J. Sickler Consulting

Chesapeake Bay Watershed 2019 Environmental Literacy Report

Results from Watershed ELIT Survey

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Background

Study Purpose, Methods, and Response Rates

ELIT Background & Purpose

The Chesapeake Bay Watershed Environmental Literacy Indicator Tool (ELIT) was developed to monitor the capacity and progress of public school districts toward meeting the environmental literacy goal stated in the 2014 Chesapeake Bay Watershed Agreement:

Enable every student in the region to graduate with the knowledge and skills to act responsibly to protect and restore their local watershed.

Three outcomes are stated in the Agreement:

1. **Students**: Increase age-appropriate understanding of the watershed through meaningful watershed educational experiences (MWEEs) and rigorous, inquiry-based instruction, with a target of at least one MWEE in elementary, middle, and high school, depending on available resources.
2. **Sustainable Schools:** Increase the number of schools that reduce impact of buildings and grounds on their local watershed, environment, and human health through best practices, including student-led protection and restoration projects.
3. **Environmental Literacy Planning:** Develop a comprehensive and systemic approach to environmental literacy for all students, including policies, practices and voluntary metrics that support environmental literacy goals and outcomes.

The ELIT monitors public school districts' progress toward these three outcomes, collecting data within four topics:

- School district preparedness to implement a comprehensive and systemic approach to environmental literacy education (Outcome 3);
- Student participation in MWEEs during the school year (Outcome 1);
- Sustainability practices at schools (Outcome 2);
- School district needs to support further improvements in environmental literacy education.

The ELIT is administered biennially to all local education agencies (LEAs) in six jurisdictions: the District of Columbia, Delaware, Maryland, Pennsylvania, Virginia, and West Virginia. This report presents results only from LEAs that fall within the Chesapeake Bay Watershed.

ELIT Data Collection

Data Collection Procedure

The ELIT is administered every two years as an electronic survey. It is intended to be completed by a single representative from each LEA's administration who is able to report on district-wide activities. Additional data-points that cannot be obtained reliably through non-survey means (e.g., location in/out of watershed; student enrollment) are identified from external sources and merged with the survey responses.

NOAA's Chesapeake Bay Program organized data collection in 2019, and representatives from each state's education office led distribution of the survey to LEAs within their jurisdiction. ELIT data collection targeted only public school districts, and only responses from public school districts within the Chesapeake Bay Watershed are included in this report.

Data Collection Timing

The 2019 ELIT asked districts to report on the status of activities for the 2018-19 school year. To support this, the ELIT survey opened in late Spring 2019 and was available to LEAs throughout the spring and summer. However, because many LEAs have limited staff capacity at the end of the school year and summer, the survey remained open through the Fall of the 2019-20 school year. The survey was closed at the end of December 2019.

Appending 2017 ELIT Data

The most significant challenge of the ELIT is obtaining a strong response rate from more than 300 LEAs across six states. As greater numbers of LEAs report their activities into this dataset, the Chesapeake Bay Program has a more accurate understanding of the status of environmental literacy activities across the watershed.

In order to maximize the ability to generalize about conditions across the watershed, it was decided that any LEA that responded to the 2017 ELIT but did not respond in 2019, would have their 2017 data appended to the 2019 dataset for reporting. This assumes that relatively little is likely to have changed in those non-responding districts over the past two years. Using this approach, this report of 2019 ELIT results includes 55% of LEAs in the watershed.

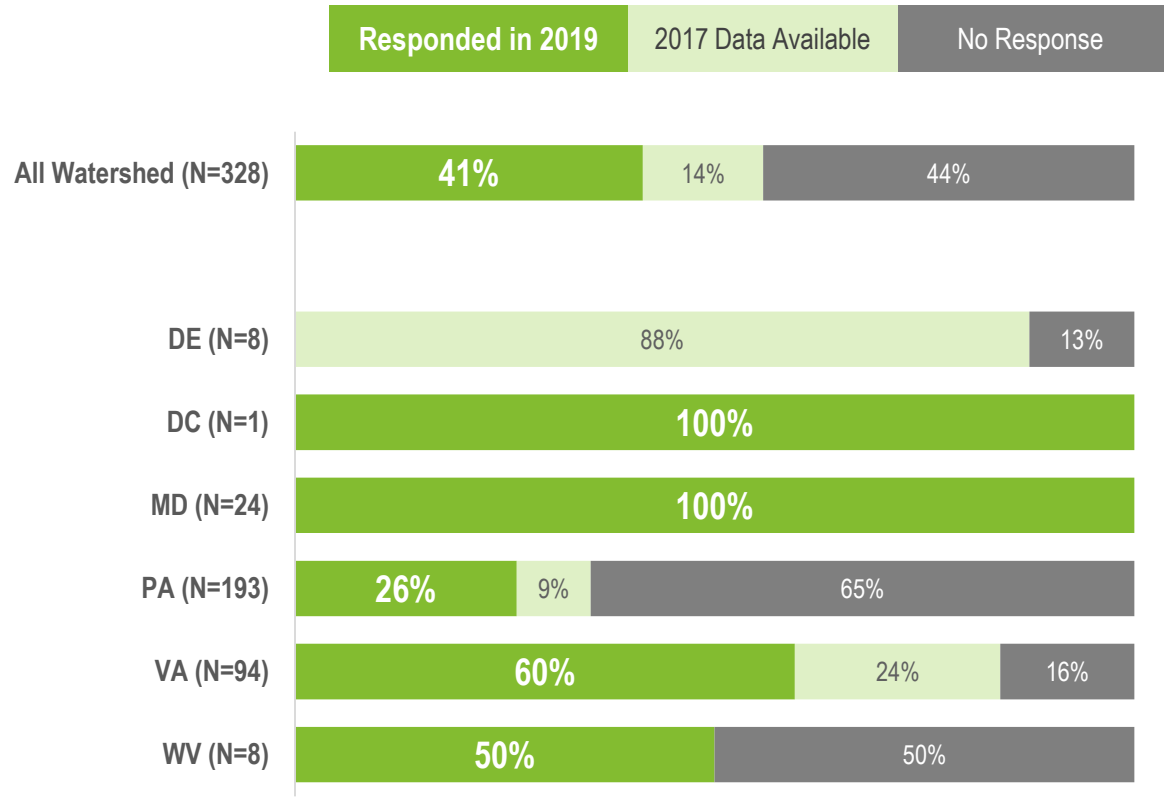
2019 ELIT Response Rate: By District

136 surveys were completed by LEAs in the watershed in 2019, which constituted 41% of all districts in the watershed.

Another 47 LEAs (14%) responded in 2017, but not 2019. These data were carried forward in 2019 analysis, with the assumption that 2019 activities did not change dramatically for a given district. The main factor in response rate was state. Maryland and the District of Columbia obtained a 100% response rate. Half of the districts in West Virginia responded in 2019 and 60% of Virginia districts. Delaware had no new responses in 2019, but seven previous response were carried forward. Pennsylvania had 51 responses, but this was far short of the 193 districts within the Chesapeake Bay watershed in that state.

State-by-state variation mirrors the 2015 and 2017 responses, with the exception of West Virginia (no 2017 data) and Delaware (no 2019 data). This report aggregates across the watershed, but interpretation of results should consider it is biased toward what is occurring in states with high response rates.

ELIT Response Rate: LEAs within the Watershed by State in 2019

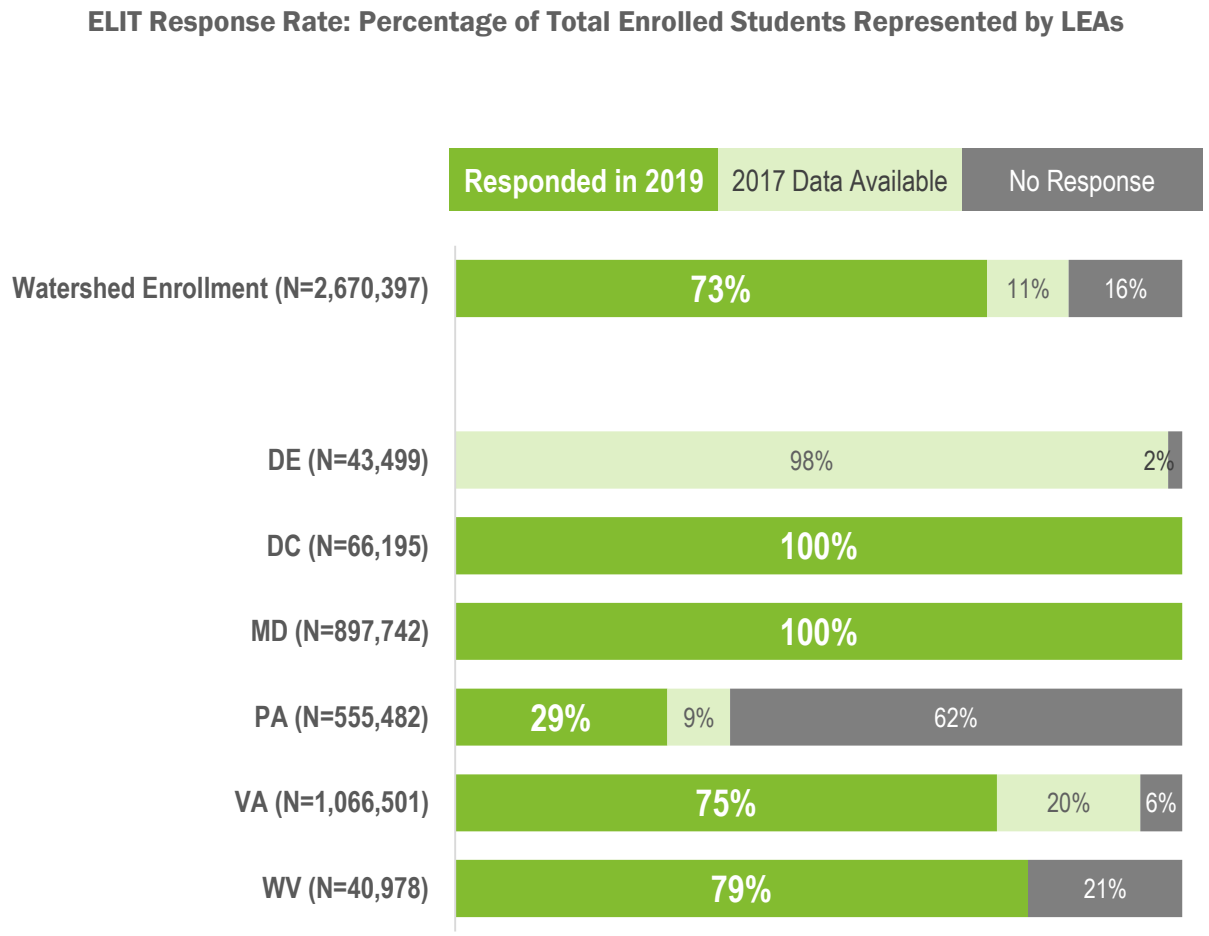


2019 ELIT Response Rate: By Enrollment

When examining response based on the students enrolled in each LEA, the 2019 ELIT data represents 73% of all students in the watershed. With 2017 additions, this reaches 84% of all students.

The difference in coverage rate, compared with district-level response rate, reflects that Virginia and Maryland have the most students within the watershed – over 1 million and nearly 900,000, respectively. Because these states also had high response rates, the overall dataset means there is strong representation of the number of students within the watershed.

This also underscores how differently LEAs are organized. Maryland's 900,000 students are contained in 24 districts, while Pennsylvania's 555,000 students are spread across 193 LEAs. The number of districts within a state does not fully account for response rate (i.e., Virginia successfully collected data with nearly 100 districts), but it does indicate that data gathering is a more challenging task for less centralized systems.

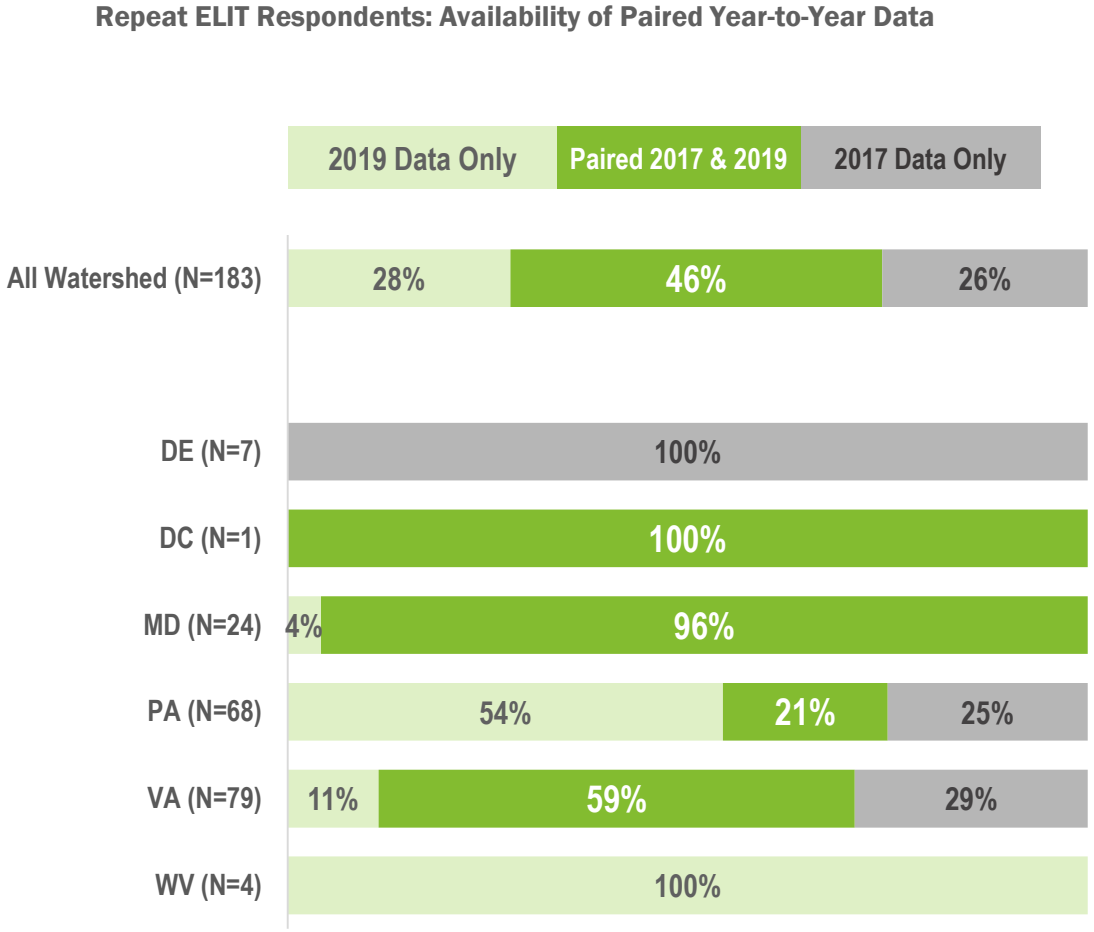


Availability of Paired Year-to-Year Data

Of the entire sample, just under half of the responding LEAs were repeat respondents who provided data in *both* 2017 and 2019. These districts support interpretation of data that suggests year-to-year changes.

In the analyses that follow, when we compare apparent changes in indicators over time, we used this smaller, paired dataset to explore the degree to which aggregate changes may have been influenced simply by fluctuations in the population of districts that responded to the ELIT survey. By isolating comparisons to districts that responded in *both* years, we can look at the number of districts who reported increases or decreases in indicators in the past two years.

As the figure to the right shows, the paired data came primarily from Maryland, Virginia, and Washington, D.C., which had strong response rates in both 2017 and 2019.



Results

Preparedness to Implement Environmental Education

Measurement: LEA Preparedness

To assess each LEA's current capacity to implement a comprehensive and systemic approach to environmental education (EE), respondents considered six elements (right) and indicated for each whether it was:

- Not in place
- Partially in place
- Fully in place

The response for each element was scored with a value of 0, 1, or 2, respectively. These values were summed to arrive at a total preparedness score for the district.

Six Elements Used To Determine LEA Preparedness for EE

a) An established program leader for environmental education (providing effective, sustained, and system leadership)

b) An integrated program infusing environmental concepts into appropriate curricular areas

c) Regular communication among staff responsible for environmental education curriculum and program implementation.

d) A support system in place that enables teachers and administrators to engage in high quality professional development in content knowledge, instructional materials, and methodology related to environmental education.

e) A plan to ensure opportunities for all students to engage in meaningful watershed educational experiences (MWEEs) at the elementary, middle and high school levels.

f) Established community partnerships for delivery of environmental education, including implementation of MWEEs

LEA Preparedness to Implement EE

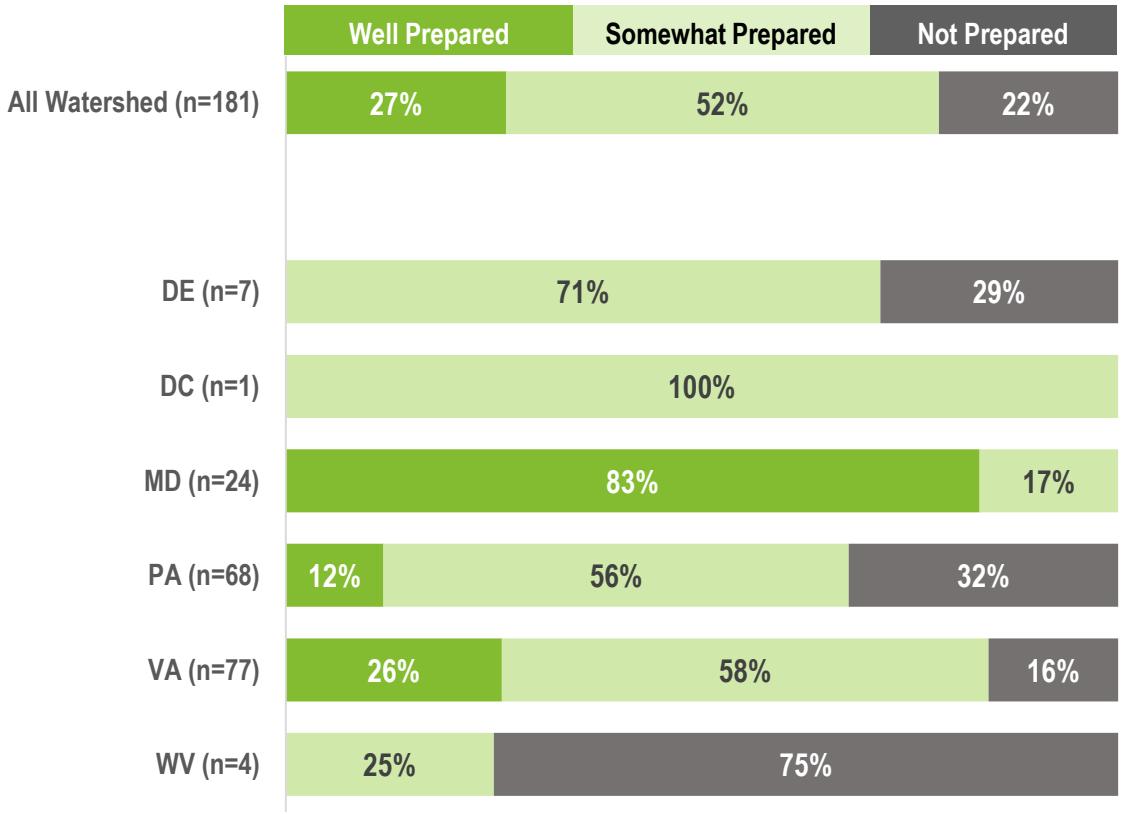
The majority of responding LEAs in the watershed are somewhat prepared to implement high quality environmental education (EE).

Responding LEAs rated how fully their district has implemented six indicators of planning and infrastructure for high quality EE. Total preparedness scores were grouped into three levels of preparedness:

- Well Prepared: scores from 9-12
- Somewhat Prepared: scores from 4-8
- Not Prepared: scores from 0-3

Preparedness varied a great deal between the states. Nearly all of the well-prepared districts were in Maryland, with a few others coming from Virginia and Pennsylvania. West Virginia had the highest rate of responding districts that were unprepared, but the very small data set from this state limits the generalizability of these data.

Self-Reported Levels of Preparedness to Implement Environmental Education Among LEAs



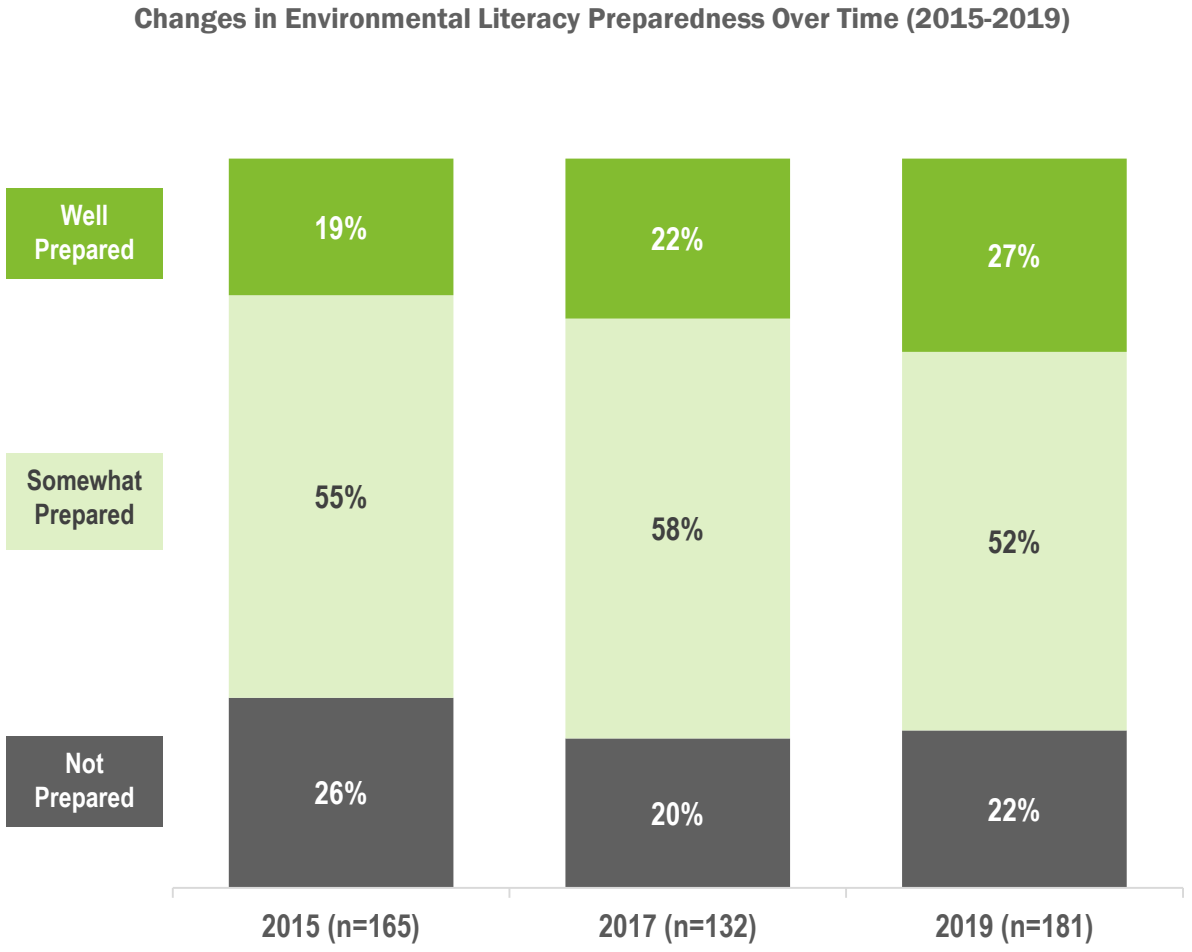
LEA Preparedness: Trends Over Time

The percentage of LEAs that scored as well-prepared to implement environmental education has increased slightly each year since 2015.

The percentage of responding LEAs who have scored as unprepared decreased after 2015,, but seems to be relatively steady between 2017 and 2019. In turn, a little more than half of the responding LEAs fall into the "somewhat prepared" category.

Looking deeper into these trends, we have data from 84 LEAs that responded to the ELIT in 2017 and 2019. **Of these LEAs, 23% moved to a higher category of preparedness in 2019**.

When we look at each LEAs total preparedness score (which is used to assign the level of preparedness), **on average, LEAs increased their scores by 0.55 points over the past two years. 47% of these LEAs showed some increase in their total score** (even if they did not move to a new category of preparedness).

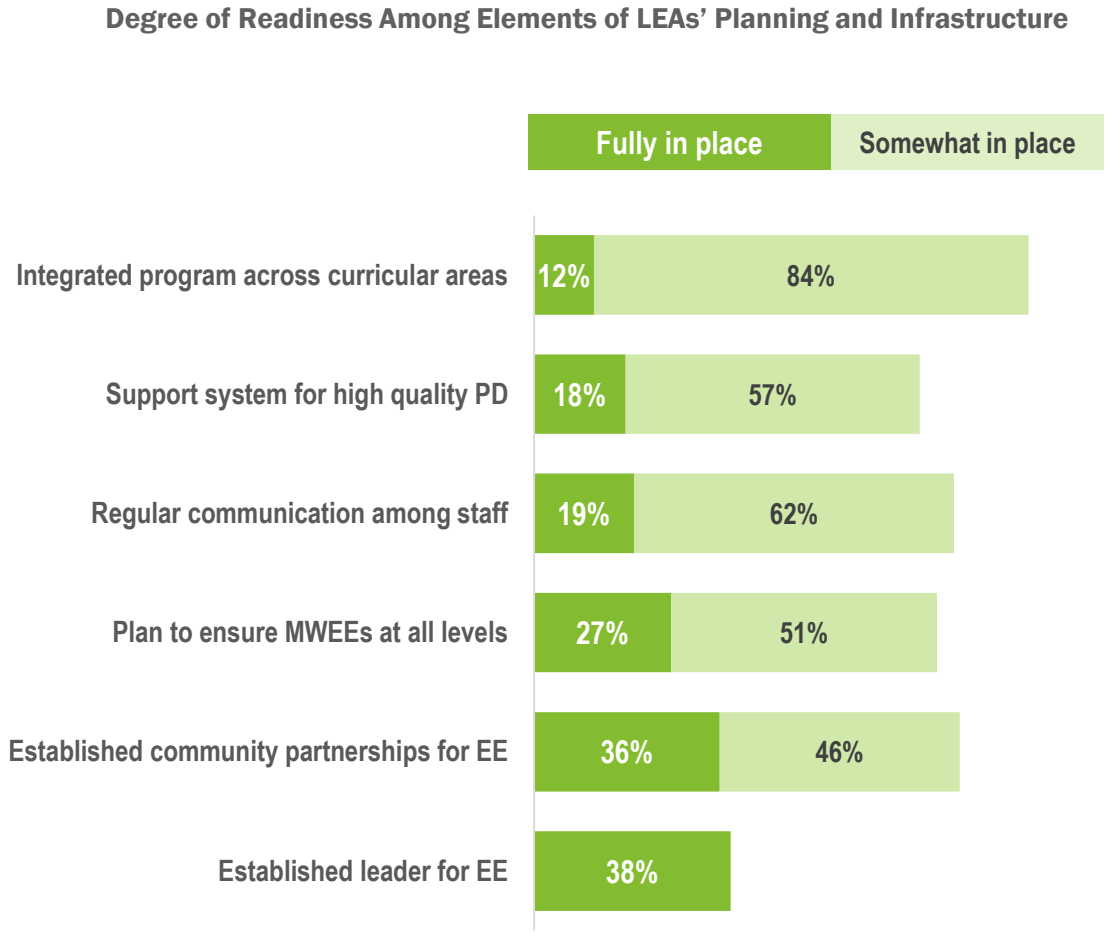


Elements of Readiness: LEAs' Preparedness

The most common planning and infrastructure elements that are fully in place within LEAs are having established district leaders for EE delivery and established community partnerships to support EE.

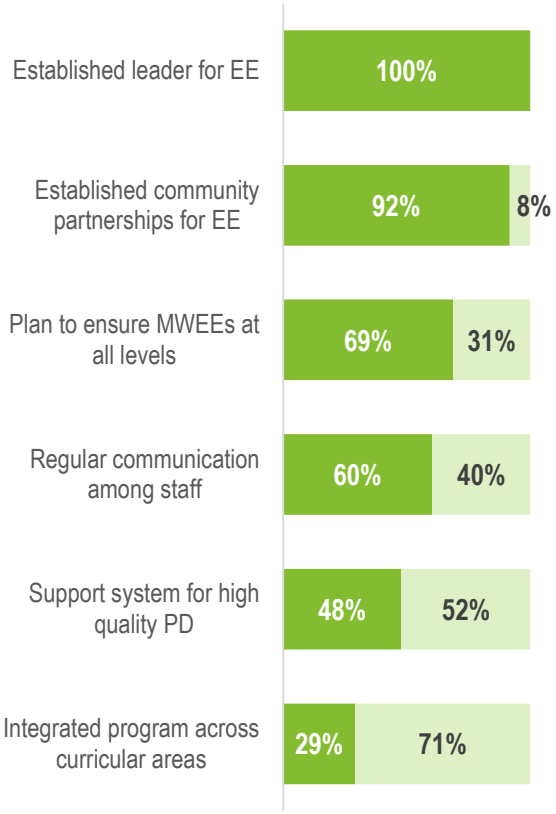
These data suggest that the task of creating an integrated program that infuses environmental topics across the curriculum is the area that the greatest number of LEAs have made progress on (84%), while the fewest number of LEAs have fully achieved it (only 12%). This suggests this may be a particularly valued and important element of EE planning and preparedness, but one that is difficult to achieve. These patterns are very similar to what was seen in 2017 data.

The next page breaks down responses for the individual actions between the three sub-groups of readiness: LEAs that are well-prepared, somewhat prepared, or unprepared. Those graphs suggest actions that may be footholds where districts tend to make progress to move toward preparedness.

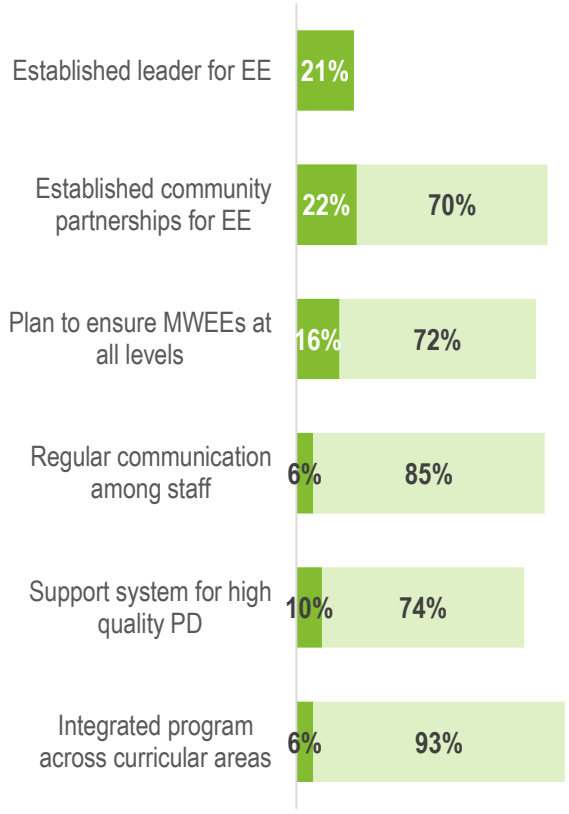


Elements Fully or Partially in Place:
Comparing Strategies between Levels of Preparedness

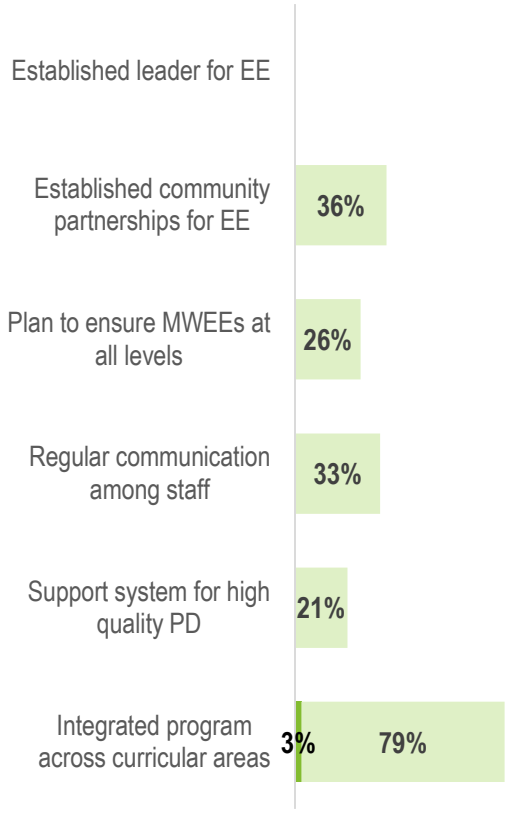
Well-Prepared LEAs (n=48):
Strategies Fully or Partially in Place



Somewhat Prepared LEAs (n=94):
Strategies Fully or Partially in Place



Unprepared LEAs (n=39):
Strategies Fully or Partially in Place



Preparedness

Results

Student Participation in Meaningful Watershed Educational Experiences (MWEEs)

Measurement: Student Participation in MWEEs

To assess the level of student participation in MWEEs within each LEA, respondents were asked to assess the presence of MWEEs within curricular offerings within each grade level (K-12), considering if they were system-wide or isolated to schools or classes. (See detail, right.) Respondents were given a reminder of the complete definition of a MWEE before the questions.

Although respondents reported at individual grade levels, analysis aggregated these data to report results by grade band (elementary, middle, or high school). The aggregation grouped each LEA into one of three levels within each grade band:

- At least one system-wide MWEE provided in the grade band;
- Some MWEE programming in the grade band, but not system-wide;
- No MWEE programming provided in the grade band.

For elementary (K-5) and middle school (6-8) grades, respondents indicated whether the district had:

- A system-wide MWEE experience for students in this grade
- Some schools or classes in this grade participate in MWEEs
- No evidence that students in this grade participate in a MWEE

For high school, where MWEEs are more likely to correspond to a course than a grade level, respondents reflected on the district's **required courses** at the high school level, and within each required course indicated whether the district had:

- A system-wide MWEE experience for students in this course
- Some schools or classes participate in MWEEs for this course
- No evidence that students in this course participate in a MWEE

Elementary: Student Participation in MWEEs

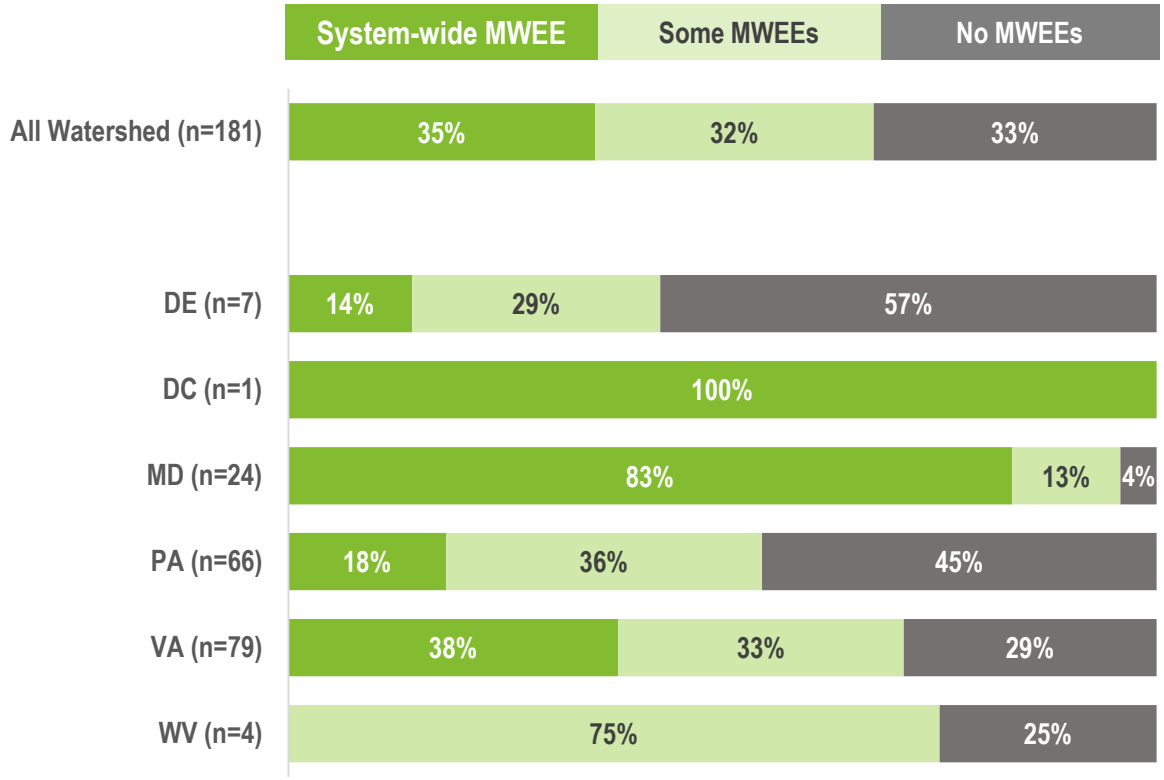
35% of responding LEAs in the watershed have a system-wide MWEE in place at the elementary grade levels.

As with preparedness scores, there was substantial variation between the states. Again, Maryland demonstrated state-wide success in this indicator, with 83% of districts having a system-wide MWEE for elementary students. The District of Columbia, with only one district, reported having a system-wide MWEE at the elementary level. Virginia reported more than one-third of districts had a system-wide MWEE.

Responding districts in Delaware and Pennsylvania had the greatest prevalence of no MWEE availability at all in elementary grades. Around one-quarter of Virginia's and West Virginia's respondents similarly reported a lack of MWEE offerings in elementary school.

Elementary Grades: MWEE Availability Among LEAs within Chesapeake Bay Watershed

Rates of availability by state in 2019



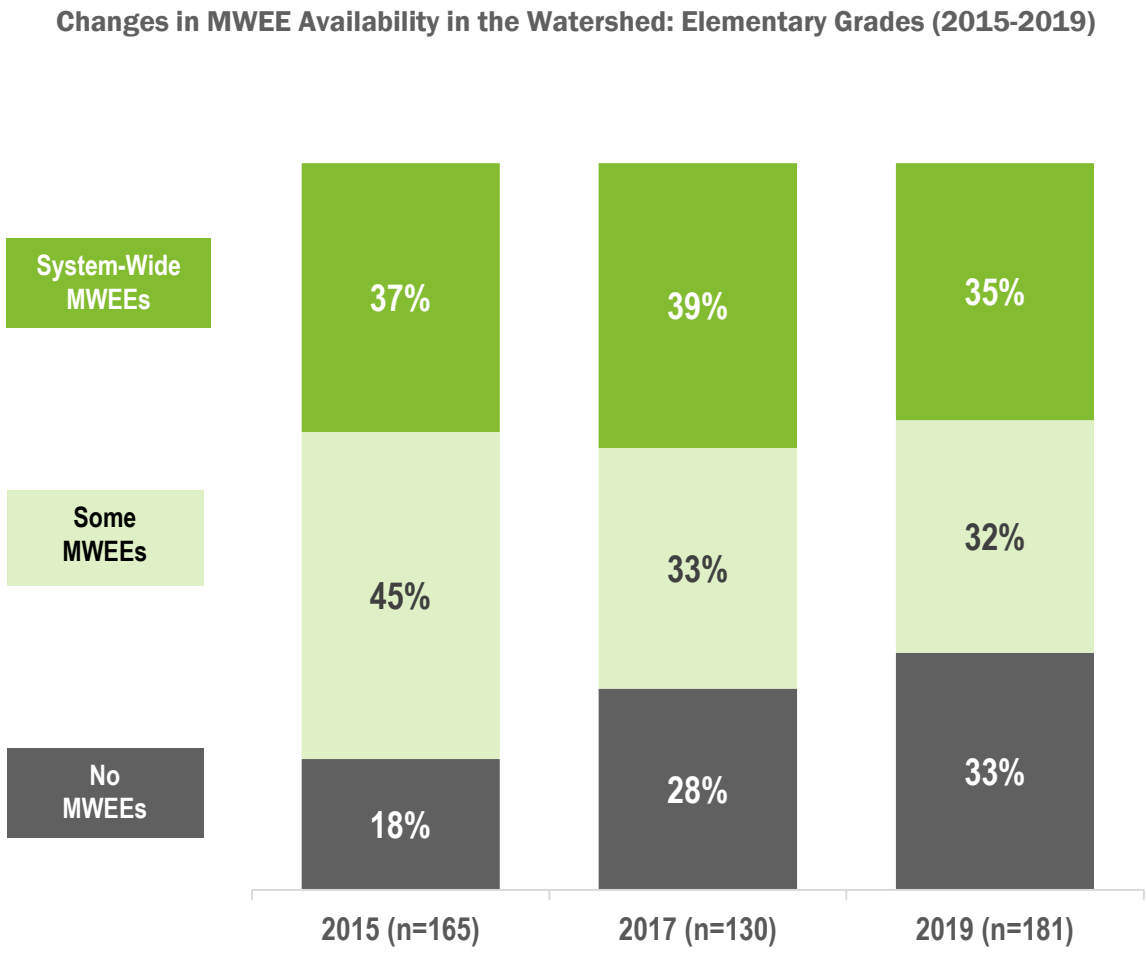
Elementary MWEEs: Change Over Time

The rate of system-wide MWEE availability for elementary grades has shown little change since 2015; while there appeared to be some growth in 2017, that did not seem to be maintained into 2019.

The data also suggest that there has been a progressive, slight increase in the number of LEAs reporting that no MWEEs are available at the elementary level.

When we examine the LEAs for which we have both 2017 and 2019 data (n=82), the number of LEAs with no MWEEs stayed stable (16%), but the number of LEAs with system-wide MWEEs actually increased from 45% to 52%. **15% of LEAs for which we have paired data indicated their district moved to a higher category of MWEE availability.** 11% indicated they moved to a lower category.

This discrepancy between the paired data and the overall responses suggests that the 2019 ELIT may have received some new responses from LEAs that are not as far along in their planning as those who have previously responded to the survey.



Middle School: Student Participation in MWEEs

39% of responding LEAs in the watershed have a system-wide MWEE in place at the middle school grade levels.

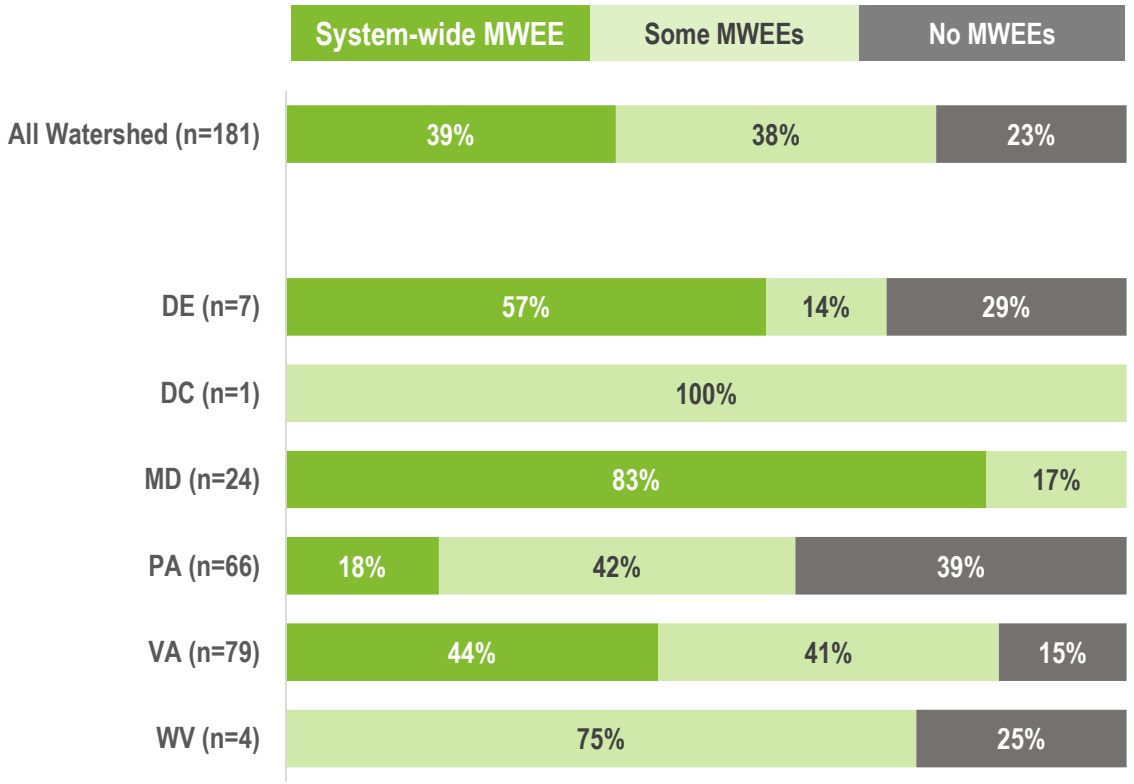
The overall breakdown of the availability of MWEEs in middle grades was similar to the patterns seen for elementary grades, although there are fewer LEAs reporting no MWEEs at the middle grades.

At the state-level, Maryland had the strongest penetration of system-wide MWEEs at the middle school level. Over half of LEAs in Delaware reported system-wide MWEEs. Virginia reported slightly more system-wide MWEEs for middle grades, as compared to elementary.

A quarter or more of responding districts from Pennsylvania, Delaware, and West Virginia reported no MWEE programs at all for middle school students. DC Public Schools has some MWEE availability to middle school students, but it is not system-wide.

Middle School Grades: MWEE Availability Among LEAs within Chesapeake Bay Watershed

Rates of availability by state in 2019



Middle School MWEEs: Change Over Time

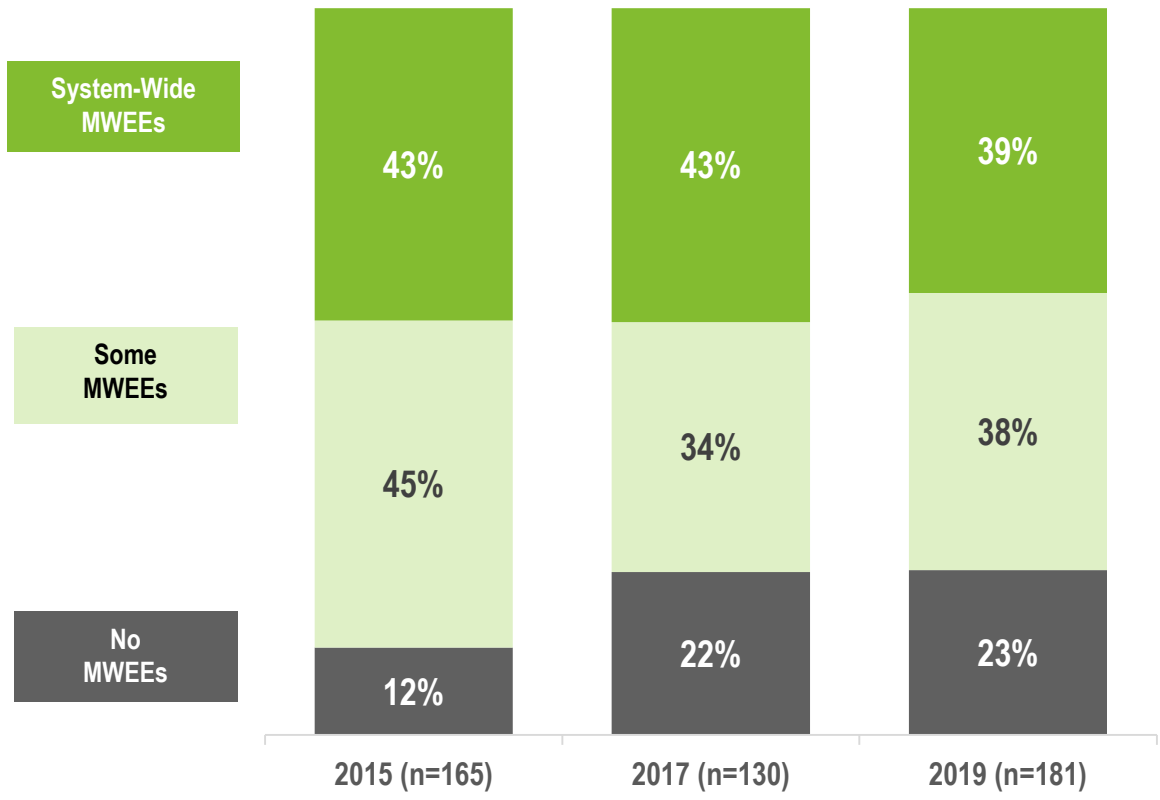
The rate of system-wide MWEE availability for middle school grades has not changed dramatically since 2015, although 2019 data suggests a slight decrease in system-wide availability.

The data also suggest that there was an increase in the number of LEAs reporting no MWEEs provided at the middle school level between 2015 and 2017, but that seemed to stabilize in 2019.

When we examine the LEAs for which we have both 2017 and 2019 data (n=83), there was a very small increase of LEAs reporting system-wide MWEEs (from 51% to 55%) and a decrease in LEAS reporting no MWEEs (from 17% to 7%). **23% of LEAs for which we have paired data indicated their district moved to a higher category of MWEE availability.** 11% indicated they moved to a lower category.

As with elementary data, this discrepancy suggests that the 2019 ELIT may have received new responses from LEAs that are not as far along in their activities as previous survey respondents.

Changes in MWEE Availability in the Watershed: Middle School Grades (2015-2019)



High School: Student Participation in MWEEs

Over one-third of responding LEAs in the watershed reported having a system-wide MWEE in place within required high school courses.

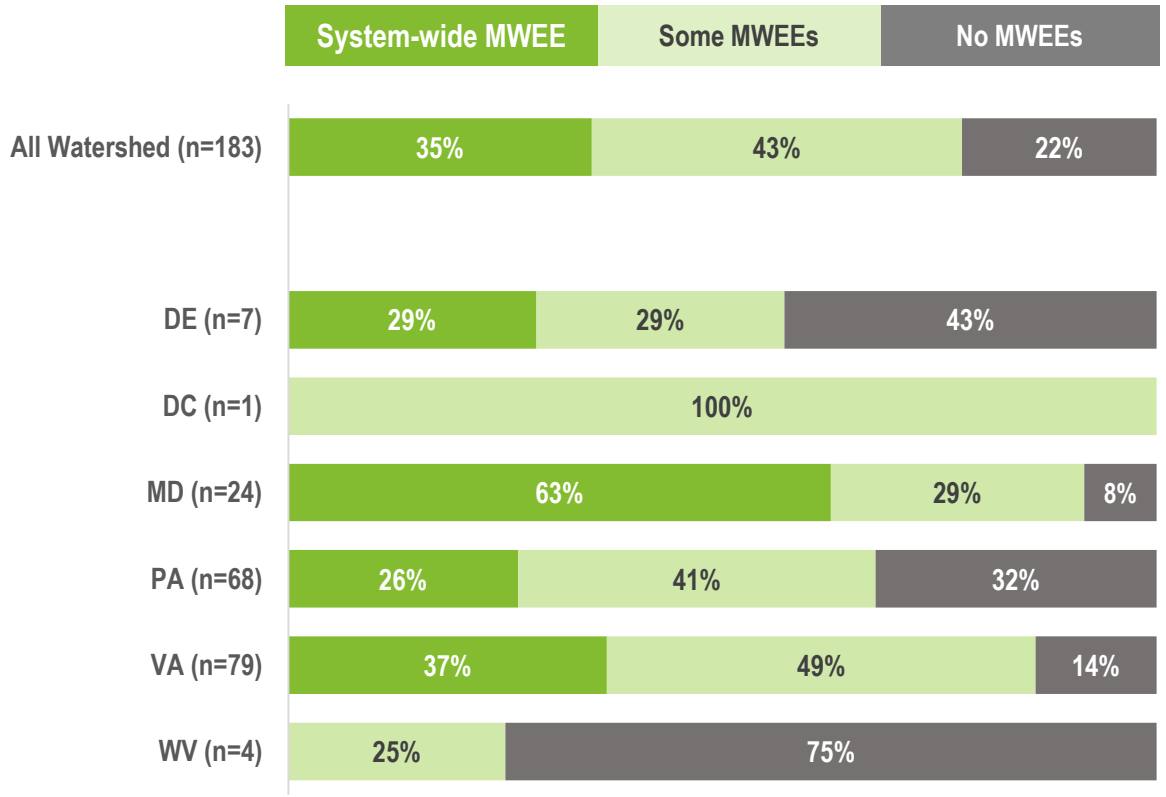
The overall breakdown of the availability of MWEEs in high school was similar to the patterns seen in younger grades. However, there's a slightly greater prevalence of MWEEs within individual schools or classes, especially compared with elementary grades. This trend was less pronounced than in past years.

Maryland, for instance, had lower rates of system-wide MWEEs in high school, and greater proportions of school-level MWEEs, which was different than the lower grades.

Only one district in West Virginia and about half of districts in Delaware reported having any kind of MWEE availability at high school. Pennsylvania, in contrast, seemed to indicate that MWEEs are generally more prevalent at the high school level than they were at the younger grades. However, the low response rate makes it difficult to know if this is generalizable for the entire state.

High School Grades: MWEE Availability Among LEAs within Chesapeake Bay Watershed

Rates of availability by state in 2019



High School MWEEs: Change Over Time

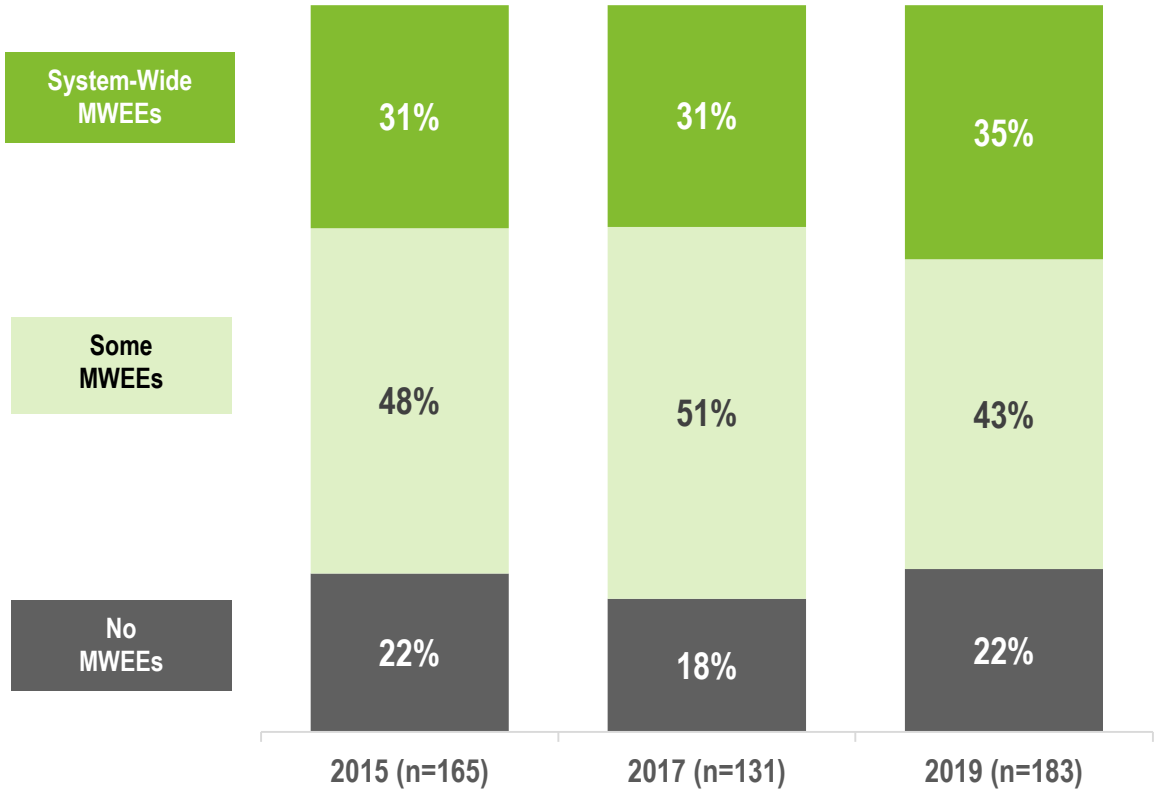
The rate of system-wide MWEE availability for high school grades increased very slightly since 2017 and 2015.

The number of LEAs reporting that no MWEEs were available at the high school level was similar to 2015 reports, which was a slight increase from 2017.

When we examine the LEAs for which we have both 2017 and 2019 data (n=84), there was a substantial increase in LEAs reporting system-wide MWEEs at high school (from 33% to 48%). **27% of LEAs for which we have paired data indicated their district moved to a higher category of MWEE availability for high school students.** 15% indicated they moved to a lower category.

In general, these data continue to indicate that the LEAs who have consistently responded to the ELIT survey tend to have higher levels of preparedness than other LEAs. However, when it comes to high school grades, the new responding districts seem to have more substantial programming in place.

Changes in MWEE Availability in the Watershed: High School Grades (2015-2019)



High School: Required Courses Using MWEEs

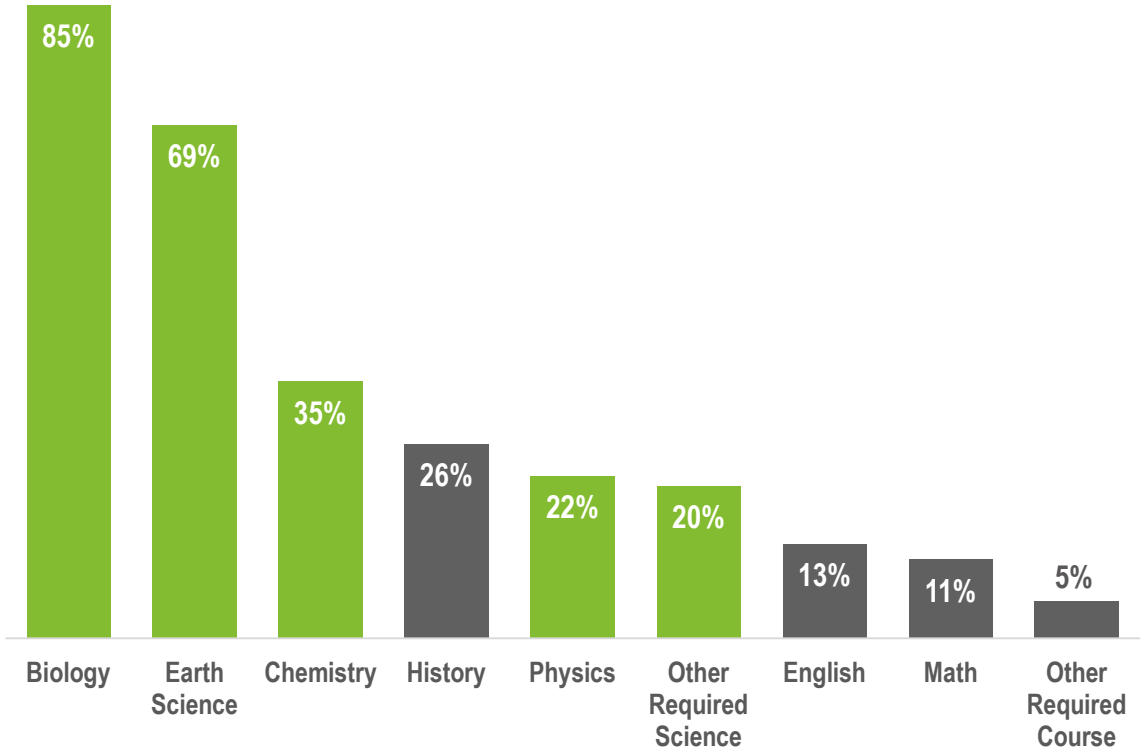
Of the 142 LEAs that reported having at least some MWEE experiences within required high school course(s), most tended to be incorporated in science courses.

Biology and Earth science were the most common required subjects that incorporated MWEEs – whether in individual courses or system-wide. Biology was consistently the most common subject for MWEEs across the states. However, Virginia and Pennsylvania seemed to have greater use of MWEEs in Earth science (74% and 72% of LEAs with any HS MWEEs, respectively). Maryland had 50% of reporting LEAs indicating there were MWEEs in Earth science courses. Science courses in the "other" category were primarily environmental science or ecology, which were reported as requirements.

Among non-science courses, history was the most common subject for a MWEE. More than 1 in 5 LEAs in Pennsylvania, Maryland, and Virginia reported required history course(s) that include MWEEs.

Percentage of LEAs that Provide MWEEs within Each Required Subject (n=142)

Sample is just of LEAs that reported having MWEE(s) in at least one required high school course. Data relies on accurate self-reports that courses are requirements.



High School: Elective Courses Using MWEEs

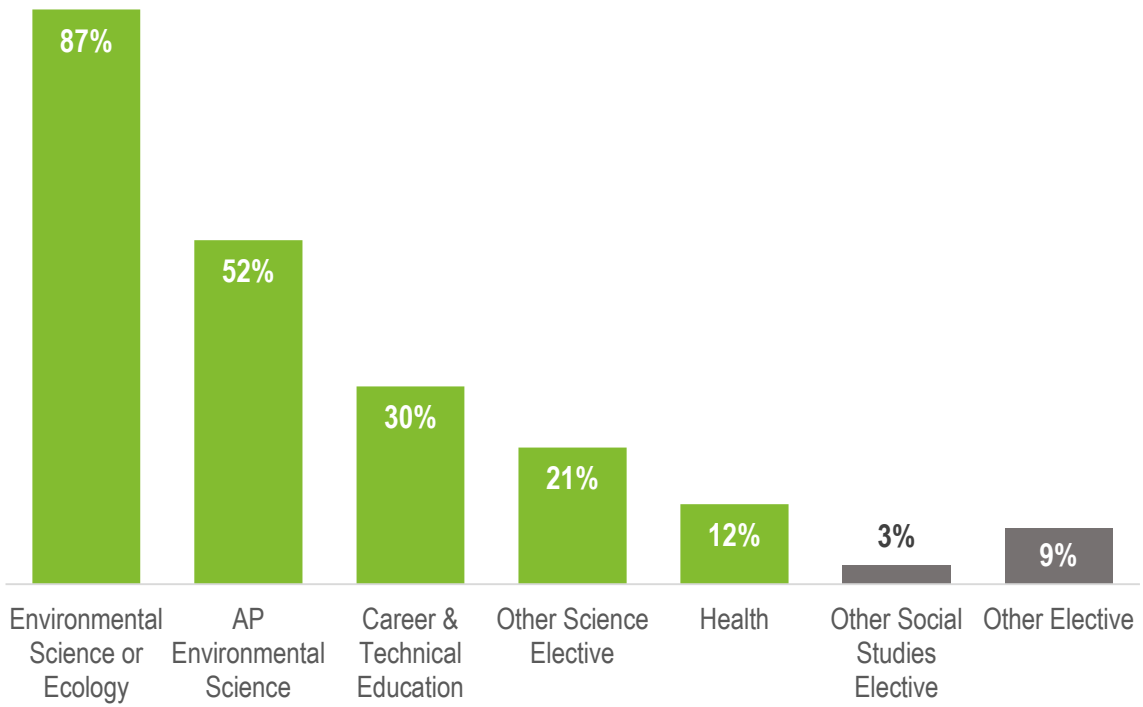
141 LEAs reported offering MWEEs within high school elective courses; most of these were in environmental science or ecology courses, including AP environmental science.

MWEEs within general environmental science and ecology electives were common across states (except for Delaware, which did not report any MWEEs in elective courses). However, Maryland LEAs more often reported having MWEEs within AP environmental science.

Just under one-third of responding LEAs include MWEEs within career and technical education (or CTE) coursework, this was spread fairly evenly across Maryland, Pennsylvania, and Virginia. Among the "other science electives" that use MWEEs were various marine science courses (marine biology, oceanography, aquatic ecology), as well as agriscience, botany, climate, Earth science, and STEM capstone or inquiry courses.

Percentage of LEAs that Provide MWEEs within Each Elective Subject (n=141)

Sample is just of LEAs that reported having MWEE(s) in at least one elective high school course.



System-Wide Outdoor Student Experiences

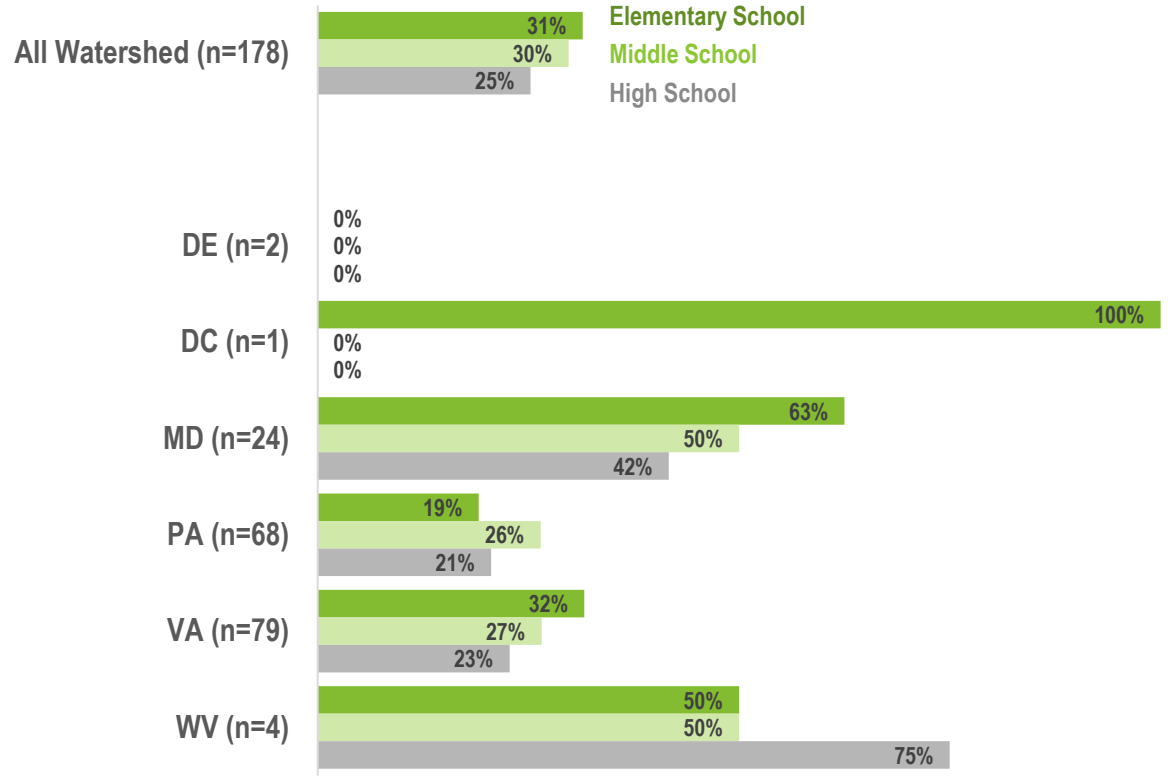
Separate from complete MWEEs, between 25% and 31% of responding LEAs indicated that they do offer other system-wide outdoor experiences for students.

While the primary target for the ELIT measurement is the incorporation of complete MWEEs for students in each grade band (which include more than outdoor experiences), the survey also inquired about the use of system-wide outdoor experiences for students.

The idea is that districts that have already implemented a system-wide field experience within a grade level may be able to leverage this infrastructure to expand into a full-scale, system-wide MWEE. The distribution of these responses vary between the states. Maryland, Virginia, and Washington, DC, report system-wide outdoor experiences are more common in elementary grades. Among the (limited) responding districts in Pennsylvania and West Virginia, middle school was more common for the former, and high school for the latter.

Percentage of LEAs with a System-Wide Outdoor Experience (n=178)

These represent districts with a system-wide outdoor experience that does not have all the attributes of a complete MWEE experience; but could be a building-block.



Results

Sustainable Schools

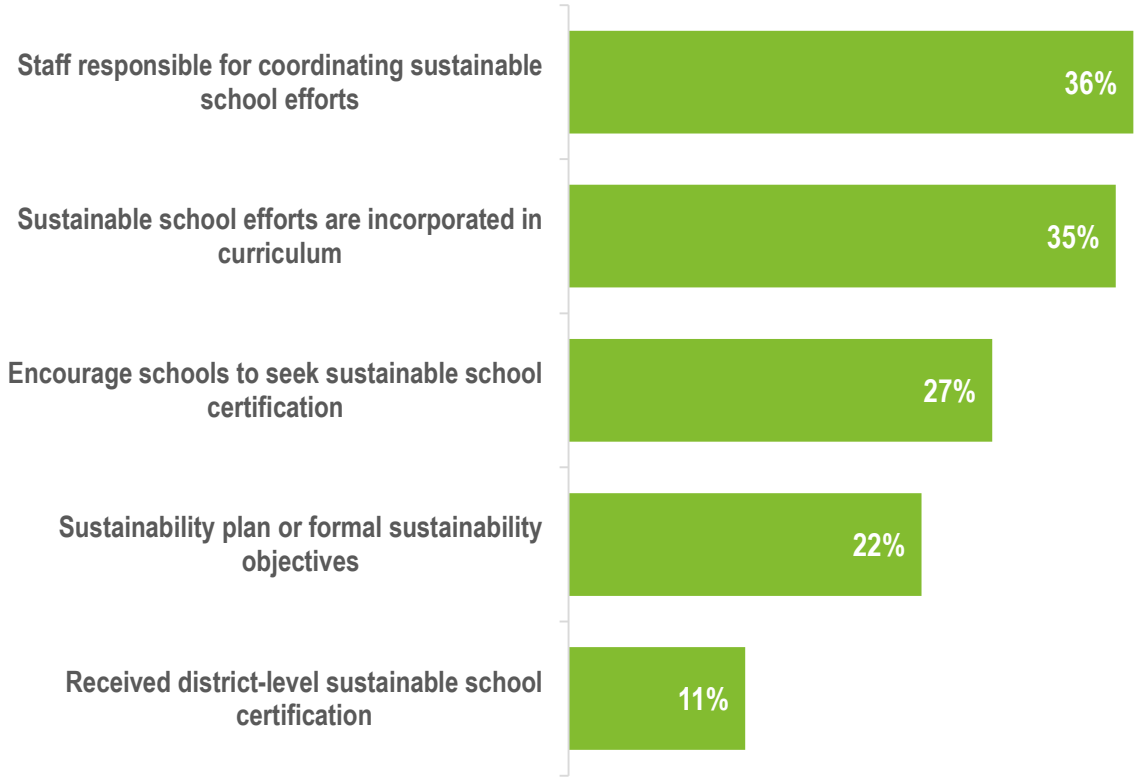
Sustainable Schools Best Practices

Over one-third of responding LEAs reported they have staff designated to coordinate sustainable school efforts and that sustainable school efforts are incorporated into curriculum.

Over a quarter of LEAs reported that they encourage schools to seek sustainable school certification. And around one in five LEAs reported having a formal sustainability plan for their district. The least common practice was receiving district-level sustainable school certification, which was reported by only 11% of responding LEAs.

Page 29 shows the state-by-state distribution of these responses in 2019. Of the states with robust responses, Maryland seems to have the strongest sustainable school practices, including 83% reporting they encourage schools to pursue certification.

Percentage of LEAs in the Watershed Reporting that Each Sustainable Schools Practice is in Place (n=127)



Sustainable Schools Practices: Changes

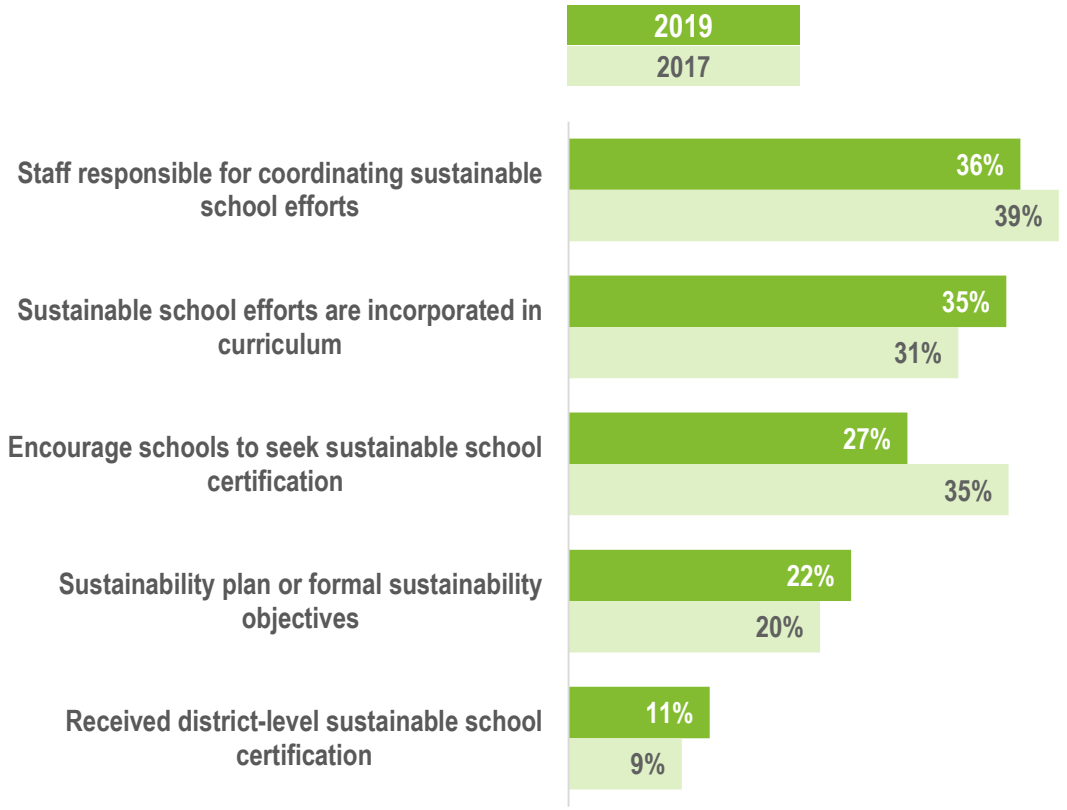
Overall, there was relatively little change in sustainable schools practices between 2017 and 2019.

The greatest change was a decrease in the number of LEAs that reported they encourage schools to seek certification. The other metrics were within 2 to 4 percentage points of their 2017 reported levels.

When we examine the strategy of encouraging sustainable school certification among LEAs for which we have both 2017 and 2019 data (n=112), there was also a slight reduction in districts that reported encouraging sustainable school certification – from 46% to 40%. Overall, we saw that 13% of the LEAs that reported in both 2017 and 2019 shifted from reporting this strategy was in place to reporting that it *wasn't* in place (or they weren't sure). Only 7% of the LEAs moved to newly have this strategy in place.

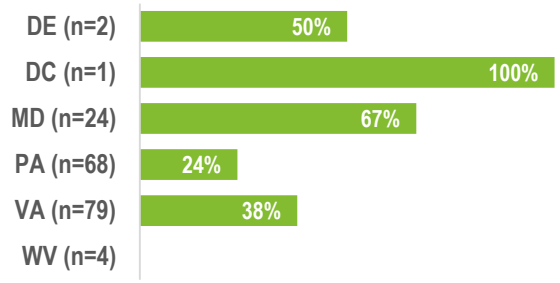
Comparing 2017 and 2019 LEA Reports of Which Sustainable Schools Practices are Used

(2017 n=127; 2019 n=127)

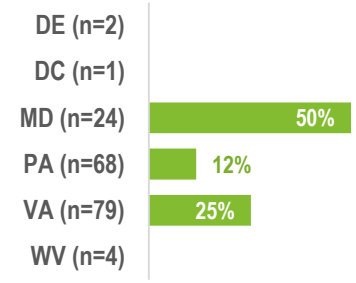


Sustainable Schools Best Practices: By State

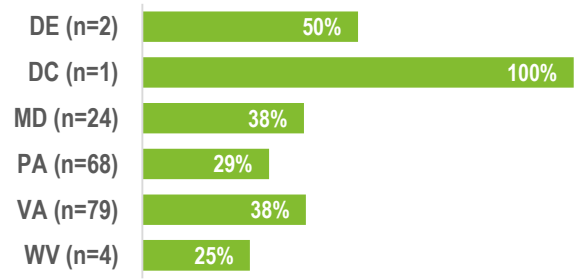
LEAs with staff responsible for coordinating sustainable school efforts



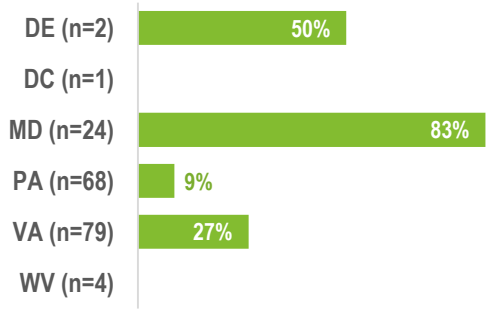
LEAs that have a sustainability plan or formal sustainability goals



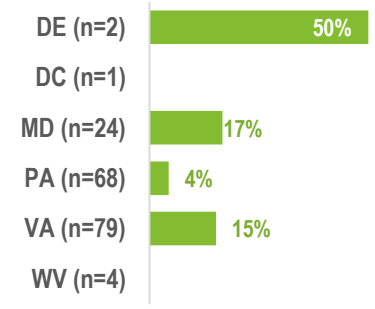
LEAs where sustainable school efforts are incorporated in curriculum



LEAs that encourage schools to seek sustainable school certification



LEAs that have received district-level sustainable school certification



Results

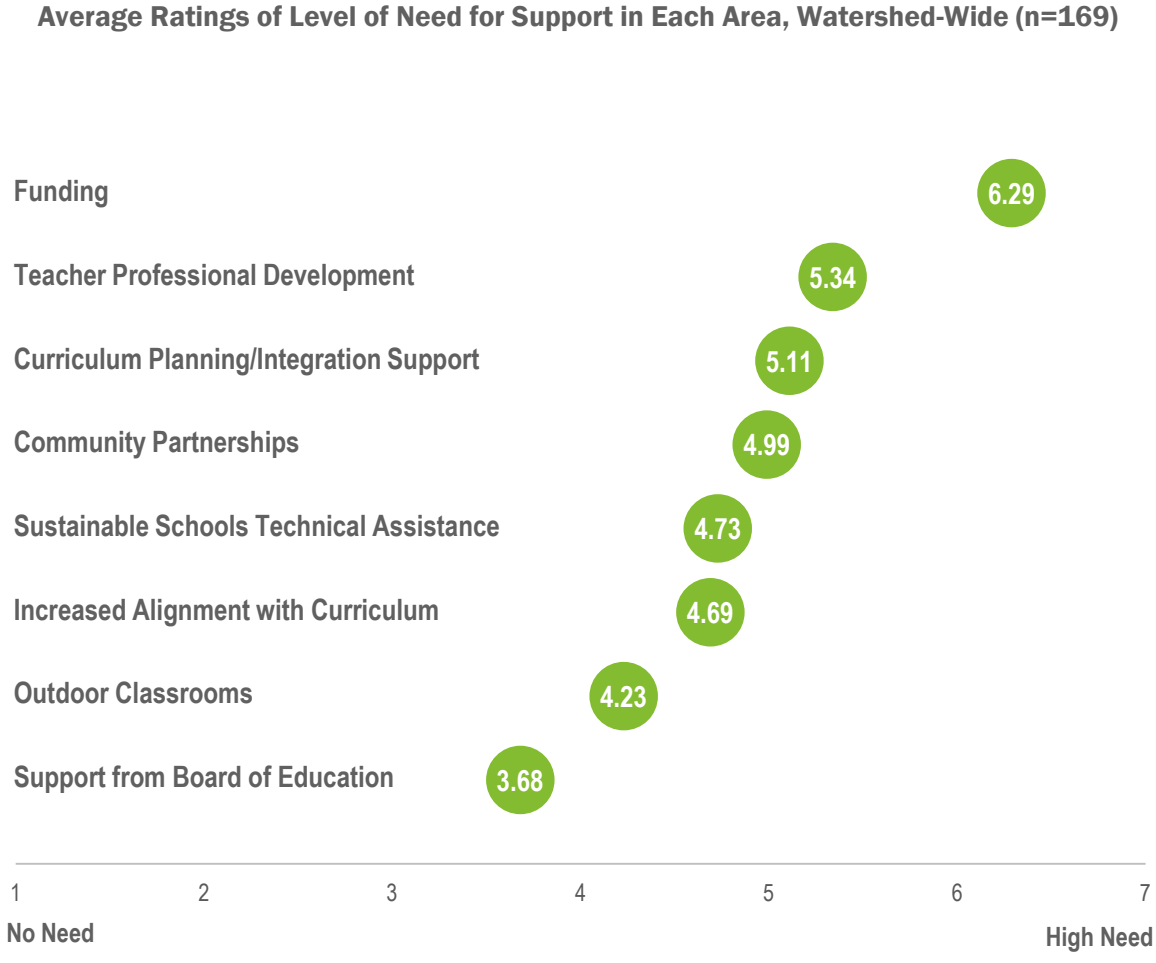
Environmental Education Support Needs

Greatest Needs for EE Support

There was consensus that the greatest need for improving EE was funding, with an average rating of 6.29 and a median of 7 (out of 7).

The next greatest need was support for high quality teacher professional development, which was rated a moderately high need (around 5.3). While no areas were rated as "no need," two topics were a slightly weaker need, rated around the mid-point: support from boards of education and support for building outdoor classrooms.

Page 33 shows state-by-state priorities via the median of respondents' ratings on each item. On the whole, states mirror the overall regional trends. Delaware was an exception; however, because there were only two responding LEAs, it is difficult to determine if this is generalizable to the entire state or just these LEAs.



Greatest Needs for EE Support: Changes

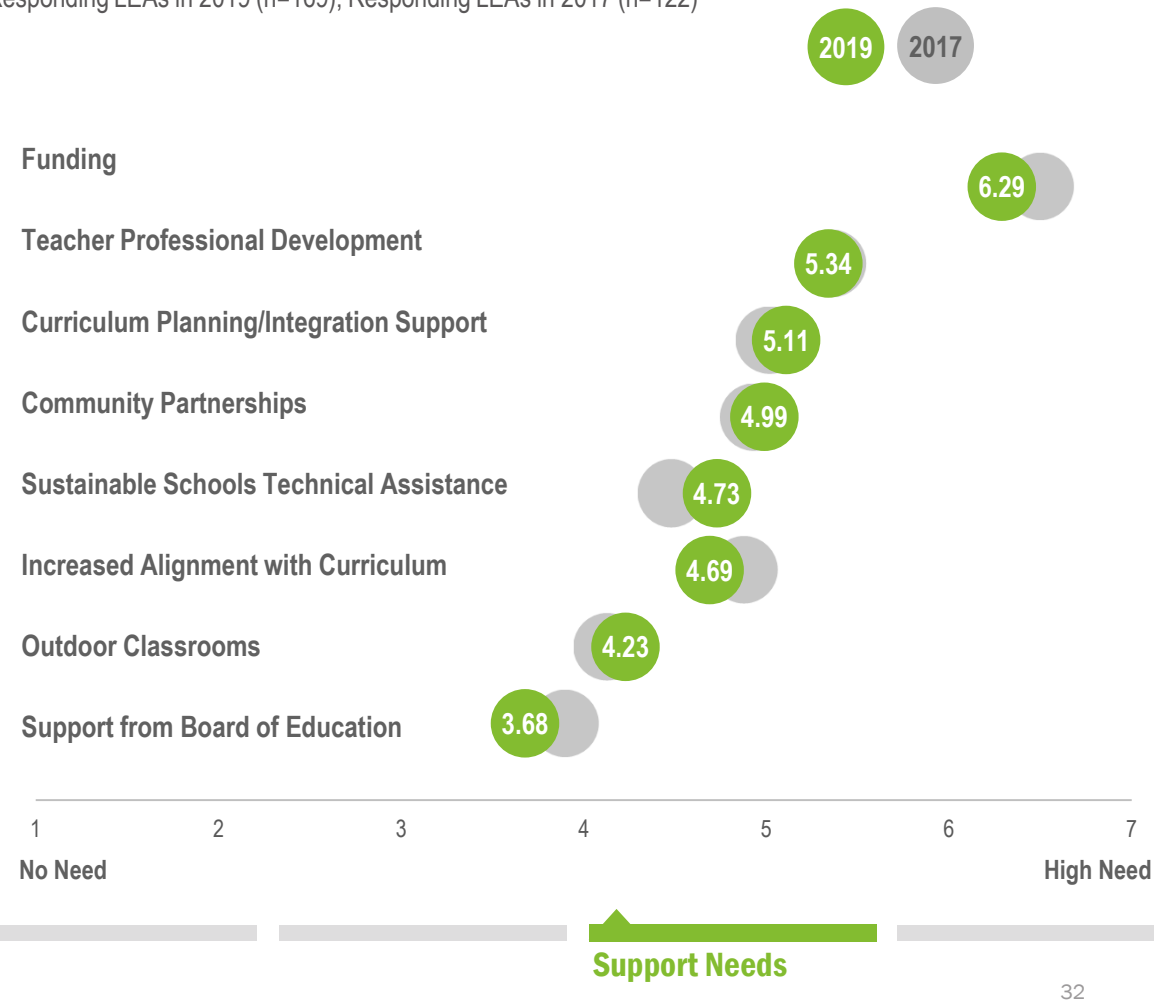
Overall, the priorities and levels of need-for-support for environmental education in different areas stayed fairly consistent between 2017 and 2019.

The figure here shows that the overall pattern of which areas of need were the greatest and least priorities stayed quite consistent between 2017 and 2019; funding continues to be the highest priority by far. Some of the average ratings were almost identical to the 2017 results.

There appeared to be some movement around the lower-rated needs (technical assistance for sustainable schools, increased alignment with curriculum, and board support); however, when we looked at data from LEAs where there were both 2017 and 2019 ratings, these differences were not significant. It was likely more attributable to slight differences in who responded to each year's survey.

Comparing Changes in Average Ratings of Level of Need between 2017 and 2019

Responding LEAs in 2019 (n=169); Responding LEAs in 2017 (n=122)



Greatest Needs for EE Support: State-by-State

Maryland	(n=24)
Funding	7
Teacher Professional Development	5
Curriculum Planning/Integration Support	5
Sustainable Schools Technical Assistance	5
Community Partnerships	4
Increased Alignment with Curriculum	4
Outdoor Classrooms	4
Support from Board of Education	4

District of Columbia	(n=1)
Funding	7
Community Partnerships	7
Teacher Professional Development	5
Curriculum Planning/Integration Support	5
Support from Board of Education	5
Sustainable Schools Technical Assistance	4
Outdoor Classrooms	4
Increased Alignment with Curriculum	3

Delaware	(n=2)
Curriculum Planning/Integration Support	6.5
Increased Alignment with Curriculum	6.5
Sustainable Schools Technical Assistance	6.5
Funding	6
Teacher Professional Development	6
Community Partnerships	5.5
Outdoor Classrooms	5
Support from Board of Education	3.5

Virginia	(n=75)
Funding	7
Teacher Professional Development	5
Curriculum Planning/Integration Support	5
Community Partnerships	5
Increased Alignment with Curriculum	5
Sustainable Schools Technical Assistance	5
Outdoor Classrooms	4
Support from Board of Education	4

Pennsylvania	(n=67)
Funding	7
Teacher Professional Development	6
Community Partnerships	6
Curriculum Planning/Integration Support	5
Increased Alignment with Curriculum	5
Sustainable Schools Technical Assistance	5
Outdoor Classrooms	4
Support from Board of Education	3

West Virginia	(n=4)
Funding	7
Curriculum Planning/Integration Support	7
Teacher Professional Development	6.5
Increased Alignment with Curriculum	6.5
Sustainable Schools Technical Assistance	6
Community Partnerships	5
Outdoor Classrooms	5
Support from Board of Education	4

Conclusions

Discussion & Conclusions from 2019 ELIT

Indicator Changes: 2015 – 2019

There were continued increases in indicators of LEA preparedness and the prevalence of MWEEs in high school grades from 2015 to 2019.

Data have shown slight, steady increases in LEAs' overall levels of preparedness to implement environmental education.

After three iterations of the ELIT survey, there has been a slight, steady increase of the proportion of LEAs that scored as well-prepared. This proportion has increased by about 4% each year, among those districts who responded to the survey. These data suggest that LEAs are steadily making progress at putting into place the types of systems and infrastructure necessary to support implementation of system-wide high-quality environmental education.

Among those LEAs for which we had paired 2017 and 2019 data, we saw that they showed an average increase of 0.55 points in their raw preparedness score, and that 23% of the districts achieved a higher level of preparedness than in 2017.

Data showed clear gains in system-wide MWEEs at the high school level; changes in lower grades were mixed.

In 2019, there was a slight increase in the prevalence of system-wide MWEEs at the high school level (from 32% to 36%), but a slight decrease in the prevalence at the middle and elementary school levels. Within the elementary grades, this shift put LEAs closer to their 2015 levels.

However, when we examined the available paired 2017 and 2019 data, these decreases were not apparent. Districts that submitted data in both years showed an overall increase in the prevalence of system-wide MWEEs in each grade band. This suggests that the decreases in aggregate data in elementary and middle school more likely reflect the practices at districts who newly completed the ELIT survey in 2019, particularly from Pennsylvania, Virginia, and West Virginia.

Key Takeaways from 2019 ELIT Indicators

Promising Steps for Initial Preparedness

Examining each element of the Preparedness score, patterns show two elements that are fully implemented by nearly all well-prepared LEAs. These elements – an established program leader and community partners – have continued to emerge as foundational elements of planning for a well-prepared district. Planning for student MWEEs across levels and establishing regular communication among staff were the next most common attributes of a well-prepared district. This suggests that these elements may be effective starting points for districts that are seeking to improve their overall preparedness.

As in 2017, cross-curricular integration of EE programs continues to be the most challenging element to fully implement, even by well-prepared LEAs. Most districts report partial efforts at this integration, but the lack of full implementation suggests that achieving this element of preparedness required substantial effort and may be difficult to fully realize.

Progress is Happening in High School

In the 2017 ELIT, high school generally had the lowest rates of system-wide MWEEs within required courses, compared with elementary and middle school grades. This year's data, however, showed that many districts reported clear gains in implementing system-wide MWEEs. This was true for the aggregate picture of all responding LEAs, as well as changes within districts for which we have longitudinal data. Maryland and Virginia seemed to contribute to this trend. Maryland increased from 43% to 63% of LEAs that reported a system-wide MWEE in a required high school course; Virginia increased by ten percentage points.

High school MWEEs are somewhat difficult to gauge. LEAs report by course and as either required or elective. This labeling may be less clear cut in high school, when students begin to have choice to satisfy some requirements. For instance, environmental science is often written in as a science requirement, which may reflect that it was an option for satisfying a requirement, that not all students will take.

Fewer Field Experiences at Elementary Grades

In 2017, the data suggested that one way to increase MWEEs could be to expand existing system-wide field experiences that do not meet the criteria of a MWEE. However, the 2019 data indicate there were fewer such opportunities. In each grade band, one-third or fewer of LEAs that lack a system-wide MWEE have a system-wide outdoor field experience that might be leveraged. In general system-wide outdoor experiences, particularly for elementary school students, appeared to drop in 2019, compared with 2017. It is not clear why this decrease occurred, but it limits the potential for leveraging such opportunities.

Key Takeaways from 2019 ELIT Indicators

Sustainable School Leadership & Curriculum

As in 2017, the data showed that two of the most common sustainable school practices among LEAs in the watershed were identifying a responsible staff person to be in charge of sustainable school efforts and working to incorporate efforts across the curriculum. These data were fairly consistent with the prior year, and they continue to indicate the importance of identifying leadership and responsibility as a first step toward sustainable school activities and/or certification. Among the aggregate data, however, there was evidence of a slight decrease in the number of districts that report actively encouraging schools to pursue sustainable school certification programs.

Priority Needs for EE Support

Unsurprisingly, funding was once again the greatest need identified by LEAs within the watershed as the support that would help them improve their environmental education practices. This was true in 2015 and 2017, as well.

Beyond the need for funding, support for teacher professional development, curriculum planning/integration, and community partnerships were the next biggest priorities. These patterns were generally consistent across the states with larger datasets. This finding aligns with the LEA preparedness results, which showed that curriculum integration is the most challenging step for districts to fully integrate.

The lowest priorities were support from Boards of Education and for outdoor classrooms. These overall patterns of priorities have remained remarkably consistent between 2015, 2017, and 2019.

Chesapeake Bay Watershed:

2019 ELIT Results

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