level of Cleanliness

Electrical – 2019:
F   Electrical Service
G   Telephone System
E   Computer Systems
G   Electrical Distribution
G   Wiring Devices
G   Interior Lighting
F   Exterior Lighting
G   Emergency Lighting
G   Fire Alarm
G   Security System

Condition Codes:

E - Excellent – Conditions generally at 'like-new' level; exemplary maintenance and appropriate funding required to maintain this level.

G - Good – Conditions generally at an acceptable level. Routine maintenance effort and appropriate funding required to maintain this level.

F - Fair – Conditions at a minimally-acceptable levels. Improvements involving greater than routine maintenance effort and additional funding required.

P - Poor – Conditions below minimally acceptable levels. Conditions require substantial capital repair and funding.

X – In addition to the condition code (E, G, F or P) X denotes element/system is of original design/construction and is of vintage age or is approaching the end of its normal life expectancy. Improvements might be required in the near future.

NE – Non-Existent

The stone copings at the top of the masonry exterior walls have deteriorated, leaving openings for water incursion around the edge of the older wings. Birds have found their way into the soffit and fascia systems. All should be addressed during needed roofing system replacement. Deterioration of the gypsum roof deck is visible in the open ceiling of the faculty lounge (1960 addition). As the school district found in the current middle school / high school roof replacement, at least a portion of the roof deck will need to be replaced.

Exterior brick masonry needs to be thoroughly cleaned and repointed in older areas, to stop mildew deterioration, water incursion, and freeze-thaw damage. There is a maintenance need to replace older, hardened sealant joints.

Barrier-free design: The two-story wing of the 1935 original school is not served by an elevator. Instead, the 1935 original school is connected to the 1960 addition by means of wheelchair lifts. Each succeeding addition has its own level, connected by a complex combination of intercommunicating stairs, ramps, and wheelchair lifts.

The parent drop-off at the main entrance should be re-configured for an accessible entrance and parking, based on today's barrier-free design standards. This main entrance enters at the lower

level of the 1935 original school (and the café). The bus drop-off enters through an accessible entrance at an intermediate (library) level from the school's hard-surface play area.

Most of the school additions preceded the Americans with Disabilities Act of 1990 mandates for barrier-free design. For example, most of the door finishing hardware (interior and exterior) and most of the toilet room configurations are pre-existing and non-conforming.

Safety and security: The main entrance near the Principal's office features passive security measures with electronic latching and video. Millersburg Area School District uses extensive video surveillance to monitor student and visitor activity, inside and outside of the school. This video is not actively monitored, but can be referenced, when needed.

Lenkerville Elementary School has numerous entrances, which are locked during the school day. Door entrances are numerically identified, for the benefit of emergency first-responders. We recommend adding room numbers to windows. Selected doors (those used for cafeteria receiving, physical education, teacher parking, and recess, for example) should have proximity readers controlling electronic latching. Electronic latching systems should be controlled by central computer technology, during emergency situations.

Millersburg Area School District produces written emergency procedures for Lenkerville Elementary School. The procedures include fire evacuation, tied to the sounding of building-wide fire alarms. Classrooms include fire evacuation diagrams. We recommend upgrading fire alarm systems to current standards for direct contact with local first responders.

Teachers use a variety of methods to protect students from intrusion danger. Classrooms may not be locked from the inside by Building Code. Classrooms are, however, typically locked from the corridor to restrict access. Each classroom should have an area where teachers and students can conceal themselves from the view of an intruder.

Upper Dauphin Area High School

220 N Church St
Elizabethville PA 17023

Washington Township
Dauphin County
Commonwealth of Pennsylvania

Robert Miller, Acting Principal
millerr@udasd.org
717.362.8181 phone

Upper Dauphin Area School District operates the high school for grades 9 to 12. We assess the high school for its suitability to present current educational programming offerings.

Student capacity based on Thompson Associates Architects and Planners analysis:
High school 9th to 12th grade: 647 students
Current enrollment:
363 - 9th grade to 12th grade students (56.1% of 647-student capacity)

High school area: 119,230 square feet
Site area: 41 acres. This is adequately sized, based on Pennsylvania Department of Education recommended site size of 39 acres.
Setting: Suburban/rural

Upper Dauphin Area High School Student Capacity Analysis:

Student capacity is calculated based on student teacher ratios and the number of available classrooms.

Special education and pupil support services: The school district operates Upper Dauphin Area High School with primarily push-in services (to regular classrooms), and limited pull-out services. Push-in services require staff office space and seminar-size spaces for one-on-one instruction or testing/assessments. The school district utilizes a proportionally large number of teaching aides to implement this push-in type strategy. Some existing Upper Dauphin Area High School classrooms are too small to count as full-size for the purpose of PDE PlanCon reimbursement. Small-size classrooms might not adequately accommodate push-in type services.

Upper Dauphin Area School District currently dedicates five full-size classrooms for special education and pupil support services distributed throughout the high school. One of these five classrooms is dedicated to life skills students. Based on the 2018-19 (grades 9 to 12) enrollment of 363 students, this amounts to one full-size classroom per 73 students. This number of students per full-size classroom supports the school district's push-in type service philosophy. The high school has three additional seminar-size spaces.

Basis for high school student capacity: For a grade 9-12 high school, student capacity includes regular classrooms, science labs, and certain special subjects (music, art, computer lab, family and consumer science, industrial arts, vocational agriculture, building trades, health, and physical education).

The high school is organized departmentally, enhancing the Principal's ability to schedule classrooms for optimum efficiency. Based on our experience with small high school facilities (enrollment 363 students), we factor the sum of the capacities of all instructional spaces by an 85% utilization rate to account for scheduling inefficiencies. We rate the total student capacity of Upper Dauphin Area High School at 647 students, summarized in Table 2-4. Some of the regular classrooms are smaller than the minimum size required to qualify for PDE PlanCon reimbursement (660 sq.ft.). We count these classrooms toward needed student capacity, given the breadth of elective classes that might feature small class sizes for more-advanced course offerings.

Table 2-4 Upper Dauphin Area High School Student Capacity

Room Name	Total Rooms	Students per Room	Total Students
Science labs	3	20	60
Science classrooms	2	25	50
Auditorium	1	0	0
Stage	1	0	0
Cafeteria/kitchen	1	0	0
Library	1	0	0
Regular classrooms	15	25	375
Computer lab	3	20	60
Television studio	1	0	0
Music	1	25	25
Art	1	20	20
Family and Consumer Science	1	20	20
Industrial Arts	1	20	20
Vocational agriculture shop	1	20	20
Building trades lab	1	20	20
Business lab	0	20	0
Business classroom	1	25	25
Health classroom	0	25	0
Physical Ed	2	33	66
Weight room	1	0	0
Wrestling room	1	0	0
Large Group Instruction	0	0	0
Seminar – small group	3	0	0
Spec Education/Math/Read/Gifted	5	0	0
Faculty room	1	0	0
Administration	1	0	0
Nurse suite	1	0	0
Subtotal			761
Utilization Factor:			85.0%
Total Student Capacity:			**647**

Upper Dauphin Area High School Educational Assessment:

Facility Summary: Upper Dauphin Area School District constructed a new high school in 1957. The school district renovated and added-on to the 1957 original in 1988 and 1999. This is a small high school (2018-19 enrollment 363 students). With a rated student capacity of 647 students, there is no pressure to schedule classrooms efficiently (teachers do not vacate un-used classrooms during planning periods, for example). Most regular classroom sizes and science lab sizes are appropriate and well-equipped.

The high school has a well-marked main entrance, which enters into the auditorium lobby, rather than directly into the high school Principal's office. The main entrance serves as the after-hours entrance for performing arts, the library, and cafeteria. The high school has a separate athletics entrance at the opposite end of the front façade, with more-direct access to gym, wrestling, weight room, and locker rooms.

The high school supports extensive career and technical education in a separate wing, near the gym. Vocational lab space includes family and consumer science, industrial arts (wood and metal), CAD lab, building trades lab, and vocational agriculture (including two commercial-scale greenhouses). Upper Dauphin Area School District has been able to retain this breadth of shop /

lab space and vocational faculty by scheduling small, overlapping sections of multiple courses with a single faculty member. These lab spaces are not fully utilized. For example, the family and consumer science teacher is also certified for secondary math. The school district utilizes half of the teacher's time teaching algebra and still maintains some family and consumer science programming.

Upper Dauphin Area High School Facility Condition Assessment:

The school district recently replaced the high school HVAC systems. Many classrooms have new vertical-type, through-wall HVAC units. These HVAC upgrades resulted in patching and repairs in exterior wall penetrations, and acoustic lay-in ceiling replacements.

Numerous doors, dating to the 1957 original school have louvers, which are no longer required for the transfer of air for the HVAC system. Many of these wood doors are in fair condition, nearing the end of their useful life. These 1957-vintage doors have non-conforming door finishing hardware, which pre-dates the Americans with Disabilities Act of 1990.

Following is a system-by-system assessment of the Upper Dauphin Area High School Condition.

Upper Dauphin Area High School Condition:

Survey Date: July 2019
Surveyor: James R Thompson AIA
Roof survey: Tremco
Building Location: 220 N Church St, Elizabethville PA 17023
GSF: 119,230 sq.ft.
Construction Type: Masonry load-bearing and steel frame
Construction Year: 1957 B, 1988 A, 1999 A/R
Number of Stories: One

Building Exterior - 2019:
G   Roofs
G   Walls – Masonry
G   Steps/Entrances
G   Landscape walls
G   Windows
G/F   Doors/Hardware
G   Painting & Sealant

Building Interior – 2019:
G   Floors
G   Walls
G   Ceilings
G/FX   Doors/Hardware
NE   Stairs
NE   Elevator
G   Classroom Casework
G   Painting & Caulking

G   Student Lockers

Plumbing – 2019:
G   Fixtures
G   Domestic Hot Water
G   Sanitary Sewer
G   Storm Water

Site/Landscaping – 2019:
G   Sidewalks
G   Accessibility
G   Parking Lot
G   Fencing
G   Trees/Shrubs
G   Lawns
G   Signage

HVAC – 2019:
E   Boiler
E   Air-conditioning

E   Distribution
E   Ventilation

Custodial – 2019:
G   Custodial Closet
G   Level of Cleanliness

Electrical – 2019:
G   Electrical Service
G   Telephone System
E   Computer Systems
G   Electrical Distribution
G   Wiring Devices
G   Interior Lighting
G   Exterior Lighting
G   Emergency Lighting
G   Fire Alarm
G   Security System

Condition Codes:
E - Excellent – Conditions generally at 'like-new' level; exemplary maintenance and appropriate funding required to maintain this level.
G - Good – Conditions generally at an acceptable level. Routine maintenance effort and appropriate funding required to maintain this level.
F - Fair – Conditions at a minimally-acceptable levels. Improvements involving greater than routine maintenance effort and additional funding required.
P - Poor – Conditions below minimally acceptable levels. Conditions require substantial capital repair and funding.
X – In addition to the condition code (E, G, F or P) X denotes element/system is of original design/construction and is of vintage age or is approaching the end of its normal life expectancy. Improvements might be required in the near future.
NE – Non-Existent

Barrier-free design: The high school is entirely single-story, although not all on one level. Corridors have accessible ramps to the vocational labs, for example. These vocational labs were, at one time, separate buildings.

Additions and renovations in 1988 and 1999 introduced spacious toilet rooms with appropriate grab bars and toilet accessories, and accessible door hardware. A significant percentage of the door finishing hardware in the 1957 original high school pre-dates Americans with Disabilities Act of 1990 guidelines. The school district should strive to continue to improve accessibility with each project undertaken, to remove remaining barriers.

Safety and security: The main entrance enters directly into the auditorium lobby. We recommend alterations as a passive security measure for admission of visitors directly into the high school Principal's office, utilizing electronic latching and video technology. The Upper Dauphin Area School District uses extensive video surveillance to monitor student and visitor activity. This video is not actively monitored, but can be referenced, when needed. We recommend upgrading video technology to improve resolution and search-ability.

The building has numerous entrances, which are locked during the school day. Door entrances are numerically identified, for the benefit of emergency first-responders. We recommend also adding room numbers to windows. Selected doors (those used for cafeteria, receiving, greenhouses, physical education, and teacher parking, for example) should have proximity readers controlling electronic latching, in lieu of extensive distribution of keys or master keys. Electronic latching systems should be controlled by central computer technology for remote access control, particularly during emergency situations.

Upper Dauphin Area School District posts fire evacuation diagrams in student spaces. The building is equipped with a public address system for communication of emergency instructions, as required. Teachers use a variety of methods to protect students from intrusion danger. Classrooms may not be locked from the inside, by Building Code. Classrooms are, however, typically locked from the corridor-side to restrict intruder access. Each classroom should have an area where teachers and students can conceal themselves from view.

Students and families extensively use this facility, long after regular school hours. The long corridors in Upper Dauphin Area High School are difficult to isolate, one from another, for community use. The school district uses roll-down grilles to zone areas for community use (for example, the music suite corridor) and should consider upgrading to roll down grilles that open automatically in an emergency.

Upper Dauphin Area Elementary School and Middle School and District Administration Office

5668 State Route 209
Lykens PA 17048

Washington Township
Dauphin County
Commonwealth of Pennsylvania

Kathleen Landa, Middle Principal
landak@udasd.org
717.362.8177 phone

Jessica Megonnell, Elementary Principal
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Upper Dauphin Area School District operates Upper Dauphin Area Elementary School for grades Pre-K to 4 and Upper Dauphin Area Middle School for grades 5 to 8. These two schools share a common wall and occupy the same campus in Lykens, Pennsylvania. However, these two schools operate independently, with separate Principal office, gym, cafeteria/kitchen, art, music, and classroom wings. We assess the elementary school and the middle school for their respective suitability to present current educational programming. The District Administration Office also shares a common wall with the middle school.

Student capacity based on Thompson Associates Architects and Planners analysis:
- Elementary school K to 4th grade: 600 students
- Middle school 5th to 8th grade: 647 students

Current enrollment:
- 394 - K grade to 4th grade students (65.7% of 600-student capacity)
- 365 - 5th grade to 8th grade students (56.4% of 647-student capacity)

Major use:	Elementary school
Date of construction:	1988 B; 1999 A/R
Elementary school area:	69,663 sq.ft.

Major use: Middle school
Date of construction: 1972 B, 1988 A, 1999 A/R
Middle school area: 96,333 sq.ft.

Major use: District administration office
Date of construction: 1988 A, 1999
DAO area: 3,355 sq.ft.
Total area: 169,351 sq.ft.

Site area: 20 acres.   Under-sized, based on Pennsylvania Department of Education recommended site size of 28 acres.
Setting: Rural

Upper Dauphin Area Elementary and Middle School Student Capacity Analysis:

We calculate student capacity from student teacher ratios and the number of classrooms.

Special education and pupil support services: Upper Dauphin Area School District operates Upper Dauphin Area Elementary School and Middle School with primarily push-in services (to regular classrooms), and limited pull-out services. Push-in services require staff office space and seminar-size spaces for one-on-one instruction or testing/assessments. The school district utilizes a proportionally large number of teaching aides to implement this push-in type strategy. Upper Dauphin Area Elementary and Middle School classrooms are adequate in size to accommodate push-in type services.

Upper Dauphin Area School District currently dedicates nine full-size classrooms for special education and pupil support services distributed throughout the school, including:

- Learning support (eight: three on the elementary side, five on the middle side)
- Transitional (elementary side)

Based on the 2018-19 (grades K to 8) enrollment of 759 students, this amounts to one full-size classroom per 84 students at Upper Dauphin Area Elementary School and Middle School. This number of students per full-size classroom supports the school district's push-in type service philosophy. Eight additional seminar-size spaces are available for instructional planning, reading / math support services, gifted student programming, speech therapy, and in-school suspension.

Basis for elementary school and middle school student capacity: For grades K-4, student capacity includes regular classrooms and full-time kindergarten classrooms. Special subjects include music, art, computer lab, library, and physical education, although these special subjects do not receive additional student capacity at the elementary level. The school district dedicates one elementary school classroom to a quality pre-kindergarten program. We rate the total student capacity of Upper Dauphin Area Elementary School at 600 students, as summarized in Table 2-5.

Table 2-5 Upper Dauphin Area Elementary School Student Capacity

Room Name	Total Rooms	Students per Room	Total Students
Library	1	0	0
Pre-kindergarten classroom	1	0	0
Half-day kindergarten	0	50	0
Full-day kindergarten	4	25	100
Regular classrooms	20	25	500
Computer lab	1	0	0
Music	1	0	0
Art	1	0	0
Multipurpose room (gym and café)	1	0	0
Stage/platform	1	0	0
Large group instruction	0	0	0
Seminar – small group instruction	8	0	0
Spec education/math/read/gifted	4	0	0
Administration/guidance	1	0	0
Nurse's suite	1	0	0
Faculty	1	0	0
Total Student Capacity:			**600**

For a grade 5-8 middle school, student capacity includes regular classrooms, science labs, and certain special subjects (music, art, computer lab, industrial arts, health, family and consumer science, and physical education). Total capacity of a middle school is factored to account for scheduling inefficiencies of teaching stations. Upper Dauphin Area Middle School is organized into multi-disciplinary teams. Based on our experience with a small middle school (365 students), we factor the sum of the middle school capacities of all instructional spaces by 85% to account for scheduling inefficiencies. We rate the total student capacity of Upper Dauphin Area Middle School at 647 students, as summarized in Table 2-6.

Table 2-6 Upper Dauphin Area Middle School Student Capacity

Room Name	Total Rooms	Students per Room	Total Students
Science labs	2	20	40
Science classrooms	0	25	0
Auditorium	1	0	0
Stage	1	0	0
Cafeteria/kitchen	1	0	0
Library	1	0	0
Regular classrooms	17	25	425
Computer lab	2	25	50
Television studio	0	0	0
Music	1	25	25
Band	1	25	25
Chorus	1	25	25
Art	1	20	20
Family and Consumer Science	1	20	20
Industrial Arts	2	20	40
Health classroom	1	25	25
Physical Ed	2	33	66
Weight room	0	0	0
Wrestling room	0	0	0
Large Group Instruction	0	0	0
Seminar – small group	3	0	0
Spec Education/Math/Read/Gifted	3	0	0
Faculty room	2	0	0
Administration	1	0	0
Nurse suite	1	0	0
Subtotal			761
Utilization Factor:			85.0%
Total Student Capacity:			**647**

Upper Dauphin Area Elementary and Middle School Educational Assessment:

Facility Summary: Upper Dauphin Area School District constructed the original school in 1972, which is part of the current middle school. In 1988, the school district added the district administration office and part of the current elementary school. In 1999, the district expanded the capacity of both the elementary school and the middle school. The elementary and middle schools operate independently, with a common wall between. For example, each has its own main entrance, Principal, special subjects, and cafeteria/kitchen.

This is a modest sized elementary school (2018-19 enrollment 394 students), with a rated student capacity of 600 students. Full-time kindergarten classrooms and regular classroom sizes are appropriately sized and well-equipped. The elementary school is organized around a loop corridor, with a large exterior courtyard at the center.

The middle school has a well-marked main entrance, which enters into a large lobby, rather than directly into the middle school Principal's office. The lobby serves as a pre-function space for the gym, auditorium, library, and cafeteria. The main entrance serves as the after-hours entrance for community recreation/athletics, performing arts, the library, or cafeteria. Equipped with public toilet rooms, this lobby area is readily zoned for community use.

Regular classrooms and science labs are organized in a two-story wing to the west of the lobby. Special subjects, including music, art, technology education, and family and consumer science are organized in a corridor to the east of the lobby. With a 2018-19 enrollment of 365 students, and a rated capacity of 647 students, there is no pressure to schedule classrooms efficiently (middle school teachers do not vacate un-used classrooms during planning periods, for example). Regular classrooms size and science labs are generously sized and well-equipped.

Upper Dauphin Area Elementary School, Middle School, and District Administration Office Facility Condition Assessment:

The school district is currently completing a roofing replacement project. The extent of recent roofing replacement work necessitated upgrades of many interior finishes, particularly ceilings. Following is a system-by-system assessment of the Upper Dauphin Area Elementary School, Middle School, and District Administration Office Condition.

Upper Dauphin Area Elementary School, Middle School, and District Administration Office Condition:

Survey Date:	July 2019
Surveyor:	James R Thompson AIA
Roof survey :	Tremco
Building Location:	5668 State Route 209, Lykens PA 17048
GSF:	169,351 sq.ft.
Construction Type:	Masonry load-bearing and steel frame
Construction Year:	1972 B, 1988 A, 1999 A/R
Number of Stories:	Two

Building Exterior - 2019:
- E/G   Roofs
- G   Walls – Masonry
- G   Steps/Entrances
- G   Landscape walls
- G   Windows
- G   Doors/Hardware
- G   Painting & Sealant

Building Interior – 2019:
- G   Floors
- G   Walls
- E   Ceilings
- G/F   Doors/Hardware
- G/FX   Stairs
- G   Elevator
- NE   Stair lifts
- G   Painting & Caulking

- G   Cubbies/Lockers

Plumbing – 2019:
- G   Fixtures
- E   Domestic Hot Water
- G   Sanitary Sewer
- E   Well Water System
- G   Storm Water

Site/Landscaping – 2019:
- G   Sidewalks
- G   Accessibility
- G   Parking Lot
- G   Fencing
- G   Trees/Shrubs
- G   Lawns
- G   Signage

HVAC – 2019:
- E/G   Boiler

- G   Air-conditioning
- G   Distribution
- G   Ventilation

Custodial – 2019:
- G   Custodial Closet
- G   Level of Cleanliness

Electrical – 2019:
- E   Electrical Service
- G   Telephone System
- E   Computer Systems
- E   Electrical Distribution
- G   Wiring Devices
- G   Interior Lighting
- G   Exterior Lighting
- G   Emergency Lighting
- G   Fire Alarm
- G   Security System

Condition Codes:

E - Excellent – Conditions generally at 'like-new' level; exemplary maintenance and appropriate funding required to maintain this level.

G - Good – Conditions generally at an acceptable level. Routine maintenance effort and appropriate funding required to maintain this level.

F - Fair – Conditions at a minimally-acceptable levels. Improvements involving greater than routine maintenance effort and additional funding required.

P - Poor – Conditions below minimally acceptable levels. Conditions require substantial capital repair and funding.

X – In addition to the condition code (E, G, F or P) X denotes element/system is of original design/construction and is of vintage age or is approaching the end of its normal life expectancy. Improvements might be required in the near future.

NE – Non-Existent

Repair or replace exterior brick masonry at landscape walls, to stop water incursion and freeze-thaw damage. Replace older, hardened sealant joints. Paint hollow metal exterior doors and frames.

Vinyl-composition floor tile in several places throughout the school is exhibiting shrinkage failure, with gaps developing between individual tiles. These floor tiles will eventually need to be replaced. The school district recently replaced synthetic flooring in the multipurpose room, which also exhibited shrinkage failure.

Seal cracks in existing parking lot pavement. Clean out vegetation and debris from site catch basins, to avoid clogging storm water piping.

Barrier-free design: This campus has ample accessible parking with grade-level access through all major entrances. The two-story wing of the 1972 original school is served by an elevator. The first floor of the middle school is at the same elevation as the elementary school and the district administration office. First floor level changes are limited to accessible ramps in corridors, stages, platforms, and tiered seating in the middle school chorus room.

Additions and renovations of these two schools in 1988 and 1999 introduced spacious toilet rooms with appropriate grab bars and toilet accessories, and accessible door hardware. A significant percentage of the door finishing hardware in the 1972 original middle school areas pre-dates the Americans with Disabilities Act of 1990 guidelines. The school district should strive to continue to improve accessibility with each project undertaken, to remove remaining barriers.

Safety and security: The main entrances at both the district administration office and the elementary school principal offices feature passive security measures with electronic latching and video. The Upper Dauphin Area School District uses extensive video surveillance to monitor student and visitor activity. This video is not actively monitored, but can be referenced, when needed.

The main entrance into the middle school enters into the lobby, rather than into the Principal's office. The middle school Principal office is located too far from the main entrance to implement a passive security solution, without relocating the office. Students and families use this facility intensely, long after regular school hours. The main entrance is also the activities entrance to the auditorium, library, cafeteria, and gym, after normal school hours.

The building has numerous entrances, which are locked during the school day. Door entrances are numerically identified, for the benefit of emergency first-responders. We recommend also adding room numbers to windows. Selected doors (those used for cafeteria receiving, physical education, teacher parking, and recess, for example) should have proximity readers controlling electronic latching. Electronic latching systems should be controlled by central computer technology, during emergency situations.

The school district posts fire evacuation diagrams in student spaces. The building is equipped with a public address system for communication of emergency instructions, as required. Teachers use a variety of methods to protect students from intrusion danger. Classrooms may not be locked from the inside, by Building Code. Classrooms are, however, typically locked from the corridor to restrict access. Each classroom should have an area where teachers and students can conceal themselves from the view of an intruder.

Five Facility Options Considered:

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

Option 1   **Status Quo Facility Option**

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**

Grade 9 to 12 Consolidation District-wide:

Options 2, 3, 4, and 5 include Grade 9 to 12 consolidation, district wide. We compared the suitability of the Millersburg Area Middle and High School versus the Upper Dauphin Area High School for the combined, projected enrollment of both school districts, grades 9 to 12, of 611 students in fall 2021.

Millersburg Area Middle and High School: We assessed the student capacity at 800 students, with 334 students on the middle school side and 466 on the high school side. This school has sufficient capacity to house the combined projected enrollment of 611 in fall 2021. This school has more regular classrooms (20) and science labs (5) than Upper Dauphin Area High School.

The configuration of the school, with shared special subjects between the 2-story middle school and the high school, could support an upper (11th and 12th) grades in the high school and lower (9th and 10th) grades in the middle school. This upper/lower school configuration would capitalize on two science labs on the middle school side, and three science labs on the high school side. Alternatively, the high school could support math and science departments and the middle school could support English, foreign language, and social studies departments.

Physical education features a gym (2 stations plus a signature weight room in the shared area) and an auxiliary gym (1 station on the middle school side). Family and consumer science occupies a two-lab suite, which has been adapted for life skills (with a morning café program, run by life skills students). The school has one art studio and two music rooms (one with tiered seating).

Career and technical labs are insufficient for a combined enrollment, with CAD lab, wood shop, and metal shop within one large, combined area. The high school has a building trades shop. The high school has no vocational agriculture lab space or commercial greenhouse.

Adapting this school as a combined enrollment high school would require a re-work of the family and consumer science labs. The career and tech labs are land-locked on the southeast corner of the shared area. The vocational agriculture program, in particular, would require new,

additional space. We recommend adding an auxiliary building in place of the existing storage (house and former church) at Johnson St and North St Extension for vocational agriculture (with greenhouses), industrial arts, and building trades labs (IF Millersburg Area MS/HS is selected to adapt to a combined grade 9 to 12 consolidated high school). We recommend re-evaluating the existing building trades and industrial arts area to better-support future, project-based courses of study, such as network/electronics, robotics, graphic arts, video studio, fabrication lab, or a CAD/CAM focus.

Upper Dauphin Area High School: We assessed the student capacity at 647 students. The combined, projected enrollment of 611 in fall 2021, would be a snug fit. This school has less regular classrooms (17) and science labs (3) than Millersburg Area Middle School and High School.

The high school is organized departmentally, with math, science, English, social studies, physical education, career and technical, and music departments. The success of fitting 611 students into a 647-student school will rely on intensively scheduling classrooms. The teacher will no longer be able to 'own' their classroom. This school will have itinerant teachers (four English teachers sharing three classrooms, for example). Itinerant teachers would need desk space. Displaced teachers would need desk space when vacating classrooms.

Physical education features a gym (2 stations plus a wrestling room and a weight room). Family and consumer science courses utilize one large lab. The school has one art studio and one music room with tiered seating (plus a small keyboarding room).

Career and technical labs are well-suited for a combined enrollment, with industrial arts lab, CAD lab, vocational agriculture lab/classroom (with two commercial greenhouses). The greatest current deficiency appears to be too few career and technical students. Combining enrollment will help with this problem.

Although the peak projected enrollment of 611 would be a snug fit for this 647-student high school, we recommend the Upper Dauphin Area High School as the preferred site for the proposed combined high school. Upper Dauphin Area High School is move-in ready.

We recommend some facility improvements, going forward. Provide a passive security vestibule at the main entrance, to admit visitors directly into the Principal's office, rather than into the auditorium lobby. The great courtyard at the center of the high school should be intensively utilized. It can be safely used with some modifications for proper, safe egress (plus, building trades might rescue the gazebo). Using the auditorium stage for band and chorus is a short-term fix for insufficient music program space. Consider extending the music suite to add a large music room, additional practice rooms, office, and storage.

Additional student capacity (new classrooms, labs, or studios) could be added beyond the cafeteria, near the existing chemistry lab, if needed. We recommend adapting existing shops / labs or adding new shops / labs, over time, to better-support future, project-based courses of study, such as network/electronics, robotics, graphic arts, video studio, fabrication lab, or a CAD/CAM focus.

Option 1: **Status Quo Facility Option:** Whether the Millersburg Area School District and the Upper Dauphin Area School District decide to combine into one new school district, or not, they always have the option to maintain the existing, four-school status quo. That said, we assessed the student capacity of the existing four schools at 3,219 students:

- Millersburg Area Middle and High School: 800 students – Grades 6-8 and 9-12
- Lenkerville Elementary School: 525 students – Grades K-5
- Upper Dauphin Area High School: 647 students – Grades 9-12
- Upper Dauphin Elementary and Middle School: 1,247 students – Grades Pre-K-4 and 5-8

These four schools have more than sufficient capacity to house the combined, projected enrollment of 1,828 students, by fall 2021. With the combined enrollment projected to decline to 1,592 students, by fall 2028, the two school districts have a great financial incentive to consolidate facilities to reduce operation and maintenance costs, and avoiding looming renovation costs, if possible. For this reason, we do not recommend Option 1.

We explored four additional school facility consolidation options, which all propose to consolidate grades 9 to 12 district wide at Upper Dauphin Area High School, while discontinuing use of Lenkerville Elementary School. Our condition assessment of Lenkerville Elementary School identifies $7.3 million in systemic renovation costs within the next five years (49,500 sq.ft. x $120/sq.ft. = $5.9 million construction cost x 1.23 for soft costs including design and construction contingencies, printing, financing, professional fees, testing, etc.).

The Pennsylvania Department of Education might lift the current moratorium for submission of future systemic renovation projects, like Lenkerville Elementary School, for PlanCon state reimbursement. This possible benefit to the school district is NOT assured.

Option 2: District-wide Consolidation Grades Pre-K to 4, 5 to 8, and 9 to 12 Utilizing only Upper Dauphin Area Elementary, Middle, and High Schools

Upper Dauphin Area Elementary and Middle School: This campus is already configured with a Pre-K to 4 elementary school and a separate 5 to 8 middle school. We assessed the student capacity of this elementary school and middle school at 1,247 students, with student capacity of 600 students on the elementary side, and 647 students on the middle side.

Table 2-7 Elementary Enrollment versus Capacity Based on 25 Students per Section

	Capacity Based on 25 ES Students per Section		*SY 2021-22 Projected Enrollment*	*%*	*SY 2028-29 Projected Enrollment*	*%*
Upper Dauphin capacity						
UD ES PK-4	600		633	106%	556	93%
UD MS 5-8	647		584	90%	510	79%
UD HS 9-12	647		611	94%	526	81%
Total:	**1,894**	**Students**	**1,828**	**97%**	**1,592**	**84%**

Table 2-7 illustrates that the elementary school side has insufficient capacity to house the projected, combined K to 4 enrollment of 633 in fall 2021. The short-term solution would be to nibble into the limited excess capacity on the middle school side. By fall 2028, the projections indicate that the combined enrollment of 556 students in the elementary side and 510 students on the middle side would shrink to fit properly.

Students with special education or pupil support needs require extra space within individual classroom sections (for example, a wheelchair-bound student with a full-time aide). If the school district desires the flexibility to reduce the number of students per classroom section from 25 to 22 average, we provide analysis in Table 2-8. Even combining the capacity of the elementary and middle school capacities would be insufficient in the short-term to meet the projected enrollment. The school district could consider a temporary modular classroom solution, as a temporary measure. In addition, discontinuing the use of Millersburg Area Middle and High School would result in the loss of annual Pennsylvania Department of Education reimbursement subsidies from recent renovations while debt service on these renovations continue through 2033 at more than $735,000 annually. For these reasons, we do not recommend Option 2.

Table 2-8 Elementary Enrollment versus Capacity Based on 22 Students per Section

	Capacity Based on 22 ES Students per Section	*change*	*SY 2021-22 Projected Enrollment*	*%*	*SY 2028-29 Projected Enrollment*	*%*
Upper Dauphin capacity						
UD ES PK-4	528	(72)	633	120%	556	105%
UD MS 5-8	647		584	90%	510	79%
UD HS 9-12	647		611	94%	526	81%
Total:	**1,822**	**Students**	**1,828**	**100%**	**1,592**	**87%**

Option 3: Grades Pre-K to 8 in Two Attendance Areas with Grade 9 to 12 Consolidation:

Upper Dauphin Area Elementary and Middle School: This campus is already configured grade Pre-K to 8, with a Pre-K to 4 elementary school and a separate 5 to 8 middle school. For Upper Dauphin, this would be a Status Quo Option. We assessed the student capacity of the elementary school side at 600 students. This school has more than enough capacity to house the Upper Dauphin K to 4 projected enrollment of 396 in fall 2021. We assessed the student capacity of the middle school side at 647 students. This school has more than enough capacity to house the Upper Dauphin 5 to 8 projected enrollment of 337 in fall 2021.

Millersburg Pre-K to 8: We assessed the suitability of adapting the Millersburg Area Middle School and High School (currently grades 6 to 12), to grades Pre-K to 8. We assessed the student capacity of the middle school side, adapted for Millersburg grades Pre-K to 4, at 300 students. This school has sufficient capacity to house the Millersburg K to 4 projected enrollment of 237 in fall 2021. We assessed the student capacity of the high school side at 443 students. This school has sufficient capacity to house the Millersburg 5 to 8 projected enrollment of 247 in fall 2021.

Although a Pre-K to 4 and 5 to 8 configuration would be similar to the Upper Dauphin Area Elementary and Middle School configuration, these two campuses differ in several important ways:

- Lenkerville Elementary School's current grade configuration is K to 5, requiring reconciliation of curriculum differences to shift 5th grade to the middle school side of the proposed Pre-K to 8
- Lenkerville Elementary School does not currently have a Head Start, quality pre-kindergarten program
- With only two to three sections per elementary grade level, maintaining equitable classroom section enrollments in Pre-K to 4 at both schools would be a challenge
- Millersburg Area Middle School's kindergarten classrooms would lack toilet rooms
- Fixture and accessory mounting heights at Millersburg Area Middle School are designed for secondary students
- Millersburg Area Middle School has two science laboratories, which would need to be converted to regular elementary classrooms
- Millersburg Area Middle School has no soft surface playground
- Upper Dauphin Area Elementary and Middle School use two separate cafeterias/kitchens, while Millersburg Middle and High School share a single cafeteria on a scheduled basis
- Millersburg Area High School is organized departmentally, while the middle school is organized in grade level clusters

The Millersburg Area High School side can be organized into grade-level, middle school clusters without significant changes.   Adapting the Millersburg Area Middle School side to grades Pre-K to 4 would require alterations to classrooms, science labs, toilet rooms, and playgrounds to make the campus suitable for elementary education.   Adapting science labs to regular classrooms, for example, would adversely affect future use of this school for secondary programming. For these reasons, we do not recommend Option 3.

Option 4: District-wide Consolidation Grades Pre-K to 4, 5 to 8, and 9 to 12

Adapting Upper Dauphin Area Elementary and Middle School to grades Pre-K to 4: This campus is already configured grade Pre-K to 8, with a Pre-K to 4 elementary school and a separate 5 to 8 middle school. We assessed the student capacity to adapt this elementary school and middle school to a grade Pre-K to 4 elementary school at 1,025 students. This school has sufficient capacity to house the projected, combined K to 4 projected enrollment of 633 in fall 2021.

The greatest disadvantage of this configuration is a projected 15 vacant classrooms. Duplicated Principal office, nurse's suite, art, music, physical education, library, and computer labs will also be vacant. Middle school program space for family and consumer science and industrial arts will also be vacant. In practice, the combined Pre-K to 3 could fit into the existing elementary side, isolating the 4th grade students on the first floor of the middle school side, and leaving the second-floor classrooms vacant. For these reasons, we do not recommend this Option 4.

Adapting Millersburg Area Middle and High School to grades 5 to 8: This campus is already configured grade 6 to 12, with a small 6 to 8 middle school and a separate 9 to 12 high school. We assessed the student capacity to adapt this middle school and high school to a grade 5 to 8 middle school at 800 students, with 334 students on the middle school side and 466 students on the high school side. This school has sufficient capacity to house the combined 5 to 8 projected enrollment of 584 in fall 2021.

The 2-story middle school wing could provide regular classrooms and science labs for grades 5 and 6. However, two thirds of the regular classrooms are on the second floor and one-third on the first floor; a mis-match for middle school multi-disciplinary teaming by grade level.

The classrooms and science labs on the high school side could support grades 7 and 8. We recommend reclaiming the use of the family and consumer science labs, as a complementary program to the high school family and consumer science program. We recommend adapting the existing building trades shop for middle school technology education. We recommend adapting existing industrial arts shop to better-support future middle school course options, such as horticulture, makerspace, graphic arts, video studio, or a fabrication lab.

Option 5: District-wide Consolidation Grades Pre-K to 5, 6 to 8, and 9 to 12

Adapting Upper Dauphin Area Elementary and Middle School to grades Pre-K to 5: This campus is already configured grade Pre-K to 8, with a Pre-K to 4 elementary school and a separate 5 to 8 middle school. We assessed the student capacity to adapt this elementary school and middle school to a grade Pre-K to 5 elementary school at 1,025 students. This school has sufficient capacity to house the projected, combined K to 5 enrollment of 780 in fall 2021.

The 2-story middle school classroom wing can be appropriately adapted to fit 'intermediate' grades 3 to 5. The elementary school side can be appropriately adapted to fit 'primary' grades K to 2 with five vacant classrooms remaining. The Pre-K to 5 configuration would warrant a separate building administrator (Principal or Assistant) for the Pre-K to 2 primary grades versus 3 to 5 intermediate grades. This school already has two separate building administrator offices.

Duplicated nurse's suite, art, music, and computer labs would be vacant, however. Middle school program space for family and consumer science and industrial arts will also be vacant. The location of vacant space near the exiting Upper Dauphin Area District Administration Office might be adapted to consolidate the combined school district administration on the existing Upper Dauphin Elementary and Middle School and District Administration Office campus.

Adapting Millersburg Area Middle and High School to grades 6 to 8: This campus is already configured grade 6 to 12, with a small 6 to 8 middle school and a separate 9 to 12 high school. We assessed the student capacity to adapt this middle school and high school to a grade 6 to 8 middle school at 800 students. This school has sufficient capacity to house the combined 6 to 8 projected enrollment of 437 in fall 2021. The second floor of the 2-story middle school wing could provide regular classrooms and science lab for grade 6. The high school classrooms and science labs could support grades 7 and 8.

We recommend reclaiming the use of the family and consumer science labs, as a complementary program to the high school family and consumer science program. We recommend adapting the existing building trades shop for middle school technology education. We recommend adapting the existing industrial arts shop to better-support future middle school course options, such as horticulture, makerspace, graphic arts, video studio, or a fabrication lab.

Option 5 provides the best natural fit of grades Pre-K to 5 to the existing Upper Dauphin Elementary and Middle School, and a better fit for the multi-disciplinary teaming for grades 6 to 8 in the existing Millersburg 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. For these reasons, we recommend Option 5.

Conclusions and Recommendation:

Considering combined enrollment and the configuration options, we recommend Option 5 as the best match for the facility needs of the students. Option 4 remains feasible, but is an inefficient grade-level fit to the existing Upper Dauphin Area Elementary and Middle School. Option 3 remains feasible, but would require significant alterations/adaptations at an added construction cost. Option 2 provides insufficient student capacity for the projected enrollment, particularly at the elementary grades. Option 1 would leave the combined school districts with a projected 1,392 vacant seats in fall 2021, growing to a projected 1,627 vacant seats in fall 2018.

The combination of the two districts will require attention to the following areas:

- Program fit of the combined, projected enrollment of grades 9 to 12 district wide into the current Upper Dauphin Area High School building (regardless of the grade configuration decided for the elementary and middle years students)
- Selection of grade configuration for elementary and middle years students
- Dual enrollment and online programming spatial needs
- Consolidation of the combined District Administration Office
- Future use of Lenkerville Elementary School and property
- Needed modifications at Millersburg Area Middle and High School for adaptive use of program spaces, as required for the chosen Option
- Special education and pupil support spatial needs
- Course options and classroom availability, particularly as it relates to science labs, art rooms, and music rooms

The grade configuration decision could lead to construction costs for adaptive changes, as identified. District facilities will always require maintenance and periodic renewal/replacement. Long-term District planning anticipates a process of planning, implementation, and evaluation, which identifies needed facility upgrades and changes in parallel with advancements in educational programming. Planned systemic replacements provide opportunities to re-assess educational program needs, to optimize construction budgets and minimize demolition of building assets prior to the end of their useful lives. The facility plan for a combined school district, like the curriculum and financial plan, serves as a starting point for the schools of tomorrow.

CHAPTER 3
HISTORICAL FINANCES AND FINANCIAL PROJECTIONS
OF INDIVIDUAL DISTRICTS

Introduction

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 was 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 deficits of $50,426 in 2015-16 and $198,425 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). (See Table 3-1.)

Table 3-1: 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
Surplus/(Deficit)	**$136,133**	**$175,080**	**-$50,426**	**$281,834**	**-$198,425**		

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. EIT spiked in 2016-17 to $778,203, ending the five-year period at $673,264, an overall growth of 7.7 percent. (See Table 3-2.)

Table 3-2: Millersburg 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	$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
Local Services Taxes	0	0	0	0	0	0	0.0
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
Bus Privilege Taxes	0	0	0	0	0	0	0.0
Mercantile Taxes	0	0	0	0	0	0	0.0
Delinquent Taxes	541,959	573,071	412,370	637,786	527,518	-14,441	-2.7
Other Local Revenue	871,777	1,135,535	690,982	875,111	862,416	-9,362	-1.1
Total Local Revenue	7,064,508	7,477,034	6,997,001	7,684,331	7,729,752	665,244	9.4

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. (See Table 3-3 and Graph 3-1.)

Table 3-3: Millersburg 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	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
Total State Revenue	**5,698,977**	**5,911,377**	**6,235,158**	**6,431,769**	**6,606,840**	**907,864**	**15.9**

Graph 3-1: Millersburg Area School District Revenue by Source
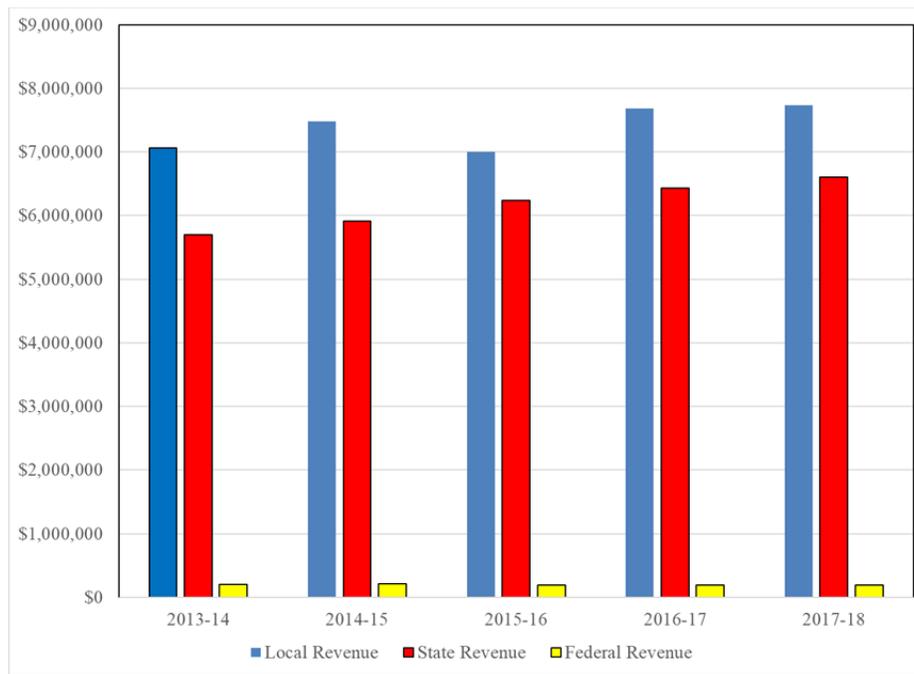
Millersburg Area Expenditures

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. (See Table 3-4.) 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 includes 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 3-4: Millersburg Area School District Expenditures by Function

	Actual 2013-14	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
Total Expenditures	**$12,831,135**	**$13,423,393**	**$13,470,248**	**$14,024,611**	**$14,725,126**	**1,893,992**	**14.8**
	Percent of Total						
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		
Total Expenditures	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**		

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. (See Table 3-5.)

Table 3-5: Millersburg Area School District Expenditures by Object

	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18	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	714,173	14,741	15,336	771,466	987,118	272,945	38.2
Total Expenditures	12,831,135	13,423,393	13,470,248	14,024,611	14,725,126	1,893,992	14.8
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	5.6	0.1	0.1	5.5	6.7		
Total Expenditures	100.0	100.0	100.0	100.0	100.0		

Millersburg Area Existing Debt Levels and Time Frames to Retire Debt

Millersburg Area's outstanding debt includes $8,725,000 remaining from the principal amount of its Series of 2015 General Obligation Bonds. (See Table 3-6.) As noted previously, proceeds of the bonds were 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. (See Table 3-7.)

Table 3-6: Millersburg Area School District General Obligation Debt
Principal Amount Outstanding as of December 31, 2018

Series	Outstanding	Date of Maturity
Series of 2015	$8,725,000	2034

Source: Official Bond Statements

Table 3-7: 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 this report, actual numbers for the 2018-19 FY were not available. Millersburg Area budgeted deficits of $675,276 for the 2018-19 FY and $558,944 for the 2019-20 FY. (See Table 3-8.)

Table 3-8: Millersburg Area School District Budgets

Revenue	Budget 2018-19	Budget 2019-2020
Local Taxes	$6,914,897	$7,036,853
Local Other Revenue	613,175	648,175
State Revenue	6,583,771	6,746,990
Fed Revenue	211,876	212,233
Other Revenue	0	0
Total Revenue	**14,323,719**	**14,644,251**
Expenditures		
Instruction	9,462,811	9,513,278
Support Services	4,360,324	4,508,043
Non-Instructional	334,860	339,854
Fac,Acq & Cons	30,500	50,500
Other Fin Use	810,500	791,520
Total Expenditures	**$14,998,995**	**$15,203,195**
Surplus/(Deficit)	**-675,276**	**-558,944**

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

Based on the assumptions, Millersburg Area's projected revenue as shown in Table 3-9 is anticipated to grow by $497,361 or 4.9 percent through 2023-24. (See Table 3-9.) 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 3-9: Millersburg Area School District Projected Revenue by Source

		Budget 2019-2020	Projected 2020-21	Projected 2021-22	Projected 2022-23	Projected 2023-24	Change 2019-20 to 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
	Total Local Revenue	$7,685,028	$7,701,028	$7,717,228	$7,733,631	$7,750,238	65,210	0.8
	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
	Total All Revenue	**14,644,251**	**14,725,546**	**14,808,030**	**14,899,296**	**14,985,749**	**497,361**	**4.9**

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 were used through 2019-20
- Increases for 2020-21 through 2023-24 were 1.5 percent annually.
- PSERS contributions were increased by estimated percentages
- Other Employee Benefits were increase by 6.0 percent
- No new debt was incurred; debt amortization schedules were used to project expense.
- Other expenditures were increased 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 9.6 percent. Table 3-11 shows the largest increase in Personnel Services – Employee Benefits, growing by $785,548 or 17.6 percent. The Purchased Services Other category, which includes tuition payments to other districts, vo-techs, colleges and charter schools, is projected to rise by $143,351 or 8.4 percent. (See Tables 3-10.)

Table 3-10: Millersburg 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	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 Non Instructional 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	791,520	788,096	787,966	797,996	797,696	6,176	0.8
Total Expenditures	**15,203,195**	**15,513,901**	**15,876,193**	**16,274,653**	**16,660,873**	**1,457,678**	**9.6**

Millersburg Area Surplus/(Deficit)

Projections indicate annual growing deficits for Millersburg Area. The projected 2019-20 budget deficit of $558,944 grows to a $1,675,123 deficit in 2023-24. During this period, expenditures increase by $1.5 million or 9.6 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. (See Table 3-11.)

Table 3-11: Millersburg Area School District Surplus/(Deficit)

	Budget 2019-2020	Projected 2020-21	Projected 2021-22	Projected 2022-23	Projected 2023-24
Revenues	14,644,251	14,725,546	14,808,030	14,899,296	14,985,749
Expenditures	15,203,195	15,513,901	15,876,193	16,274,653	16,660,873
Surplus/(Deficit)	**-558,944**	**-788,354**	**-1,068,164**	**-1,375,357**	**-1,675,123**

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. (See Table 3-12.)

Table 3-12: Millersburg Area Fund Balance

	Budget
	2019-2020
Committed Fund Balance	725,000
Assigned Fund Balance	1,085,354
Unassigned Fund Balance	1,486,681
Total Fund Balance	**3,297,035**
Budgetary Reserve	**70,000**

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 12.8 percent during the historical review period, while expenditures grew by $2.1 million (12.1 percent). (See Table 3-13.)

Table 3-13: 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
Surplus/(Deficit)	43,779	-396,254	1,294,216	477,285	349,415		

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. (See Table 3-14.)

Table 3-14: 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
Total Local Revenue	**$4,077,225**	**$4,487,802**	**$4,462,873**	**$4,506,910**	**$4,722,253**	**645,028**	**15.8**

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. (See Table 3-15 and Graph 3-2.)

Table 3-15: 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	117,507	33,758	59,492	50,968	28,322	-89,185	-75.9
Total State Revenue	**8,781,627**	**9,307,744**	**9,804,137**	**9,709,770**	**10,176,359**	**1,394,732**	**15.9**

Graph 3-2: Upper Dauphin Area School District Revenue by Source
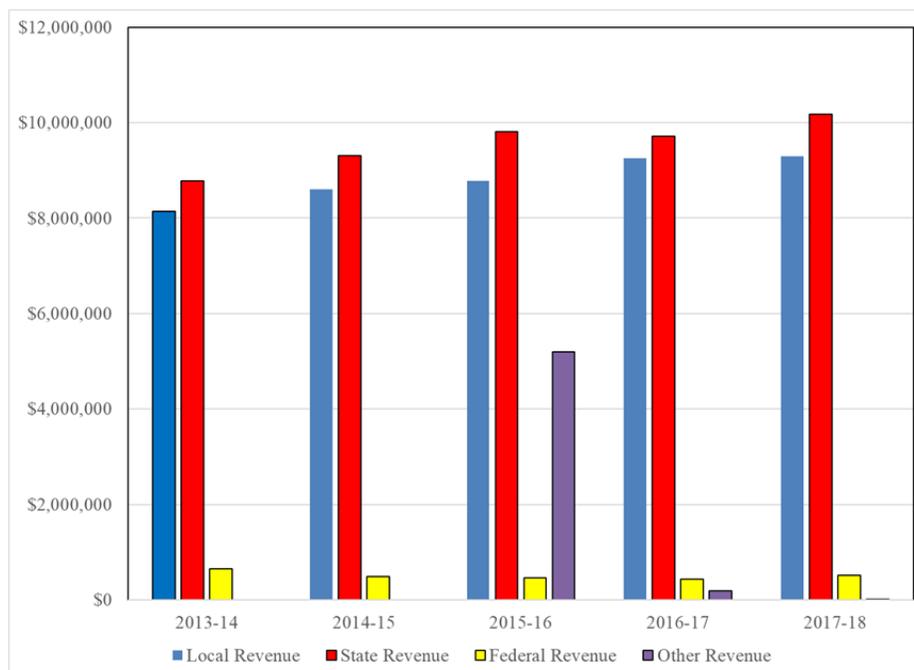
Upper Dauphin Area Expenditures

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. (See Table 3-16.)

Table 3-16: Upper Dauphin Area School District Expenditures by Function

	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18	Change 2013-14 to 2017-18 $	%
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	1,441,951	2,019,352	6,198,988	1,027,783	1,092,426	-349,524	-24.2
Total Expenditures	**$17,530,154**	**$18,798,399**	**$22,955,386**	**$19,113,474**	**$19,654,287**	**2,124,133**	**12.1**
	Percent of Total						
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	8.2	10.7	27.0	5.4	5.6		
Total Expenditures	100.0	100.0	100.0	100.0	100.0		

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 $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. (See Table 3-17.)

Table 3-17: Upper Dauphin Area School District Expenditures by Object

	Actual 2013-14	Actual 2014-15	Actual 2015-16	Actual 2016-17	Actual 2017-18	Change 2013-14 to 2017-18 $	%
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
Total Expenditures	**$17,530,154**	**$18,798,399**	**$22,955,386**	**$19,113,474**	**$19,654,287**	**2,124,133**	**12.1**
	Percent of Total						
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		
Total Expenditures	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**		

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. (See Tables 3-18 and 3-19.)

Table 3-18: Upper Dauphin Area School District General Obligation Debt
Principal Amount Outstanding as of December 31, 2019

Series	Outstanding	Date of Maturity
Series of 2005	$1,440,000	2020-21
Series of 2019	$5,330,000	2030-31

Source: Official Bond Statements

Table 3-19: Upper Dauphin Area 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	$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 this report, actual numbers for 2018-19 were not available. Upper Dauphin Area budgeted deficits for 2018-2019 ($450,192) and 2019-20 ($336,897). (See Table 3-20.)

Table 3-20: Upper Dauphin Area School District Budgets

	Budget 2018-19	Budget 2019-2020
Revenue		
Local Taxes	$8,817,114	$8,952,645
Local Other Revenue	433,100	543,100
State Revenue	9,941,063	9,953,280
Fed Revenue	418,843	517,431
Other Revenue	0	0
Total Revenue	**$19,610,120**	**$19,966,456**
Expenditures		
Instruction	$12,924,595	$12,999,524
Support Services	5,692,282	5,841,414
Non-Instructional	417,063	436,043
Fac,Acq & Cons	0	0
Other Fin Use	1,026,372	1,026,372
Total Expenditures	**$20,060,312**	**$20,303,353**
Surplus/(Deficit)	**-$450,192**	**-$336,897**

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 remained constant.
- Earned income tax showed moderate growth (1.25 percent annually) as local income increases.
- Basic Education Funding was grown at 0.5 percent annually.
- State Special Education Funding was increased 2.0 percent annually.
- State aid for pensions was increased at the same percentages at which PSERS contributions are expected to grow.
- State share for Social Security taxes and Medicare was increased at the same rate as employee salaries.
- Other state revenues were kept at 2019-20 budgeted levels or increased by two percent.
- Federal and Other Revenues were 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.   (See Table 3-21.)

Table 3-21: Upper Dauphin Area School District Projected Revenue by Source

	Budget 2019-2020	Projected 2020-21	Projected 2021-22	Projected 2022-23	Projected 2023-24	Change 2019-20 to 2023-24 $	%
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	543,100	543,100	543,100	543,100	543,100	0	0.0
Total Local Revenue	$9,495,745	$9,517,370	$9,539,265	$9,561,434	$9,583,880	88,135	0.9
Total State Revenue	9,953,280	10,042,293	10,132,595	10,233,743	10,328,662	375,382	3.8
Total Federal Revenue	517,431	517,431	517,431	517,431	517,431	0	0.0
Total Other Revenue	0	0	0	0	0	0	0.0
Total All Revenue	**$19,966,456**	**$20,077,094**	**$20,189,291**	**$20,312,608**	**$20,429,973**	463,517	2.3

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 were used through 2019-20.
- Increases for 2020-21 through 2023-24 were 1.5 percent annually.
- PSERS contributions were increased by estimated percentages
- Other Employee Benefits were increased by 6.0 percent
- No new debt is incurred; debt amortization schedules were used to project expense.
- Other expenditures were 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. (See Table 3-22.)

Table 3-22: 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
Total Expenditures	**20,303,563**	**20,815,889**	**21,196,053**	**21,819,690**	**22,339,505**	**2,035,942**	**10.0**

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. (See Table 3-23.)

Table 3-23: 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
Surplus/(Deficit)	**-337,107**	**-738,795**	**-1,006,762**	**-1,507,082**	**-1,909,532**

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 balance 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 PS Section 6-688). (See Table 3-24.)

Continuing deficits will erode the balance.

Table 3-24: Upper Dauphin Area School District Fund Balance

	Budget
	2019-2020
Committed Fund Balance	5,344,562
Unassigned Fund Balance	1,624,268
Total Fund Balance	**$6,968,830**

CHAPTER 4
FINANCIAL IMPACTS OF A COMBINED DISTRICT

Both districts will face significant deficits over the next several years whether they combine or not. Combining the districts involves equalizing the millage rates as well as adjusting the salary and benefits schedules for professional and support staff and realigning of the administration. This section looks at the estimated financial effects of combining the districts.

Revenue Impacts for a Combined District

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 equalizing taxes between the two districts for the first year of the combined district. The following analysis uses 2019-20 budget year 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 93.0 percent of levied property taxes on a current basis; Upper Dauphin Area collects about 91 percent.

Regarding the possible approaches to equalizing the real estate millage rates for a combined district, 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. The combined district has options available to equalize the tax rate upon the combined district. One option would be to apply the lower current tax rate to all residents (Upper Dauphin Area at 18.8775 mills), Another option would be to use the higher millage rate of Millersburg Area at 21.019 mill, or to use a revenue neutral approach, that is a new tax rate that produces the same amount of revenue for the combined district. The financial impact of each option will be presented below. However, the various analyses that follow will utilize the assumption of the lower of the two current rates as a financial baseline — that is, Upper Dauphin Area's current rate of 18.8775 millage.

Millersburg Area's 2019-20 millage rate is 21.019. Applying the lower Upper Dauphin Area millage rate of 18.8775 mills to the Millersburg Area tax base produces a reduction in real estate taxes. The estimated drop in real estate tax revenue is $547,522. (See Table 4-1.)

Table 4-1: Millersburg Area Tax Revenue at Upper Dauphin Area Rates

	Millersburg Area @ Current Mills 21.019	Millersburg Area @ UD Mills 18.8775	Tax Revenue Variance
Approximate Tax Revenue from RE Taxes	$5,214,138	$4,666,616	**-$547,522**

Upper Dauphin Area's current rate is 18.8775. Applying the higher Millersburg Area millage rate of 21.019 mills to the Upper Dauphin Area tax base produces a gain in real estate taxes. The estimated gain real estate tax revenue is $689,090. (See Table 4-2.)

Table 4-2: Upper Dauphin Area Tax Revenue at Millersburg Area Rates

	Upper Dauphin Area @Current Mills 18.8775	Upper Dauphin Area @ Millersburg Area 21.019	Variance
Approximate Tax Revenue from RE Taxes	$6,412,145	$7,101,235	**$689,090**

If the combined district stayed revenue neutral, that is the total real estate tax revenue remained unchanged, the calculated millage rate would be approximately 19.800. Applying the revenue neutral millage would result in an approximate millage increase for Upper Dauphin Area (0.9225) and a decrease for Millersburg Area (-1.219). (See Table 4-3.)

Table 4-3: Revenue Neutral

Approximate Revenue Neutral Millage Rate	Millersburg Area	Upper Dauphin Area
19.800 Mills	Decrease (1.219 mills)	Increase (0.9225)

Except for real estate millages, all other local tax rates are the same in both districts. (See Table 4-4.)

Table 4-4: 2019-20 Real Estate Tax Millage and Other Tax Rates

	Millersburg Area	**Upper Dauphin Area**
Real Estate Tax Millage	21.019	18.8775
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%

As shown in Table 4-5, 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 $547,522.

Table 4-5: Local Revenue Summary Budget 2019-2020

	Millersburg Area	Upper Dauphin Area	Adjustment	Combined
Current Real Estate Taxes	$5,214,138	$6,412,145	-$547,522	$11,078,761
Interim Real Estate Taxes	8,500	20,000	0	28,500
Public Utility Realty Taxes	6,900	7,500	0	14,400
PILOTS - State / Local	315	13,000	0	13,315
Current Per Capita Taxes, Section 679	18,500	25,000	0	43,500
Current Act 511 Taxes - Flat Rate Assessments	18,500	25,000	0	43,500
Current Act 511 Taxes – Proport Assessments	1,280,000	1,730,000	0	3,010,000
Delinquencies on Taxes Levied	490,000	720,000	0	1,210,000
Other Local Revenue	648,175	543,100	0	1,191,275
Total Local Revenue	**$7,685,028**	**$9,495,745**	**-$547,522**	**$16,633,251**

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 4-6 shows the Market Value/Weighted Average Daily Membership, the Personal Income/Weighted Average Daily Membership, and the Aid Ratios using this method.

Table 4-6: Market Value/Personal Income and Total Aid Ratios

	Millersburg Area	Upper Dauphin Area	Combined
District MV	322,858,588	478,060,811	800,919,399
State MV	855,970,374,734	855,970,374,734	833,520,323,913
District WADM	976.390	1437.576	2,413.966
State WADM	1,994,948.073	1,994,948.073	1,994,948.073
District PI	142,584,005	179,932,094	322,516,099
State PI	339,831,330,362	339,831,330,362	339,831,330,362
District MV/WADM	330,666	332,546	331,786
State MV/WADM *	429,069	429,069	429,069
District PI/WADM	146,032	125,164	133,604
State PI/WADM	175,527	175,527	175,527
District PIAR	0.5840	0.6435	0.6194
District MVAR	0.6147	0.6125	0.6134
District MVPIAR	0.6024	0.6249	0.6158

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 effects upon the local revenue available. The ultimate impact on local revenue will depend to a large extent on decisions made relative to the millage rate, the combining of salary schedules, employment agreements and PDE calculations. For purposes of this analysis and to provide a conservative estimation of the financial impact on local revenues, the lower millage rate of Upper Dauphin Area is used.

CHAPTER 5
ENROLLMENT, DEMOGRAPHICS AND TAXES

Introduction

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 Area Borough and Upper Paxton Township. The Millersburg Area operates three schools, Lenkerville Elementary (K-5), Millersburg Area Middle School (6-8) and Millersburg Area High School. It also offers online leaning 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. Dauphin Upper 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).

Millersburg Area and Upper Dauphin Area School Districts in Dauphin County
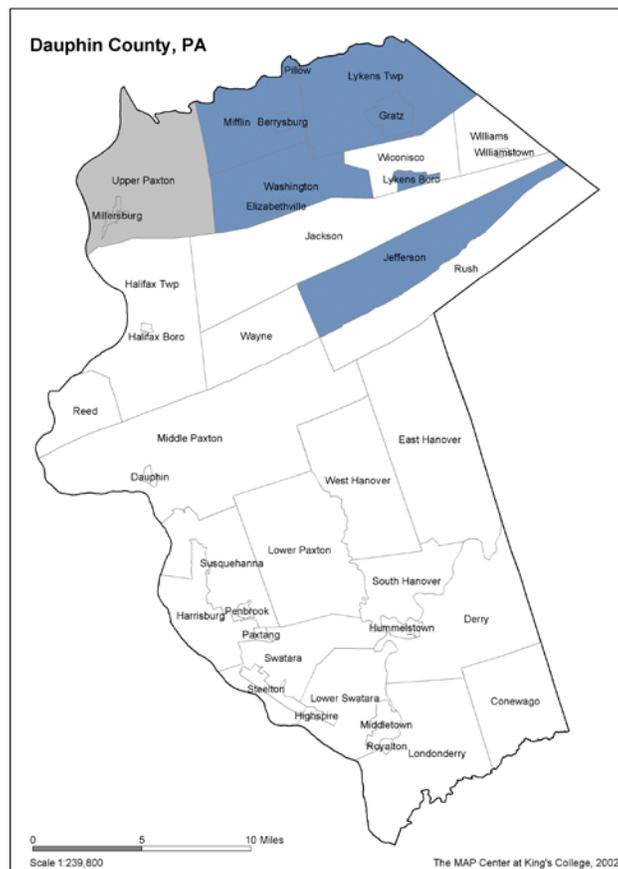
From 2006-07 through 2018-19, total enrollment in both districts declined. For Millersburg Area, enrollment fell from a high of 949 in 2006-07 to 816 in 2016-17, then before decreasing to fewer than 800 students in 2017-18. During the same period, Upper Dauphin Area's total enrollment also declined from a high of 1,282 in 2006-07 to a low of 1,122 in 2018-19. Millersburg Area's total enrollment fell by 20.1 percent during the review period; Upper Dauphin Area was down by 13.6 percent.

Student Enrollment as of October 1st Census

Year	Millersburg Area				Upper Dauphin Area				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
Change 2006-07 to 2018-19	-164	-17.3				-160	-12.5			-324	-14.5
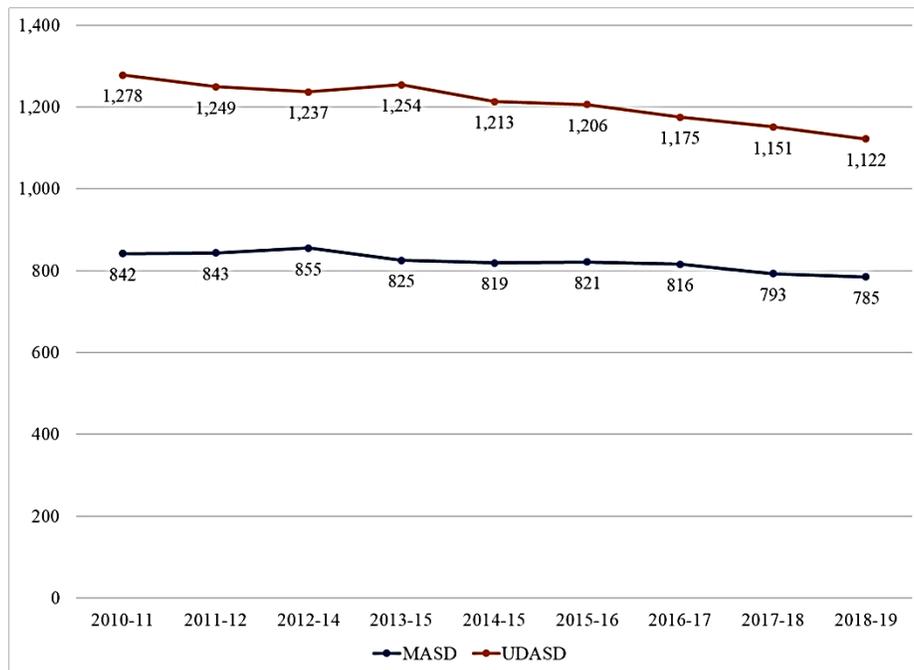
Enrollment Projections

Enrollment trends for Millersburg Area and Upper Dauphin Area 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
Change 2018-19 to 2023-24				**-136**	**-7.4**

Elementary Projections

Three configurations of elementary projections are presented below based on options outlined elsewhere in this report. K-4 enrollments during the projection period decrease by 56 students from 672 in 2018-19 to 616 in 2023-24. K-5 enrollments drop from 825 to 750 or a loss of 75 students. K-8 enrollments fall from 1,296 to 1,156 for a loss of 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
Change 2018-19 to 2023-24				**-56**	**-8.3**

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
Change 2018-19 to 2023-24				**-75**	**-9.1**

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
Change 2018-19 to 2023-24				**-140**	**-10.8**

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. Enrollments in grades 6-8 decrease by 65.

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
Change 2018-19 to 2023-24				**-84**	**-13.5**

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
Change 2018-19 to 2023-24				**-65**	**-13.8**

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 is 4 pupils or 0.6 percent for the period 2018-19 through 2023-24.

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
Change 2018-19 to 2023-24				**4**	**0.6**

Demographic Profile

Millersburg Area Demographic Profile

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

	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%
Total	**6,492**	**100.0%**	**6,718**	**100.0%**	**226**	**3.5%**
	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%
Total	**6,492**	**100.0%**	**6,718**	**100.0%**	**226**	**3.5%**
	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%
Total	**6,492**	**100.0%**	**6,716**	**100.0%**	**224**	**3.5%**

Source: Census data accessed 07.31.2019 website: http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

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

Upper Dauphin Area 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%
Total	**8,766**	**100.0%**	**9,752**	**100.0%**	**986**	**11.2%**
	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%
Total	**8,766**	**100.0%**	**9,752**	**100.0%**	**986**	**11.2%**
	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%
Total	**8,766**	**100.0%**	**9,752**	**100.0%**	**986**	**11.2%**

Total combined population grew by 1,244 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

	2000		2010		2000 to 2010 Change	
Male	7,486	49.1%	8,150	49.5%	664	8.9%
Female	7,772	50.9%	8,320	50.5%	548	7.1%
Total	**15,258**	**100.0%**	**16,502**	**100.0%**	**1,244**	**8.2%**
	2000		2010		2000 to 2010 Change	
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%
Total	**15,258**	**100.0%**	**16,470**	**100.0%**	**1,212**	**7.9%**
	2000		2010		2000 to 2010 Change	
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%
Total	**15,258**	**100.0%**	**16,502**	**100.0%**	**1,244**	**8.2%**

Housing Profile
2000 and 2010 Census Figures

The total number of housing units in Millersburg Area 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 Area 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
Total	**2,843**	**100.0**		**3,074**	**100.0**		**231**	**8.1**

Source: Census data accessed 07.31.2019, website: http://factfinder.census.gov/faces/nav/jsf/pages/community_facts.xhtml

The total number of housing units in Upper Dauphin Area 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 Area 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
Total	**3,695**	**100.0**		**4,193**	**100.0**		**498**	**13.5**

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
Total	**6,538**	**100.0**		**7,267**	**100.0**		**729**	**11.2**

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. Another positive indicator is a growth in owner occupied units and a decline in renter occupied units, which points 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.

The majority of the municipalities' poverty levels are below the county average. Most of the municipalities have a median household and family income levels that are below the Dauphin 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
Millersburg Area						
Millersburg Area 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%
Upper Dauphin Area						
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 Area, the number of students eligible for free and reduced lunch was 41.2 percent in 2018-19 compared to 19.8 percent in 2006-07. In Upper Dauphin Area, the amount grew from 21.5 percent in 2006-07 to 46.2 percent in 2018-19.
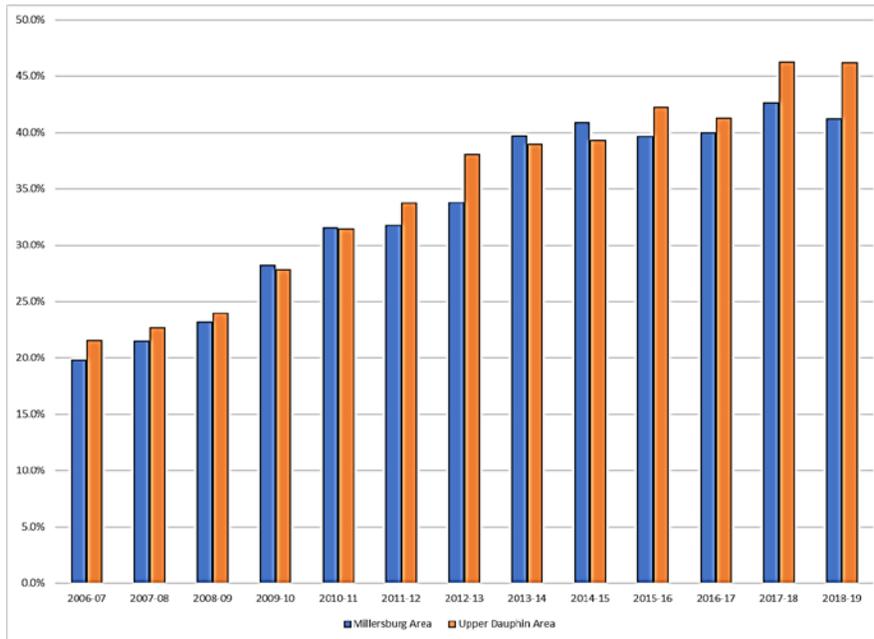
Millersburg Area

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 Area

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

Assessed Property Value by Municipality
2018

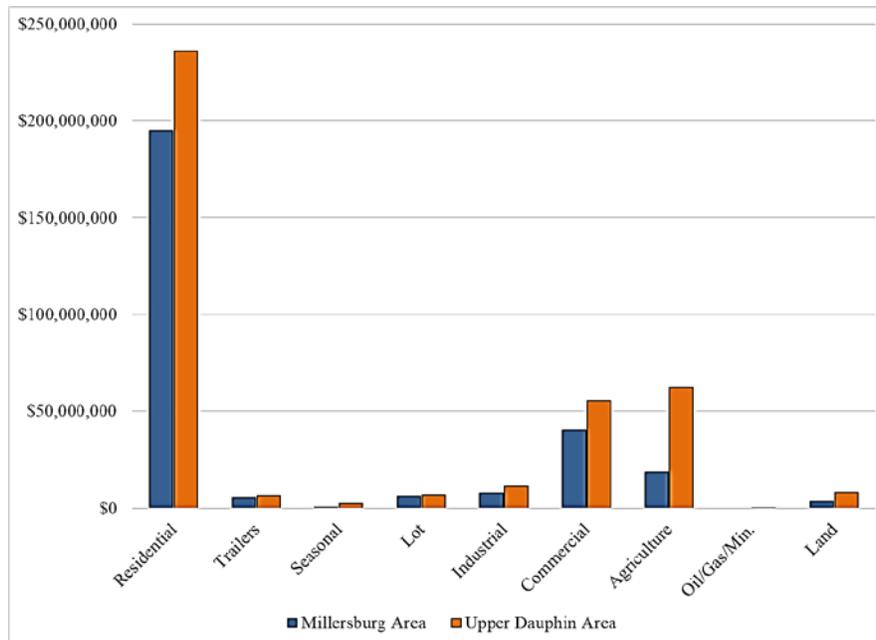|	Assessed Value	% of Total
Millersburg Area Borough	$75,221,500	11.3
Upper Paxton Township	201,113,100	30.3
Berrysburg Borough	9,971,400	1.5
Elizabethville Borough	41,797,600	6.3
Gratz Borough	27,736,900	4.2
Jefferson Township	21,417,400	3.2
Lykens Borough	43,614,100	6.6
Lykens Township	70,935,600	10.7
Mifflin Township	43,890,900	6.6
Pillow Borough	8,531,000	1.3
Washington Township	120,494,500	18.1
Total	**$664,724,000**	**100.0**
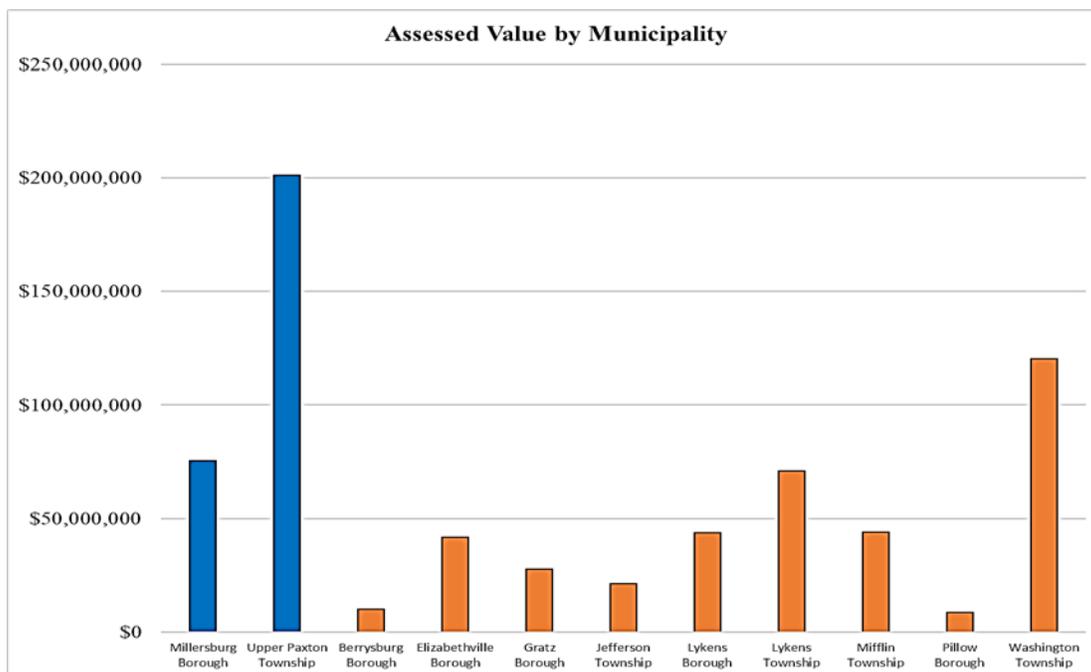
Distribution of Assessed Value by Type and Use
2018

The combined property tax base of Millersburg Area and Upper Dauphin Area 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.

Distribution of Assessed Value by Type and Use
2018

	Millersburg Area			Upper Dauphin Area	
	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
TOTAL	**$276,334,600**	**100.0**		**$388,389,400**	**100.0**

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 Area market value has grown by 20.6 percent or $56.0 million, while assessed values grew by 2.3 percent or $6.2 million since 2008. 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 Area'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) limits on 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%
Change 2008 - 2018		**56,004,933**	**20.6**		**6,224,300**	**2.3**		

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%
Change 2008 - 2018		117,595,377	30.5		23,867,400	6.5		

Market vs. Assessed Value
2008 - 2018
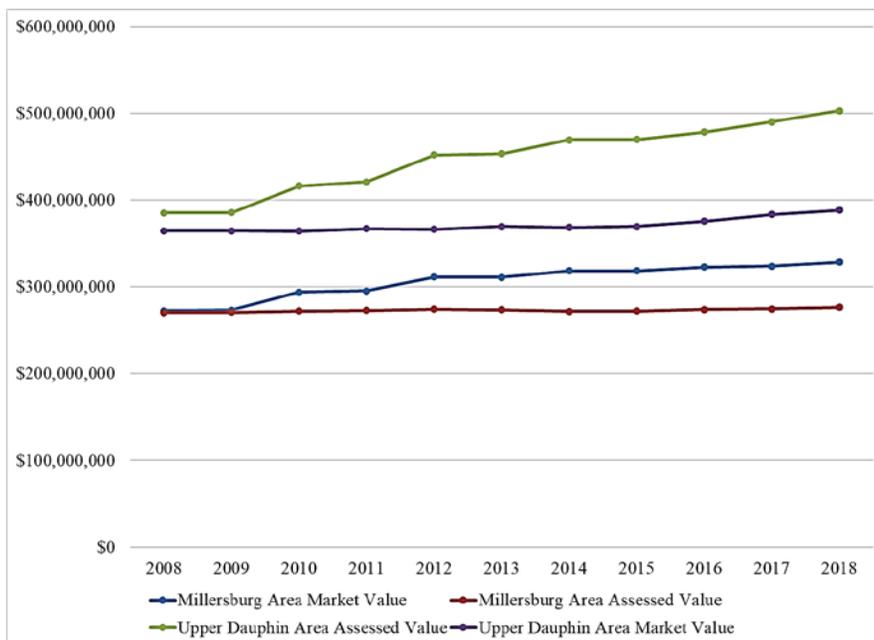
Source: State Tax Equalization Board, Accessed 07.29.2019. Most recent data available.

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 Area increased from 15.26 mills in 2006-07 to 21.019 mills for the 2019-20 school year or 37.7%. Upper Dauphin Area 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 Area			Upper Dauphin Area	
	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%
Change 2006-2007 to 2019-20	**5.7590**	**37.7%**		**4.1275**	**28.0%**

**Real Estate Tax Rates**
2006-07 to 2019-20
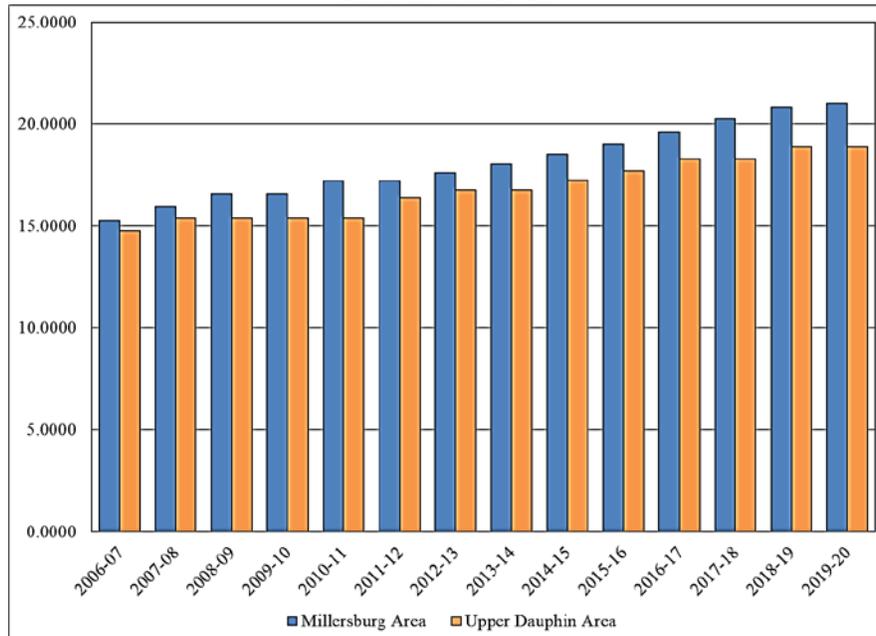
Act 1 Index and History

Act 1 of 2006 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. 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 Area's Act 1 index of 2.8 and Upper Dauphin Area'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 Area, Upper Dauphin Area
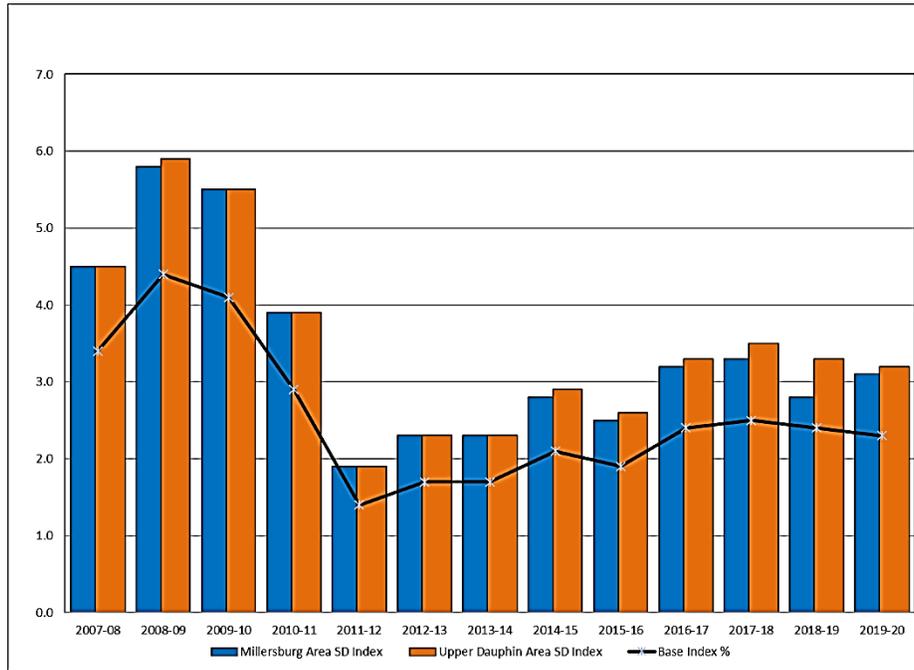
District Aid Ratios

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 MVPIAR 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 for market value and personal income.
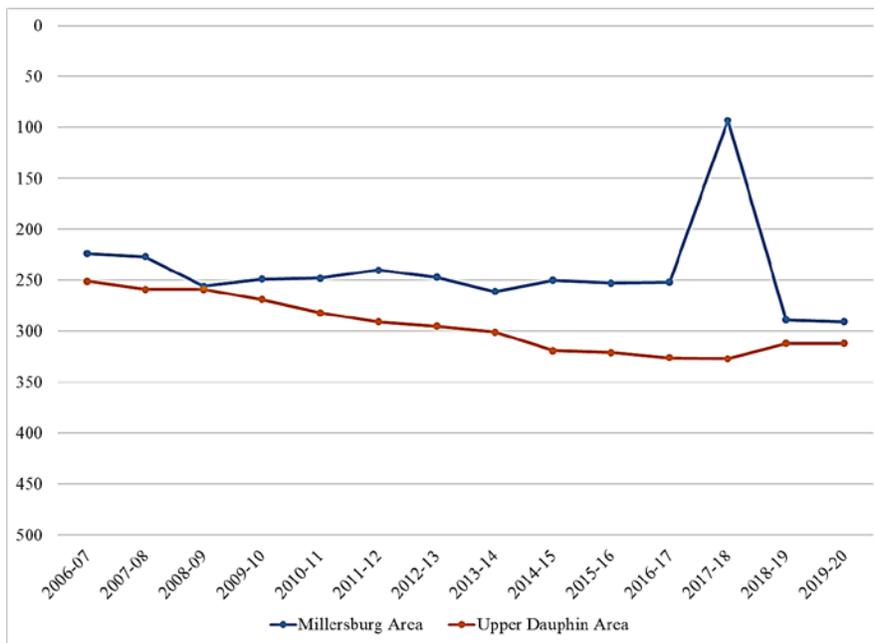
Millersburg Area Aid Ratios[1]

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 Area Aid Ratios

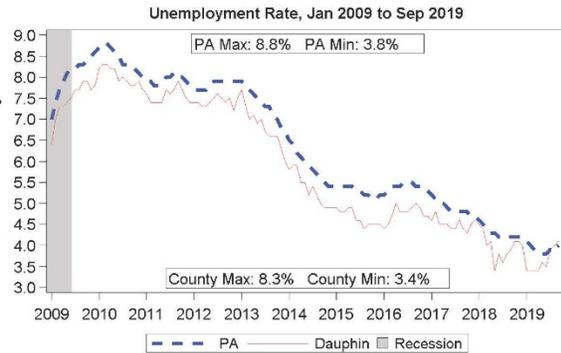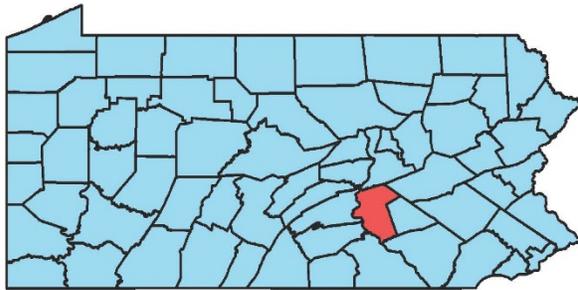| YEAR	MV / PI Aid Ratio	MV Aid Ratio	PI Aid Ratio	Rank
2006-07	0.5872	0.5987	0.5701	251
2007-08	0.5898	0.6028	0.5705	259
2008-09	0.5959	0.6128	0.5708	259
2009-10	0.6054	0.6048	0.6067	269
2010-11	0.6155	0.6197	0.6094	282
2011-12	0.6248	0.6310	0.6156	291
2012-13	0.6260	0.6246	0.6284	295
2013-14	0.6262	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

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[1] Note: Millersburg Area had a one-time spike in personal income that impacted the aid ratio for 2017-18.

Aid Ratio Relative Ranking

Dauphin County Profile

October 2019

Unemployment Rate, Jan 2009 to Sep 2019

PA Max: 8.8%   PA Min: 3.8%

County Max: 8.3%   County Min: 3.4%

- - - PA   —— Dauphin   ▨ Recession

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**
September 2019	10,263	293,519
September 2018	10,890	300,494
Annual Volume Change	-627	-6,975
Annual Percent Change	-5.8%	-2.3%

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		
Sep 2019	**County**	**PA**
Unemployment Rate	4.1%	4.0%
Labor Force	143,300	6,492,000
Employed	137,500	6,231,000
Unemployed	5,800	260,000

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

Unemployment Compensation Exhaustees				
Oct 2018 to Sep 2019	**Volume**		**Percent of Total**	
Pre-UC Industry	**County**	**PA**	**County**	**PA**
Natural Resources & Mining	0	760	0.0%	1.0%
Construction	110	9,660	6.5%	12.0%
Manufacturing	160	9,200	10.0%	11.0%
Trade, Transportation & Utilities	410	16,380	25.0%	20.0%
Information	20	1,390	1.0%	1.5%
Financial Activities	120	4,750	7.5%	6.0%
Professional & Business Services	380	15,250	23.5%	18.5%
Education & Health Services	230	13,750	14.0%	17.0%
Leisure & Hospitality	90	6,000	5.5%	7.5%
Other Services	30	2,340	2.0%	3.0%
Government	40	840	2.5%	1.0%
Info Not Available	40	1,680	2.5%	2.0%
Total	1,630	82,000	100%	100%

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

Top 10 Employers by Employment in Q1 of 2019
State Government
Milton S Hershey Medical Center
The Hershey Company
Hershey Entertainment & Resorts Co
UPMC Pinnacle Hospitals
Federal Government
Pennsylvania State University
PHEAA
United Parcel Service Inc
Tyco Electronics Corporation

Source: Quarterly Census of Employment and Wages

Center for Workforce Information & Analysis

Dauphin County Profile

October 2019

Quarterly Census of Employment and Wages, 2018 Annual Averages								
		Estab.		**Employment**		**Employment %**		**Wages**	
NAICS	**NAICS Description**	**County**	**LQ**	**County**	**PA**	**County**	**PA**	**County**	**PA**
	Total, All Industries	7,475	1.00	184,687	5,867,775	100.0%	100.0%	$54,793	$55,627
11	Agriculture, Forestry, Fishing and Hunting	27	ND	ND	24,721	ND	0.4%	ND	$36,189
21	Mining, Quarrying, and Oil & Gas	3	ND	ND	27,953	ND	0.5%	ND	$86,498
22	Utilities	24	1.12	1,236	34,980	0.7%	0.6%	$111,084	$100,610
23	Construction	469	0.69	5,765	264,074	3.1%	4.5%	$62,152	$66,387
31-33	Manufacturing	202	0.68	12,143	570,471	6.6%	9.7%	$62,663	$62,583
42	Wholesale Trade	333	1.00	6,833	217,396	3.7%	3.7%	$67,699	$80,059
44-45	Retail Trade	906	0.76	14,891	624,326	8.1%	10.6%	$27,431	$29,152
48-49	Transportation and Warehousing	236	1.27	12,150	304,978	6.6%	5.2%	$52,821	$49,372
51	Information	101	0.67	1,879	89,398	1.0%	1.5%	$69,182	$85,613
52	Finance and Insurance	404	1.39	11,502	263,286	6.2%	4.5%	$74,123	$95,386
53	Real Estate and Rental and Leasing	244	0.76	1,555	65,006	0.8%	1.1%	$45,846	$60,967
54	Professional and Technical Services	774	0.71	8,112	360,717	4.4%	6.1%	$81,191	$94,552
55	Management of Companies and Enterprises	91	0.96	4,143	136,817	2.2%	2.3%	$147,302	$129,285
56	Administrative and Waste Services	388	1.02	10,239	318,673	5.5%	5.4%	$36,372	$36,818
61	Educational Services	216	0.80	12,207	484,589	6.6%	8.3%	$52,549	$57,039
62	Health Care and Social Assistance	1,224	0.95	31,995	1,068,610	17.3%	18.2%	$60,944	$50,744
71	Arts, Entertainment, and Recreation	130	2.11	6,661	100,475	3.6%	1.7%	$23,045	$32,709
72	Accommodation and Food Services	709	0.93	13,905	474,698	7.5%	8.1%	$19,795	$18,747
81	Other Services (Except Public Administration)	841	1.01	6,421	201,392	3.5%	3.4%	$42,195	$34,098
92	Public Administration	153	3.07	22,751	235,216	12.3%	4.0%	$59,491	$61,665
	Total, Suppressed Local Industries	30		238		0.1%			
Company Ownership									
Total, All Ownership		7,475	1.00	184,687	5,867,775	100.0%	100.0%	$54,793	$55,627
Private Ownership		7,146	0.90	147,279	5,193,970	79.7%	88.5%	$53,918	$55,294
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%	$60,064	$62,352
Local Ownership		189	0.79	11,072	446,157	6.0%	7.6%	$50,607	$52,896

Notes: 'Estab.'-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					
		Entry-Level Wage		**Average Wage**	
SOC Code	**Major Occupational Group**	**County**	**PA**	**County**	**PA**
00-0000	Total, All Occupations	$23,080	$22,410	$51,140	$50,030
11-0000	Management	$63,250	$62,560	$113,250	$125,800
13-0000	Business & Financial Operations	$45,140	$44,670	$67,410	$74,800
15-0000	Computer & Mathematical	$49,730	$50,440	$77,530	$84,800
17-0000	Architecture & Engineering	$49,320	$47,870	$78,600	$80,040
19-0000	Life, Physical & Social Science	$41,360	$40,530	$65,950	$76,930
21-0000	Community & Social Services	$29,220	$29,490	$47,640	$45,440
23-0000	Legal	$43,330	$41,880	$94,060	$102,750
25-0000	Education, Training & Library	$29,510	$27,340	$57,410	$59,870
27-0000	Arts, Design, Entertainment, Sports & Media	$29,980	$23,560	$56,160	$51,080
29-0000	Healthcare Practitioners & Technical	$42,150	$39,010	$79,080	$75,860
31-0000	Healthcare Support	$23,280	$23,760	$31,220	$31,910
33-0000	Protective Service	$23,840	$22,480	$46,830	$45,870
35-0000	Food Preparation & Serving Related	$17,500	$17,510	$23,590	$24,400
37-0000	Building & Grounds Cleaning & Maintenance	$18,450	$19,920	$25,820	$29,260
39-0000	Personal Care & Service	$17,680	$18,910	$25,330	$26,320
41-0000	Sales & Related	$18,510	$18,820	$41,830	$41,670
43-0000	Office & Administrative Support	$25,290	$23,710	$40,520	$38,190
45-0000	Farming, Fishing & Forestry	$24,010	$19,190	$39,630	$33,200
47-0000	Construction & Extraction	$33,580	$31,770	$50,860	$53,070
49-0000	Installation, Maintenance & Repair	$30,210	$29,360	$49,440	$48,770
51-0000	Production	$25,440	$24,950	$39,680	$39,950
53-0000	Transportation & Material Moving	$24,240	$22,430	$37,770	$37,040

Note: 'ND' represents Non-Disclosable information.

pennsylvania
DEPARTMENT OF LABOR & INDUSTRY
CENTER FOR WORKFORCE INFORMATION & ANALYSIS

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Introduction

Given that the last set of major school district consolidations occurred in the 1950s and 1960s, there is no extensive current existing base of school district consolidation experience at any level of educational administration in Pennsylvania. The most recent school consolidation was Central Valley SD in Beaver County. This occurred for the 2009/10 school year. The PA School Code provides for several actions to be taken by several institutions.
The actions to be taken are specified for:
1. Each district involved in the consolidation.
2. The Department of Education.
3. The State Board of Education,

Role of the Districts

Pursuant to the provisions of the Pa School Code of 1949; 24 PS 2-224 (30 PL 224 (1949) and 1034 PL (1966): Any two or more school districts or administrative units may combine to create a larger school district. The board of school directors of each school district desiring to form such a combination shall, by a majority vote, adopt a resolution outlining the areas to be combined and file an application for approval to the Superintendent of Public Instruction and the State Board of Education.

The School Boards shall vote on the consolidation issue through board resolution. No public referendum is necessary. This resolution will include the effective date of the consolidation, meaning that the vote to consolidate can occur months or years before the consolidation is legally implemented. This separation in time may allow for curriculum planning, negotiating of existing collective bargaining agreements, and a host of other necessary activities.

Role of the Department of Education

The current language of the School Code in Section 2-224 provides that as part of the procedure leading to the approval application and review of the merged districts, the Department of Education may require information from the existing school districts as part of the application process. The School Code is silent on the specifics of what may or will be required.

Role of the State Board of Education

The current language of the School Code in Section 2-224 uses the term "the Superintendent of Public Instruction". Because of various revisions that have occurred since the adoption of the School Code, this term has become the function of the Secretary of the Department of Education

Further the School Code 24 PS 2-224 states the Superintendent of Public Instruction shall place on the agenda of the State Board of Education each such application for its consideration.

The State Board of Education shall review each application upon its agenda and approve such applications as it deems wise in the best interest of the educational system of the Commonwealth.

When an application receives approval, the State Board of Education shall direct the Superintendent of Public Instruction to issue a certificate creating the new school district, listing the name, constituting components, classification and effective date of operation.