# ANNUAL EVALUATION

## Maryland Green Schools Program

2024-2025


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# ANNUAL EVALUATION

MAEOE Maryland Green Schools Program

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# MARYLAND GREEN SCHOOLS PROGRAM

## About Maryland Green Schools (MDGS)

The Maryland Green Schools (MDGS) program is the signature program of the Maryland Association for Environmental and Outdoor Education (MAEOE). The program was initiated in 1999 and has expanded to 22 of Maryland's 23 counties and Baltimore City.

By integrating environmental education and sustainability practices into school curricula, the MDGS program supports schools to pursue and achieve the state of Maryland's education requirements for environmental literacy put forth by the Code of Maryland Regulations (COMAR) 13A.04.17 - Environmental Literacy Instructional Programs for Grades Pre-kindergarten – 12). The MDGS program also helps to facilitate progress toward environmental goals proposed in Maryland's Chesapeake Bay Watershed Agreement.

The process to become a Green School is rigorous. The MDGS program supports schools by providing infrastructure, an array of logistical and financial support, and systematic application review to Maryland schools interested in applying. If schools are awarded, they carry the recognition of being certified as a Maryland Green School. To maintain award status, schools must reapply every four years.

## MDGS Program Goal

In 2019, as a result of the Maryland state legislature's "Maryland Green Schools Act of 2019," funding was provided to MAEOE to expand the contributions of schools toward statewide sustainability goals, with new legislation in 2022 that provided an additional expansion for two more years of funding. For the MDGS program in particular, a goal was set to support 50% of all schools in Maryland to receive Maryland Green School awards by 2028. To achieve this ambitious goal, MAEOE set the following objectives:

- Increase support for the development of Green Schools;
- Provide professional development to more teachers; and
- Increase environmental literacy of students.

This evaluation aims to explore these objectives. First, it examines progress towards expansion of MDGS awards statewide. This includes changes to award status over time and how program engagement and award status are influenced by demographic, geographic, and other factors. Second, it explores the impact of MDGS funding and training support on program engagement. Finally, the evaluation describes Green School environmental impact through staff and student participation in a series of sustainability practices.

# EVALUATION DATA

## Evaluation Questions

The annual evaluation of the MDGS program explores progress towards the statewide goal of 50% of Maryland's schools awarded as Green Schools by the year 2028, with a focus on factors that may influence progress towards this goal and recommendations for strategies to achieve this goal.

Guiding evaluation questions include:

1. What is the current progress towards the goal? What percentage of Maryland schools obtained new awards, sustained awards, and lapsed awards? How are schools progressing through the life cycle of the MDGS program?

2. Among public schools, how does school participation and award status in the MDGS program vary across demographic, socioeconomic, geographic and other factors? Is MDGS improving their reach in target areas identified by these factors?

3. How do professional development and grant support contribute to a school's likelihood to achieve and maintain a Green School award?

4. What is the cumulative environmental impact of the MDGS program?

## Data Sources

Several data sources were collated and analyzed to complete this evaluation of the MDGS program:

1. MAEOE's databases of all Green Schools and Green Centers currently or previously awarded, award level, and award history.

2. School-level data on all public schools from the National Center of Educational Statistics (NCES) 2023-24 dataset (most recent available).

3. School-level data on all private schools from NCES' Private School Survey (2021-22; most recent available).

4. List of Maryland Approved Nonpublic Schools sourced from the Maryland State Department of Education (2022; most recent available).

5. Environmental metrics survey results, reported in school applications for the 2024-25 Green School award cycle.

6. Records of training offerings and resources, mini-grants, and professional development stipends awarded by MAEOE's MDGS program in 2024-25.

7. School-level data on Title I status from the Maryland State Department of Education's 2024-25 dataset.

# ANALYSIS AND INTERPRETATION

## Data Analysis

To conduct this evaluation, a systematic and rigorous data audit and cleaning exercise was undertaken to ensure that information derived from multiple data sources used for this analysis (such as the National Center for Education Statistics state-level school datasets) were both collated and merged with accuracy. Any discrepancies among the different data sources were brought to the attention of MAEOE staff and resolved/updated accordingly. The result is a merged dataset from which we explored factors that influence MDGS growth across Maryland schools.

To ensure consistency with prior annual evaluations and to most meaningfully compare the Green School population to all Maryland schools, the following criteria were applied to remove schools that:

1) Are solely pre-K (or daycare) facilities;
2) Have fewer than 15 students; or
3) Are alternative schools/programs.

The results presented in this report are based on the application of MDGS award policies to the collated dataset. Photos of Green Schools used in this report were provided by MAEOE staff.

## Interpreting this Report

The MDGS program is based on a 4-year application cycle, and as such, annual progress is incremental. Much of the year-to-year change is related to the number of initial Green School awards from new recruits that year, as well as the number of schools who lapsed out of the Green School program. All other schools are elsewhere in the 4-year cycle and are not impacting growth or regression in statewide award rates.

Additionally, analyses for this report originate from data that are publicly available from NCES and the MD State Department of Education, as well as Green School data provided by MDGS. There are limitations to what these data can illustrate. Though we can explore factors that contribute to Green School award rates, we cannot comment on changes in student environmental literacy as a result of the program, or other similar items of interest to MDGS.

The intent of this evaluation is to provide discrete and tangible strategies to improve school participation in and long-term commitment to the Maryland Green Schools program, particularly in areas with low program reach.

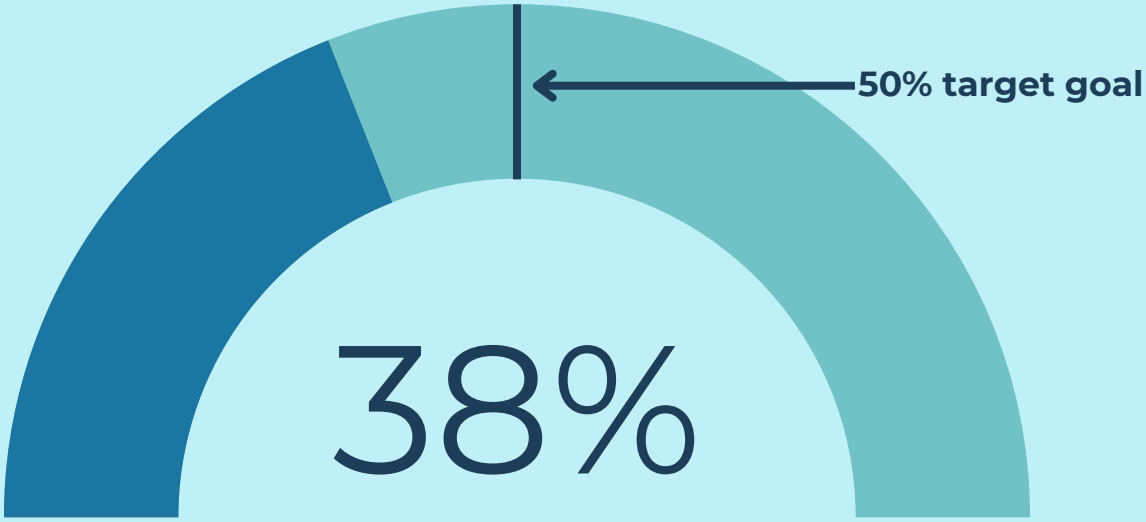
# RESULTS: HIGH LEVEL PROGRESS

## Maryland Green Schools Program

2024-2025

# PROGRESS TOWARDS 50% GOAL

**In the 2024-2025 academic year, 38% of all schools in Maryland – including both public and private schools – are Green Schools, showcasing a 2.5% increase from the previous year.**




The primary goal of the Maryland Green Schools program is to continue to increase the number of schools participating in the program. MAEOE set a goal in 2020 to achieve a 50% award rate across all Maryland schools by the 2027-28 academic year. Since the 2020-21 academic year, when annual program evaluations began, the statewide school award rate has vacillated between 34-38%, with this year falling at the top of that range with **674 awarded Green Schools**. The increase seen this year, up from 35.5% in 2023-24, indicates that more schools were added to the program than schools that lapsed their Green School status. However, significant advances must be undertaken and achieved by MDGS in order to accomplish their ambitious 50% award rate target in the next three years. This evaluation explores an array of factors that contribute to the statewide award rate, as well as opportunities to increase the rate in future years.

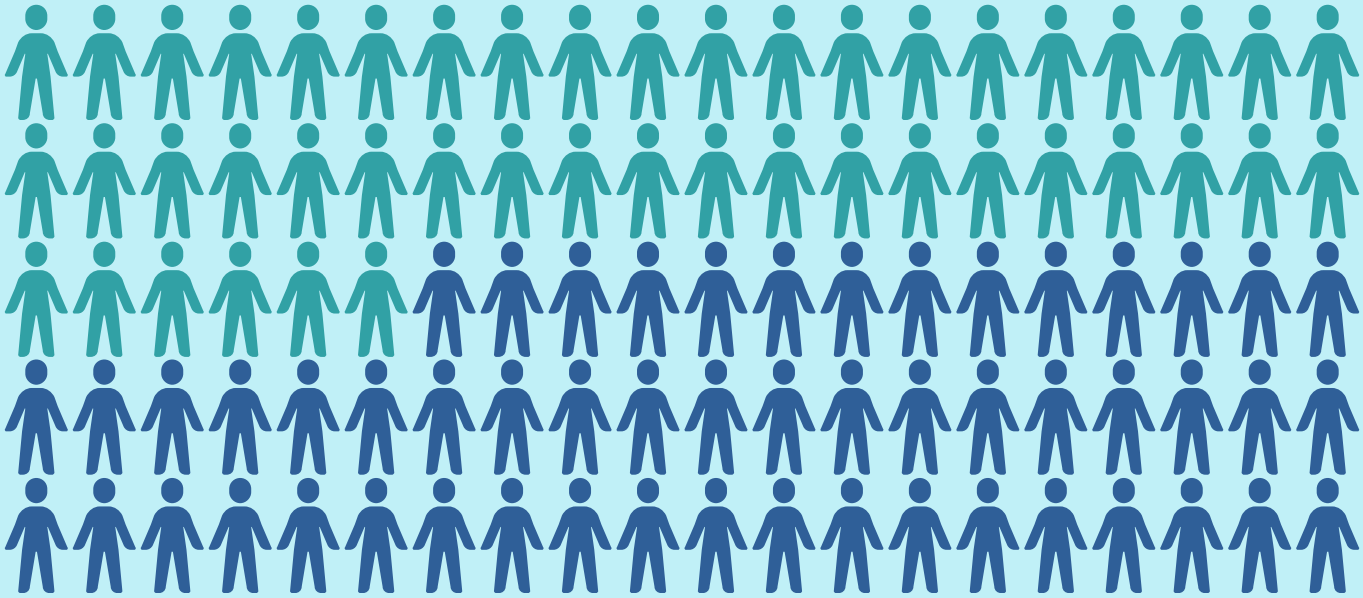
Note: The award rate of 38% is based on the number of awarded Green Schools (674) after applying the filters outlined in the Data Analysis section of this report. Without the filters, the total number of awarded Green Schools this year is 693.

| 2021-22 | 2022-23 | 2023-24 | 2024-25 |
|---|---|---|---|
| 36% → | 34% → | 35.5% → | 38% |

Statewide Green School award rate for the past four years in which an annual impact evaluation was conducted for the MDGS program.

# STUDENTS SERVED BY MDGS

**A total of 449,712 students attend certified Maryland Green Schools (46% of all Maryland students), up 2.9% from the 2023-24 school year.**



Just under half (46%) of Maryland students, illustrated in green, attend certified Green Schools.

Though MDGS is reaching 38% of schools across the state, they are reaching 46% of the total number of enrolled students - a figure much closer to their target rate of 50%. This is unsurprising given greater participation in the program by larger-sized schools (as measured by the number of enrolled students).

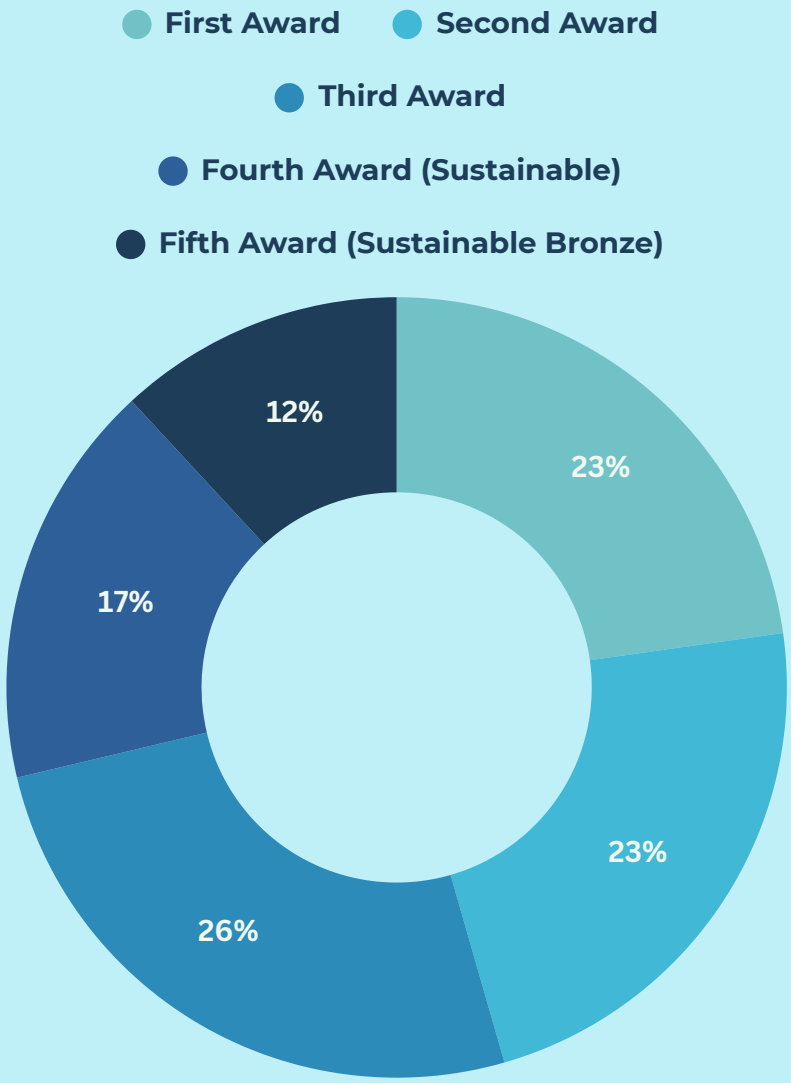
Another 134,871 students are attending schools that were previously awarded Green School status but have since lapsed (down from 135,540 in 2023-24).

The number of students in both awarded schools and in lapsed schools are conservative estimates, as the data from a small number of schools (almost exclusively private schools) did not report the size of their student body.

In the more detailed analysis of public schools found later in this report, this evaluation will explore which students are best served by the MDGS program and where there are opportunities to conduct more strategic outreach.

# GREEN SCHOOL AWARD LIFECYCLE

**Maryland Green Schools are spread across the award lifecycle, with the largest segment having achieved their third award. First-round awards increased from previous years.**



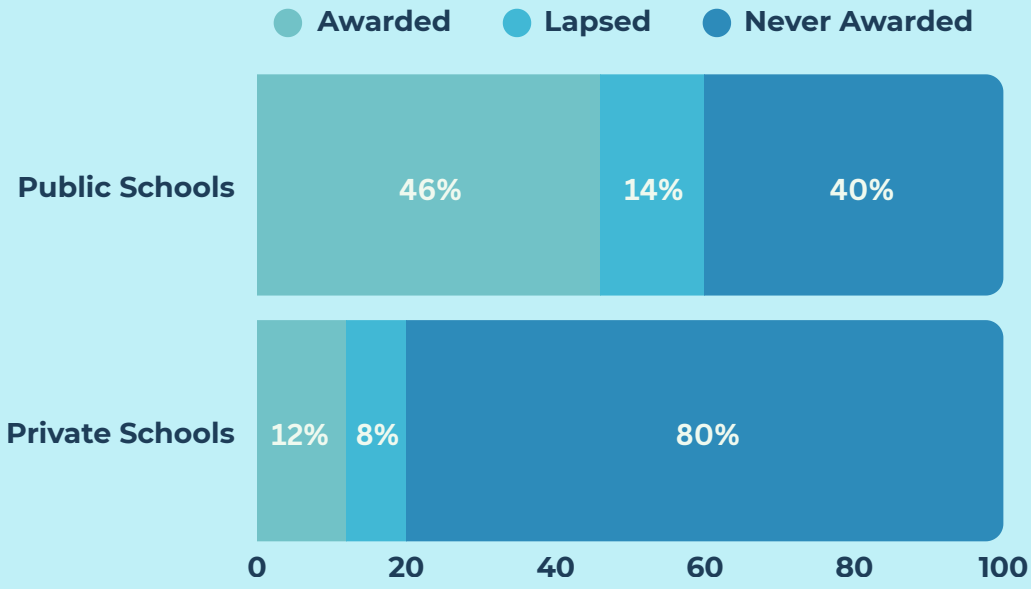

**Green School Award Lifecycle**

Green Schools are somewhat evenly distributed across the award lifecycle. That the highest percentage of schools have achieved their third award demonstrates the long-term involvement of many schools in the Green School program. As reapplication is required every four years, schools on their third award represent an 8-12 year commitment. The percentage of schools obtaining an initial (first) Green School award increased from 16% last year to 23% this year, which highlights MAEOE's efforts to recruit new schools over the past year.

Once a Maryland Green School has achieved its fourth award, it becomes a Sustainable school and may use a simplified process for future program applications. Sustainable school award rates have remained consistent over the past few years.

# PUBLIC VERSUS PRIVATE SCHOOLS

**The Maryland Green Schools program maintains a significantly higher participation rate in public schools than in private schools.**




Distribution (percentage) of Maryland public and private schools by Green School award status.

The Maryland Green Schools program continues to have higher participation from public schools (622 of 1,353 public schools) than from private schools (52 of 422 private schools). This is not a new finding; MDGS reach in public schools has been consistently higher than in private schools since 2020-21 when annual program evaluation began.

The total number of public Green Schools rose from 591 to 622 (3%) in the past year. Awards to private schools also increased by 2% this year, which indicates slow but incremental movement toward better reaching this segment of the Maryland school population.

The Green Schools program has primarily focused on public schools largely due to the Maryland Green Schools Act of 2019, which encourages public school participation and reporting. Due to the availability of more robust data for public schools, this evaluation report will also explore public school participation and engagement trends in greater detail.

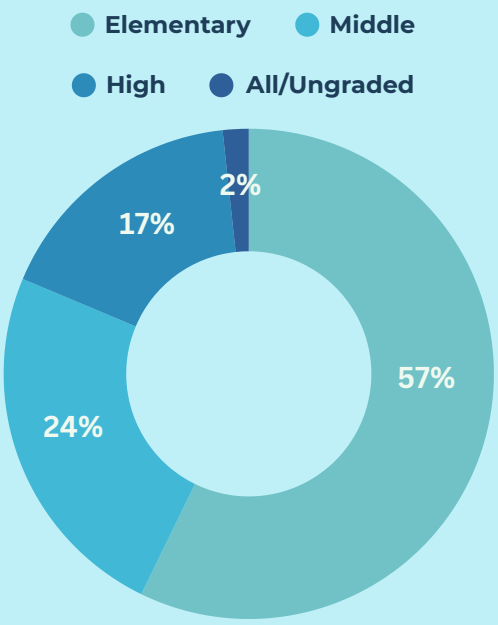
# RESULTS: PUBLIC SCHOOLS

## Maryland Green Schools Program

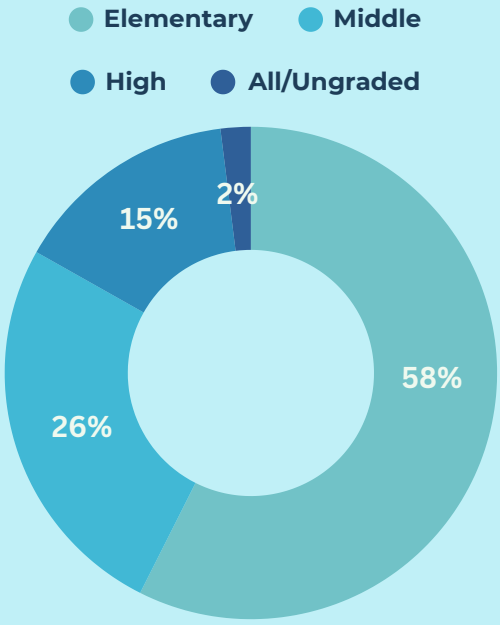
2024-2025

# AWARD RATES: GRADE LEVEL

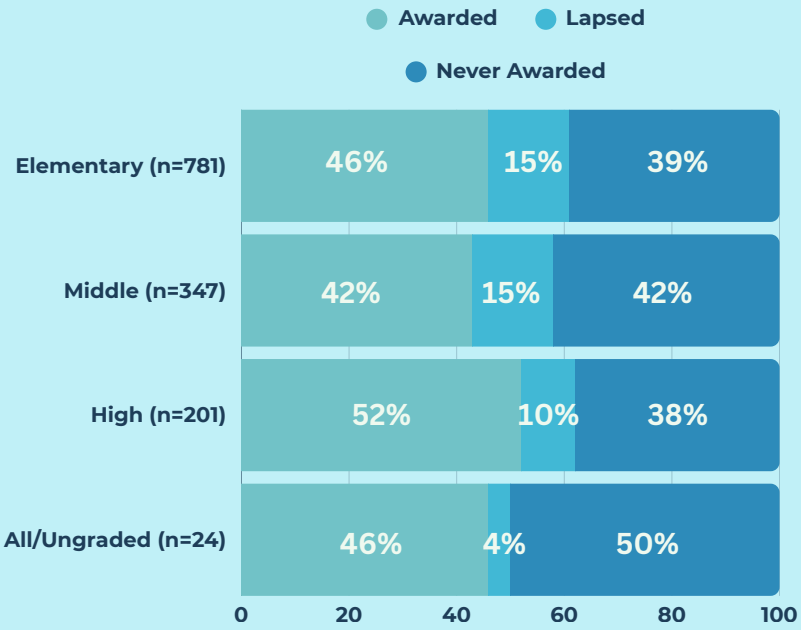
**Of the 622 *public* Green Schools, the distribution of elementary, middle, and high schools, as well as schools that are ungraded or serve all grade levels, closely resembles the statewide grade level distribution.**




**Public Green Schools**




**All Public Schools**



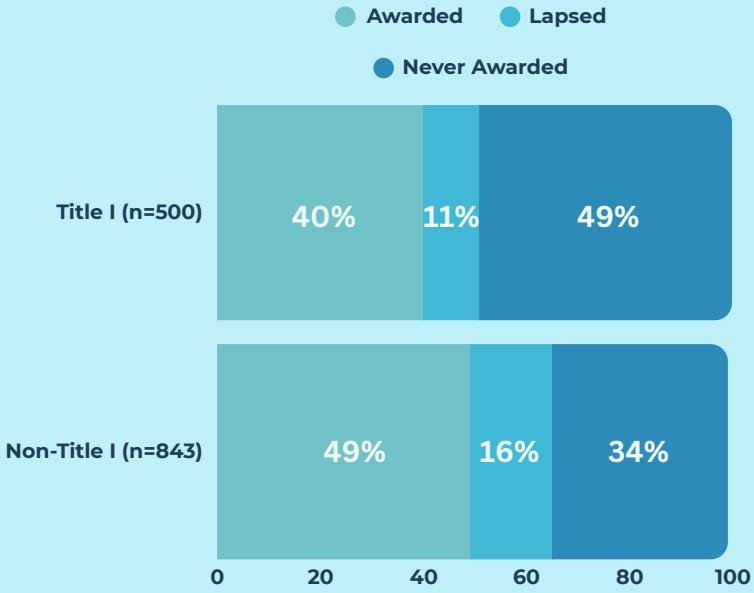

Distribution (percentage) of public school grade levels by Green School award status.

This year, and over time, the distribution of Green Schools across grade levels in public schools is proportionate to that of grade levels statewide.

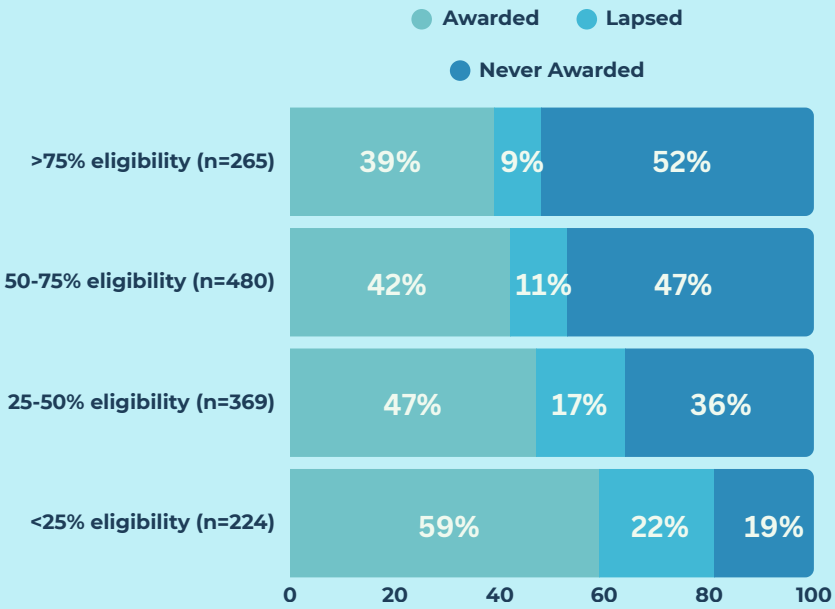
High school award rates (52%) exceed that of the statewide goal of 50%, improving from 49% last year and 45% the year before. Elementary and middle schools remain close to, but short of, the 50% statewide goal. The total number of awarded Green Schools has increased from last year across each school level.

# AWARD RATES: SOCIOECONOMIC FACTORS

**Title I schools and schools with higher student eligibility for the Free and Reduced Meal (FARM) program are less likely to be awarded as a Maryland Green School.**




Distribution (percentage) of Title I and non-Title I public schools by Green School award status.



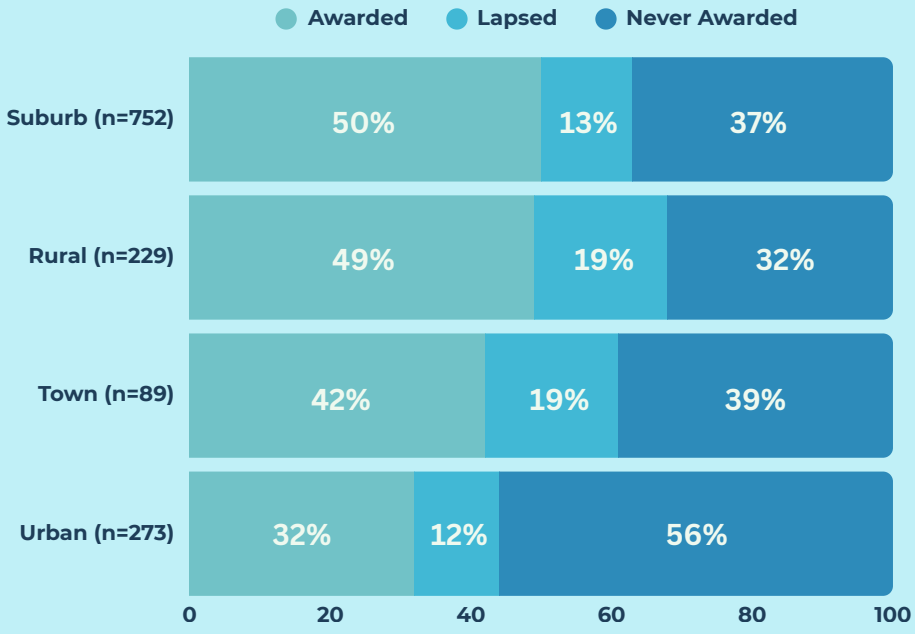

Distribution (percentage) of public schools according to FARM eligibility by Green School award status.

Green School award status is likely impacted by the resources available to each school. Schools that are designated as Title I status and schools with a higher proportion of student eligibility for the FARM program were less likely to be awarded as a Green School. This indicates that the MDGS application process and requirements for participation may command more resources than are readily available at schools with students from low-income areas.

Schools with fewer resources and more disadvantaged students may benefit from a wide variety of resource programs to improve their capacity to take on the challenge of applying to become a Green School. Meaningful incentives and resources to apply and sustain participation in the Green Schools program should be explored if MAEOE is interested in increasing participation from low-resourced public schools. The number of Title I schools in Maryland increased this year, which may indicate that schools will only need more support in the future.

# AWARD RATES: SCHOOL LOCALE

**The MDGS program continues to have greatest success recruiting and awarding schools that are in suburban and rural locations, with opportunity to reach more urban schools.**



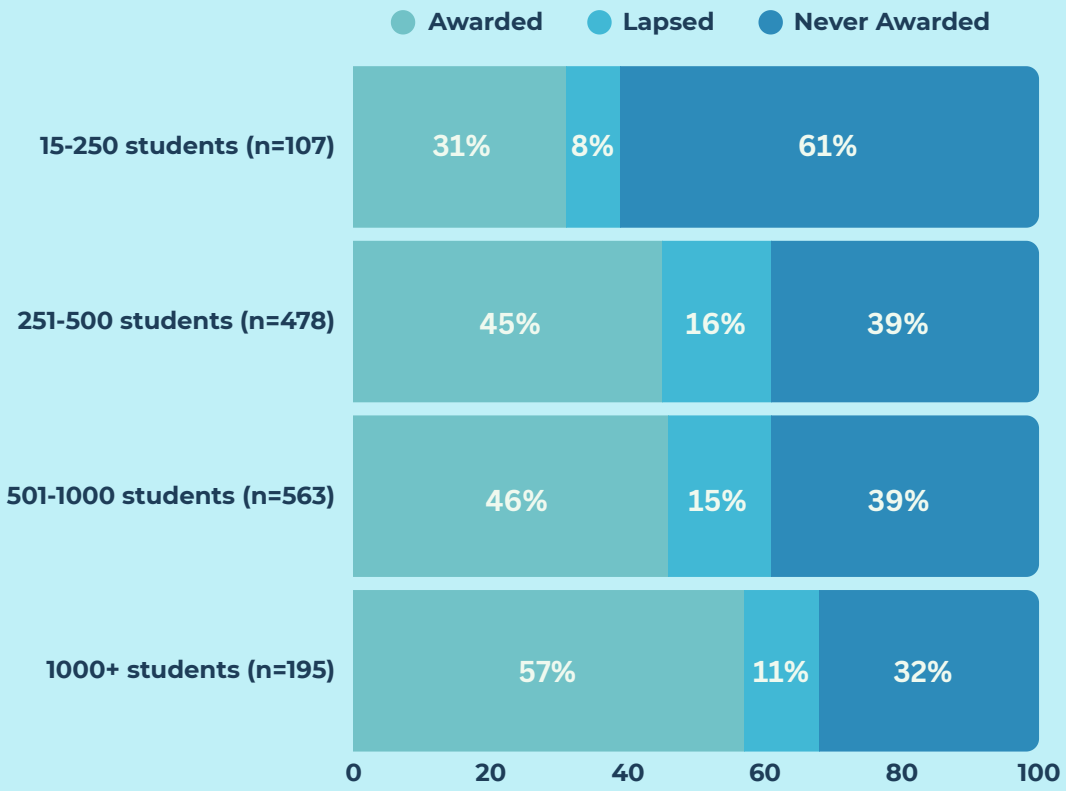

Distribution (percentage) of public school MDGS award status by locale type.

In the public school population, both suburban and rural schools show high rates of participation (50% and 49%, respectively) in the MD Green School program. These rates nearly reach the 50% statewide goal that MAEOE aims to achieve by 2028. Despite high award rates for schools in rural areas and towns, rates for schools lapsing out of the program are also highest in these areas.

Green School award rates remain low for urban schools, many of which have not yet interacted with the Green School program (56% never awarded). Over half of urban (city-based) schools are designated Title I schools – a rate much higher than found in suburban, town, and rural schools.

# AWARD RATES: SCHOOL SIZE

**Among public schools, as in past years, the Green Schools program continues to see higher award rates in schools with larger student bodies.**




Distribution (percentage) of public school MDGS award status by school size.

School size in public schools (as measured by number of enrolled students), is positively correlated with Green School award rates, with larger schools maintaining a higher award rate than smaller schools. These numbers are essentially unchanged from 2021-22 when annual evaluation began.

As with other metrics that were explored for this evaluation, school size is likely an indicator of Green School program participation because larger schools tend to have access to more resources than smaller schools, allowing them to not only complete the rigorous application process but also continue to maintain all requirements expected of active Green Schools.

# COUNTY AWARD RATES

High Participation → Low Participation

| County (# of Public Schools) | Awarded (%) | Lapsed (%) | Never Awarded (%) |
|---|---|---|---|
| Calvert (n=23) | 100 | 0 | 0 |
| Queen Anne's (n=14) | 100 | 0 | 0 |
| Kent (n=5) | 100 | 0 | 0 |
| Prince George's (n=197) | 77 | 1 | 22 |
| Talbot (n=8) | 63 | 12 | 25 |
| Montgomery (n=207) | 54 | 7 | 39 |
| Howard (n=76) | 51 | 29 | 20 |
| Cecil (n=28) | 50 | 14 | 36 |
| Wicomico (n=25) | 48 | 4 | 48 |
| Charles (n=38) | 42 | 11 | 47 |
| Anne Arundel (n=117) | 42 | 22 | 36 |
| Allegany (n=22) | 41 | 0 | 59 |
| Worcester (n=13) | 39 | 23 | 38 |
| Baltimore County (n=164) | 38 | 16 | 46 |
| Harford (n=54) | 37 | 35 | 28 |
| Carroll (n=38) | 37 | 42 | 21 |
| Garrett (n=12) | 33 | 50 | 17 |
| St. Mary's (n=27) | 33 | 52 | 15 |
| Dorchester (n=11) | 27 | 9 | 64 |
| Baltimore City (n=149) | 23 | 11 | 66 |
| Caroline (n=9) | 22 | 11 | 67 |
| Frederick (n=66) | 21 | 11 | 68 |
| Washington (n=43) | 16 | 14 | 70 |
| Somerset (n=7) | 0 | 14 | 86 |

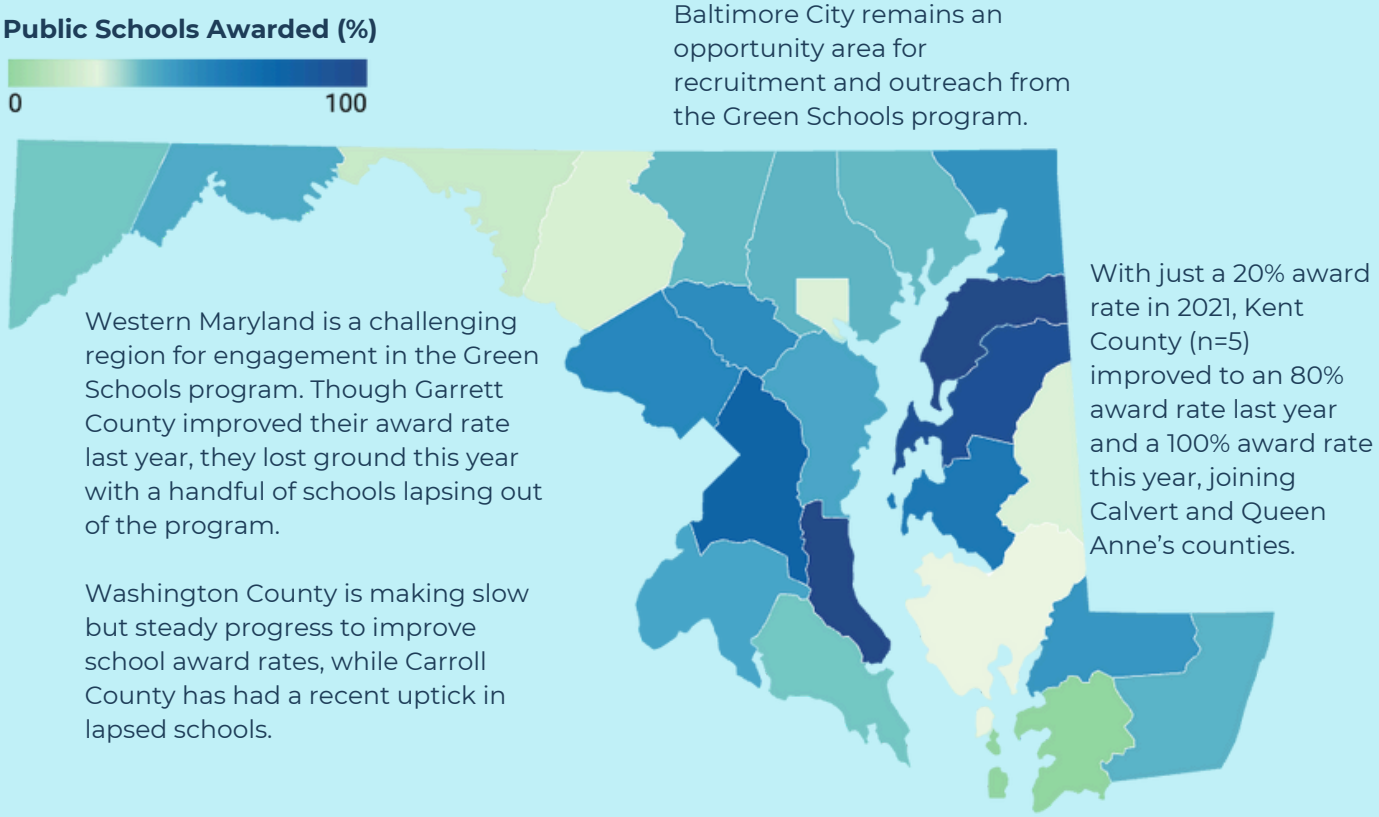
**Participation in the Green School program varies by county. Calvert, Kent, and Queen Anne's counties maintain 100% award rates, while Somerset continues to have no awarded schools.**

Calvert, Kent, and Queen Anne's counties earned 100% award rates in their public schools, and eight counties achieved MAEOE's target statewide goal of a 50% award rate. Somerset is the only county with no current Green Schools.

Prince George's and Montgomery counties have the highest number of participating schools, largely an artifact of population size relative to other counties. However, Prince George's also maintains one of the highest award rates. There is still opportunity to increase reach in Montgomery, as well as other populous counties like Baltimore, Baltimore City, and Anne Arundel.

# COUNTY-SPECIFIC TRENDS

**Green School award rates are not geographically uniform, with hotspots of both high and low program engagement across Maryland. Several counties improved their award rates in 2024-25, while others saw regressions caused by schools lapsing out of the program.**




Baltimore City remains an opportunity area for recruitment and outreach from the Green Schools program.

Western Maryland is a challenging region for engagement in the Green Schools program. Though Garrett County improved their award rate last year, they lost ground this year with a handful of schools lapsing out of the program.

Washington County is making slow but steady progress to improve school award rates, while Carroll County has had a recent uptick in lapsed schools.

With just a 20% award rate in 2021, Kent County (n=5) improved to an 80% award rate last year and a 100% award rate this year, joining Calvert and Queen Anne's counties.

The Lower Eastern Shore continues to show low engagement with the Green Schools program, although Dorchester County improved from a 0% to a 27% award rate this year.

| | County (# of Public Schools) | Change from 2023-24 (%) | 2024-25 Awarded (%) | 2023-24 Awarded (%) | 2022-23 Awarded (%) | 2021-22 Awarded (%) |
|---|---|---|---|---|---|---|
| | Dorchester (n=11) | +27 | 27 | 0 | 0 | 0 |
| | Kent (n=5) | +20 | 100 | 80 | 40 | 20 |
| (+) | Caroline (n=9) | +11 | 22 | 11 | 11 | 22 |
| | Frederick (n=66) | +9 | 21 | 12 | 7 | 11 |
| | Montgomery (n=208) | +8 | 56 | 48 | 47 | 44 |
| (-) | Garrett (n=12) | -17 | 33 | 50 | 50 | 58 |
| | Talbot (n=8) | -13 | 63 | 75 | 62 | 75 |

Notable increases and decreases in county award rates for the Maryland Green Schools Program in 2024-25.

# RESULTS: SUPPORT FOR GREEN SCHOOLS

## Maryland Green Schools Program

2024-2025

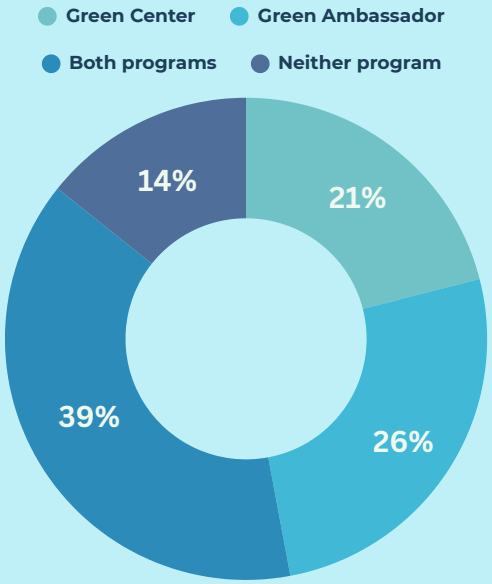
# GREEN CENTERS AND GREEN AMBASSADORS

**Maryland's Green Schools receive invaluable support from partnerships with Green Centers and Green Ambassadors. Of 119 schools that applied this year, 102 were supported by a Green Center, a Green Ambassador, or both. The extensive network of community partners and resources, which also includes MDGS staff, meaningfully aids schools with their success in the Green Schools program.**

Green Centers are local organizations that support both aspiring and current schools to achieve or maintain Maryland Green School awards. Like Green School awards, Green Center awards are valid for four years before reapplication is required. Being recognized as a Green Center is a symbol of the commitment an organization has for environmental education, sustainability, and active engagement with local schools in the community. There are 40 Green Centers across Maryland.

Green Ambassadors (formerly Green Leaders) are individuals that aid schools with their applications, as well as other support tasks like helping the students with performing sustainability practices. Both Green Centers and Ambassadors are critical components of the Maryland Green Schools ecosystem.

Green Centers supported 71 (60%) of this year's Green School applicants. Most counties have at least one active Green Center, with larger counties (Montgomery, Prince George's, and Baltimore) having between four and six.




Support received by Green Schools that submitted applications in 2024-25.

The absence of local Green Centers may impact the success of nearby Green Schools. Currently, six counties are without Green Centers; three of which have low engagement in the Green School program: Caroline (22% award rate), Dorchester (27% award rate), and Somerset (0% award rate). Five new Green Centers were awarded in 2025 in regions where the Green Schools Program stands to benefit.

Green Ambassadors supported 77 (65%) of this year's school applicants (some Green Schools were aided by both programs - see pie chart).

# TRAINING AND PROFESSIONAL DEVELOPMENT

**Many schools and school district staff attended trainings on the Green School application process, including portal training and a series of information sessions hosted by MAEOE. Organizations interested in becoming Green Centers and individuals wanting to volunteer for the Green Ambassador program also attended the information sessions. Professional development stipends were provided to select teachers and Green Ambassadors in support of program goals.**

| Training Opportunity (2024-25) | Attendance (total) | Attendance (schools) | Attendance (school districts) | Attendance (non-school organizations) |
|---|---|---|---|---|
| Green School Application Portal Training | 12 | 11 | 1 | 0 |
| Green School Application Info Sessions | 51 | 29 | 6 | 14 |

Attendance of MDGS professional development offerings in 2024-25.

| Professional Development Support (2024-25) | Number of recipients | Total amount awarded |
|---|---|---|
| Teacher stipend | 39 | $9,750 |
| Green Ambassador stipend | 6 | $1,400 |

MDGS support provided to teachers and Green Ambassadors in 2024-25.

Training sessions offered by MAEOE's MDGS program focused primarily on guiding schools through the Green School application process. Trainings were attended by school teachers, staff, and executives, as well as district-level administrators, Green Ambassadors, and Green Center leadership and staff. Teachers and Green Ambassadors were also awarded stipends to assist them in their roles and to further support MDGS program goals.

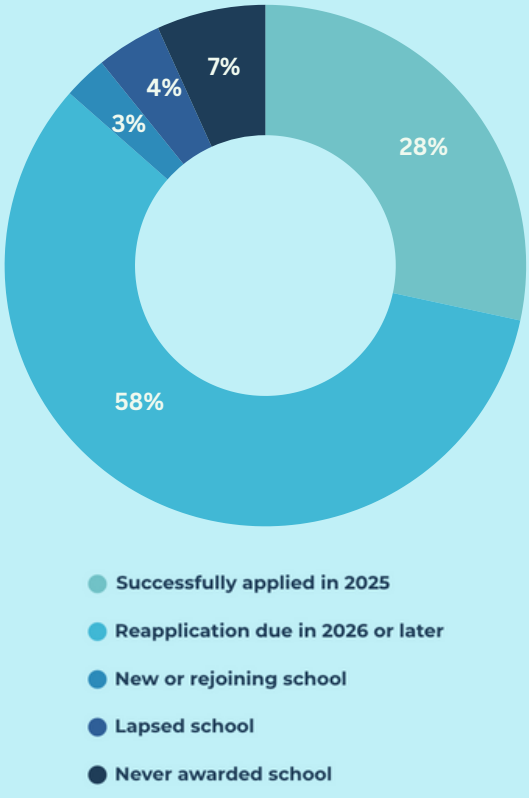
In addition to the training offerings listed above, the MDGS program provides several instructional videos and resources on the MDGS website to guide schools through the process of completing their applications. Reach metrics for these training resources were not available for this evaluation.

# MINI-GRANTS

**In the 2024-25 academic year, 61 mini-grants were awarded to schools, school districts, and Green Centers in support of improving the total number of awarded Maryland Green Schools. A total of 45 schools received mini-grants, with a range of 1-4 mini grants per school.**

| Mini-Grant Offering (2024-25) | Grant recipents | Total amount awarded |
|---|---|---|
| Professional Development Grants | 8 | $17,779 |
| Transportation Grant - Field Trips | 19 | $14,720 |
| Transportation Grant - Youth Summit | 25 | $13,375 |
| Student Action Project Grants | 9 | $15,365 |

Number of recipients of MDGS mini-grants in 2024-25, and funding awarded.




**Schools that received mini-grants had favorable application outcomes, though mini-grant support is just one of many factors that may influence a school's award status.**

Over 86% of schools that received mini-grants in the 2024-25 academic year either went on to complete successful Green School applications this year (28%) or have their reapplication due in 2026 or later (58%). Notably, schools that were expected to apply, have lapsed out of the program, or have not been awarded before, received a much smaller portion of the available funding.

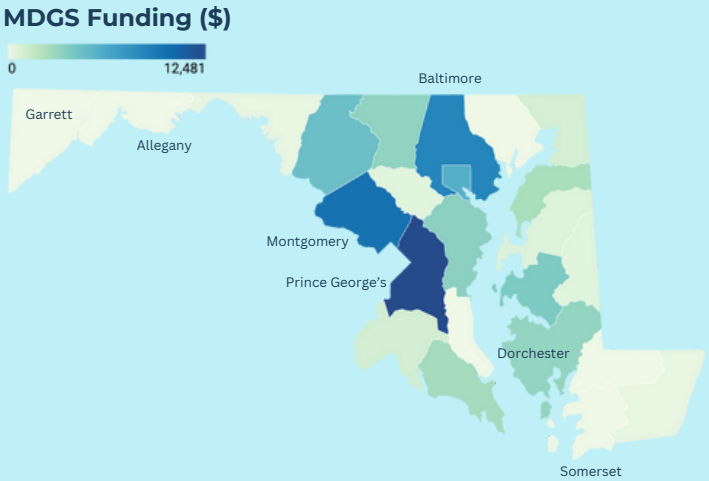
A county-level analysis of the impact of mini-grants and other MDGS support is provided on the following page.

# FINANCIAL AWARDS BY COUNTY

**During 2024-25, counties receiving greater support from mini-grants and professional development stipends had greater success applying to become Green Schools, while counties without grant support continued to lack engagement in the program.**

| County | Number of MDGS Funding Awards* |
|---|---|
| Prince George's | 23 |
| Montgomery | 20 |
| Baltimore County | 12 |
| Baltimore City | 10 |
| Anne Arundel | 6 |
| Frederick | 6 |
| St. Mary's | 6 |
| Dorchester | 4 |
| Carroll | 3 |
| Harford | 3 |
| Talbot | 3 |
| Charles | 2 |
| Howard | 2 |
| Queen Anne's | 2 |
| Caroline | 1 |
| Cecil | 1 |
| Kent | 1 |
| Washington | 1 |
| Worcester | 1 |
| Allegany | 0 |
| Calvert | 0 |
| Garrett | 0 |
| Somerset | 0 |
| Wicomico | 0 |

*includes both mini-grants for schools/districts and stipends for teachers and Green Ambassadors




The total amount of mini-grants and professional development stipends awarded to counties in 2024-25 (range: $0 - $12,481).

Maryland Green Schools Program funding supported prospective and current schools to successfully apply/re-apply to the program in 2024-25. In a notable example, Dorchester schools received four funding awards, which went to two of the three new schools awarded of the county's 13 total schools (last year, it did not receive any grant funding, nor did it have any awarded Green Schools).

Conversely, the absence of MDGS support funding was apparent in Somerset County, the last remaining Maryland county without any awarded Green Schools, and Garrett County, where the public school award rate dipped below 50% (to 33%) for the first time.

Prince George's, Montgomery, and Baltimore counties received the most funding overall, but also represent the most populous counties.

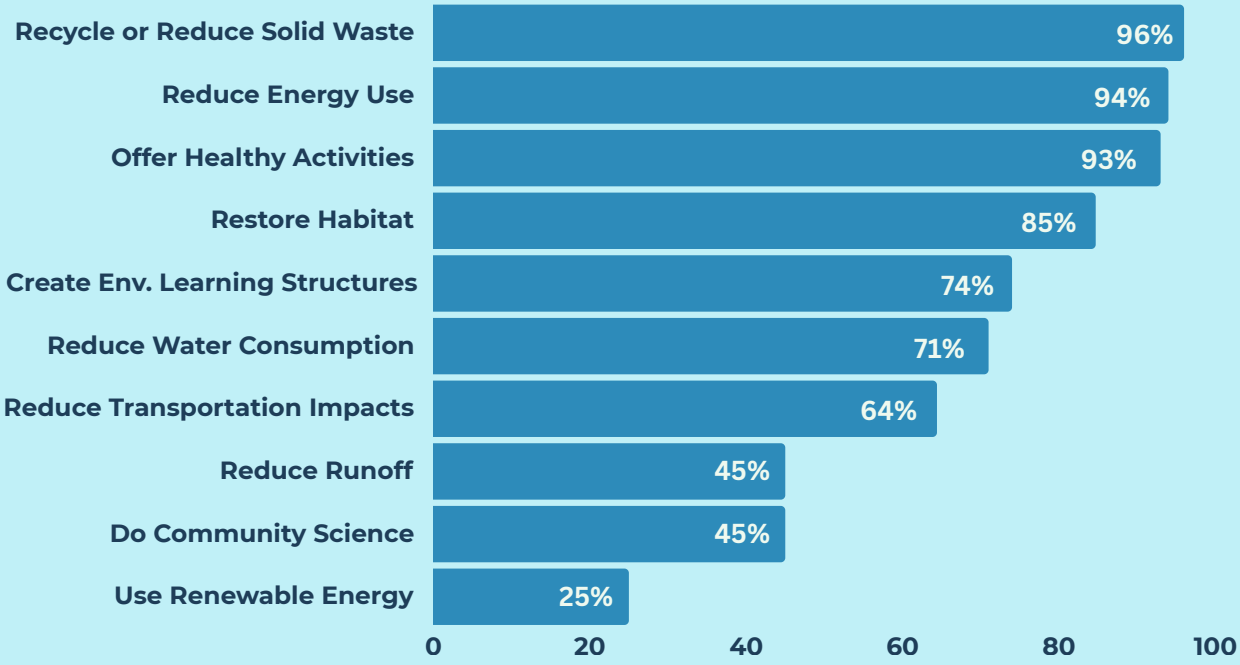
# RESULTS: ENVIRONMENTAL IMPACT

## Maryland Green Schools Program

2024-2025

# STUDENT SUSTAINABILITY ACTIONS IN SCHOOLS

**School-reported data from 119 Green Schools (105 public schools and 14 private schools) were available to compute the positive environmental impact of student actions in Maryland Green Schools this year.**



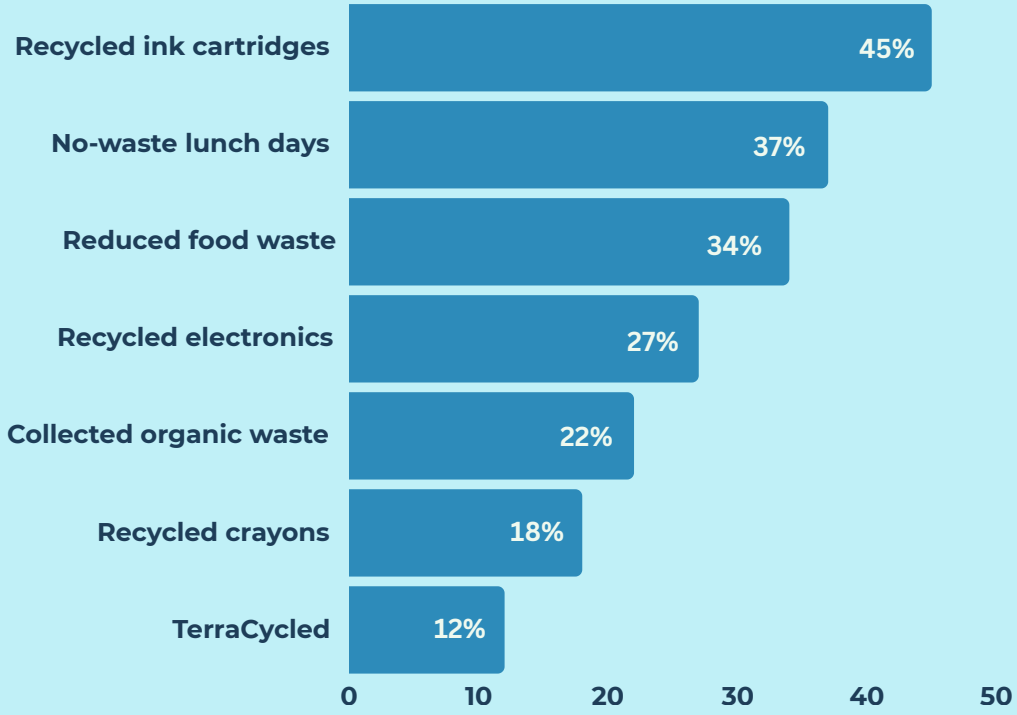

Self-reported participation (% of schools who answered yes) in a series of green practices Across Maryland Green Schools (n=119) in 2024-25.

Green School engagement in different sustainability practices varies. School-reported participation is high for recycling, energy reduction, and other healthy activities such as using plants to promote indoor air quality. Conversely, most schools are not using renewable energy or engaging their students in community science activities. Practices that require little effort and training to complete, as well as those that are easier to measure, are conducted and reported by schools more often than effort-intensive practices or those that those with substantial measurement barriers.

One example of a green practice with significant barriers for schools is the use of renewable energy, which includes solar, wind, and/or geothermal energy. Installation and ongoing maintenance of renewable energy infrastructure likely involves district or county-level approval and support. Additionally, associated costs can be prohibitive for low-resourced schools. In contrast, it is relatively simple and cost-efficient for schools to use energy-efficient light bulbs. Each sustainability category is explored in greater detail on the subsequent pages.

# RECYCLING & REDUCING WASTE

**Recycling ink cartridges was the most common waste reduction practice reported by Green Schools (45% of schools), but over a third also reported reducing food waste and holding "no-waste" lunch days.**




Self-reported participation (% of schools who answered yes) in a series of practices to recycle and reduce waste across Maryland Green Schools (n=119) in 2024-25.

Green Schools reported over 3,400 recycled ink cartridges, nearly 4,000 recycled electronics (including cell phones and batteries), and a total of nearly 1.7 million lbs. of recycled material.

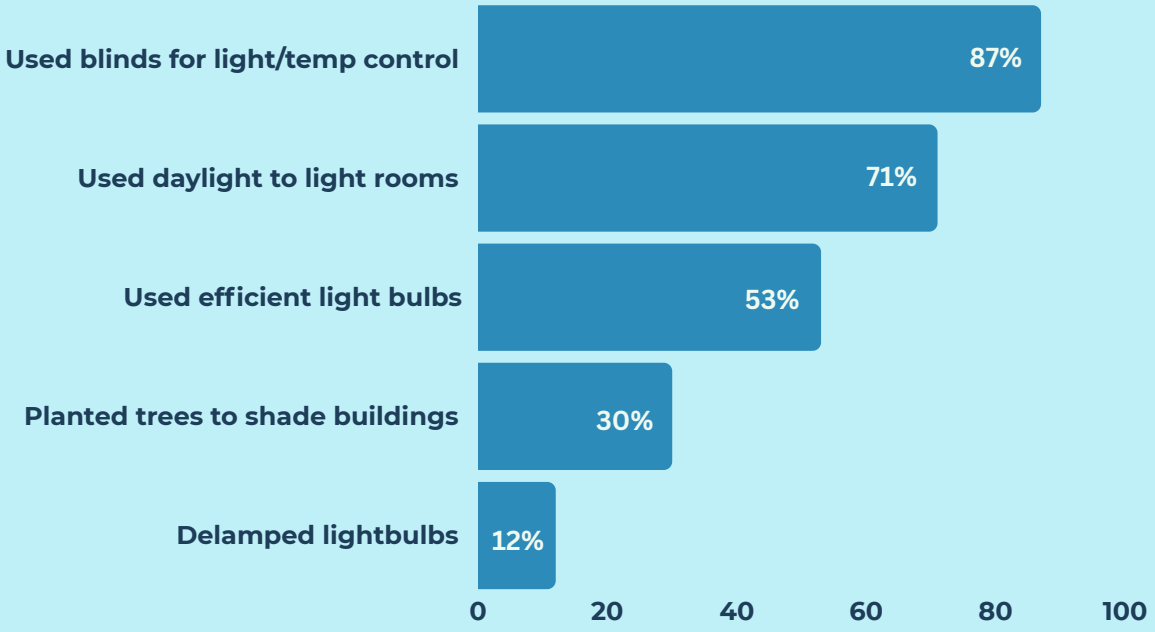
Collectively, schools hosted over 1,100 no-waste lunch days (the equivalent of 3+ years), and reduced food waste by nearly 130,000 lbs.

Ranges for most school-reported waste metrics were atypically large and included unrealistic outliers. Caution is advised when interpreting the reported values.

Additionally, though many schools participated in the various waste reduction practices shown above, some of them did not measure or audit their impact. Without dedicated resources, schools may lack capacity to reliably track these metrics.

# ENERGY CONSERVATION

**To conserve energy on school grounds, schools most often reported using blinds for temperature and light control and using daylight for lighting rooms.**



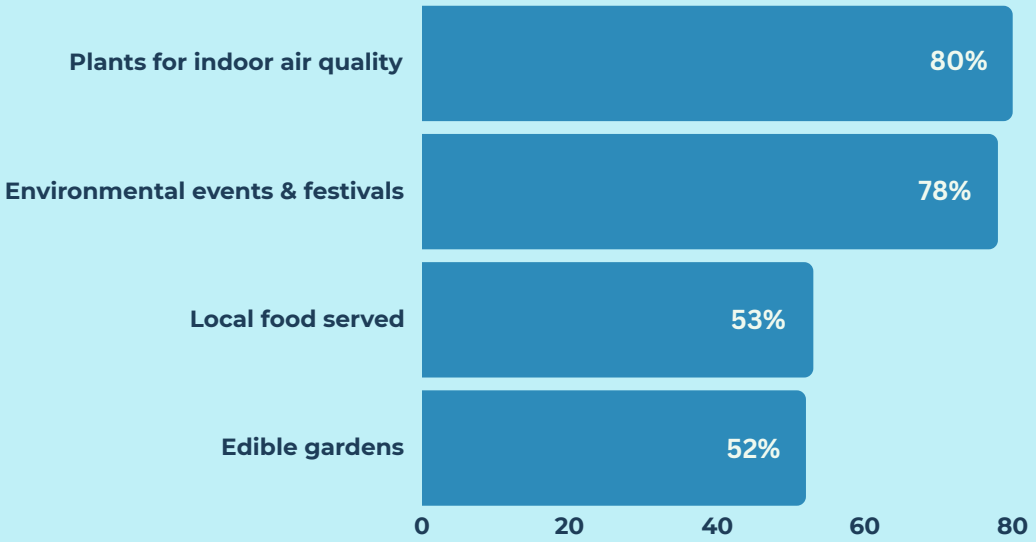

Self-reported participation (% of schools who answered yes) in a series of practices to conserve energy across Maryland Green Schools (n=119) in 2024-25.

Several energy conservation behaviors had high engagement in Green Schools this year, with the greatest participation reported for using window blinds to control indoor temperature (87% of schools) and using daylight to light classrooms (71%). Practices with lower participation included planting trees to shade buildings (30% of schools), and de-lamping lightbulbs (12%). These practices are easy to measure and are likely more accurate than other energy conservation metrics not included on the figure above: the use of solar, wind, and geothermal energy, and total energy saved (in kWh).

Significant variation in school-reported metrics associated with these practices suggest that most of the estimates are unreliable. For example, the total reported energy savings for 119 schools is ~3.7 million kWh, yet over 1 million kWh of that value was reported by a single school. Most schools indicated that it was not possible to compute the amount of school energy savings - either they did not have access to these data, there were challenges with computing the data accurately, or there was no established baseline by which to compare offsets and savings.

# HEALTHY SCHOOL ACTIVITIES

**Most Green Schools reported having indoor plants for air quality (80%) and hosting outdoor events and environmental festivals (78%). Over half maintain edible gardens and serve local food.**




Self-reported participation (% of schools who answered yes) in a series of practices to conduct healthy activities across Maryland Green Schools (n=119) in 2024-25.

School engagement across the healthy activities category was high. Over 75% of schools use plants to improve indoor air quality and organize environmental events and festivals for their students. Locally-sourced food was served in Green Schools between 1 and 180 times during the school year, for a total of nearly 3,000 times. Schools maintaining edible gardens reported a collective 12,400+ square feet, equivalent to the size of two White House Rose Gardens.

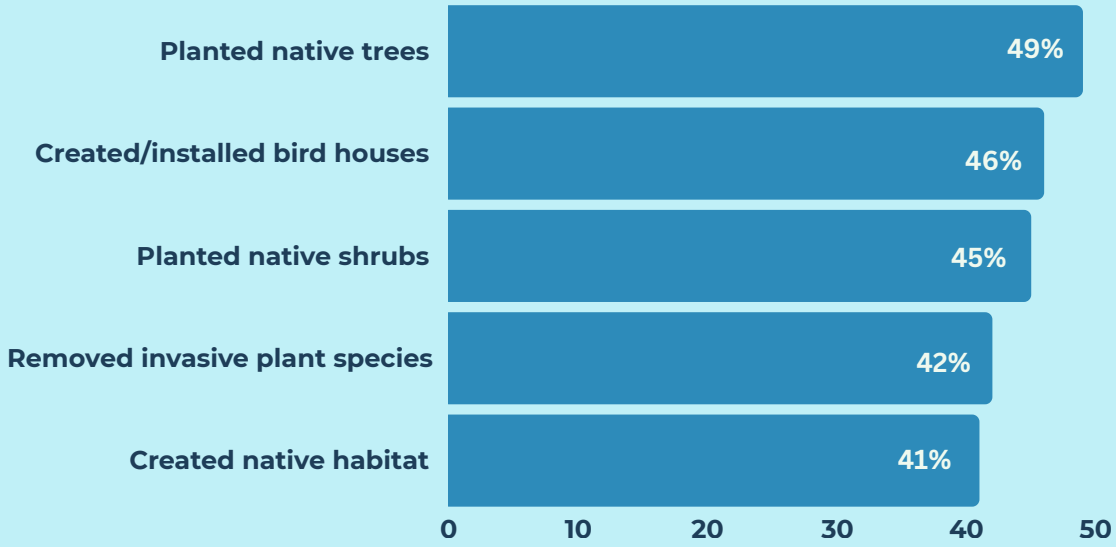
Edible gardens may be less common in schools because of the time and effort it takes to maintain them.

Similarly, the procurement of locally-sourced food involves many external factors, such as food availability and cost. To grow participation in these practices, the MDGS program could consider subsidies or explore other connections to local food and state-sponsored health initiatives.

Survey reporting for this sustainability category had no major challenges. A few schools cited challenges accessing and estimating the amount of local food served.

# HABITAT RESTORATION

**Green Schools reported participating in a range of habitat restoration practices, including planting native trees and creating native habitat. However, many schools are maintaining existing habitat as opposed to creating new habitat, and these efforts are unaccounted for.**




Self-reported participation (% of schools who answered yes) in a series of practices to conduct habitat restoration across Maryland Green Schools (n=119) in 2024-25.

In total, Green Schools were actively involved in land restoration practices. Imagine turning the entire field at Camden Yards green, but with native habitat instead of Orioles fans! That's how much native habitat (~2 acres) was created by Green Schools this year, as reported via the metrics survey. Green Schools also installed 409 bird houses, planted over a thousand native trees, and removed over 16,000 square feet of invasive plant species.

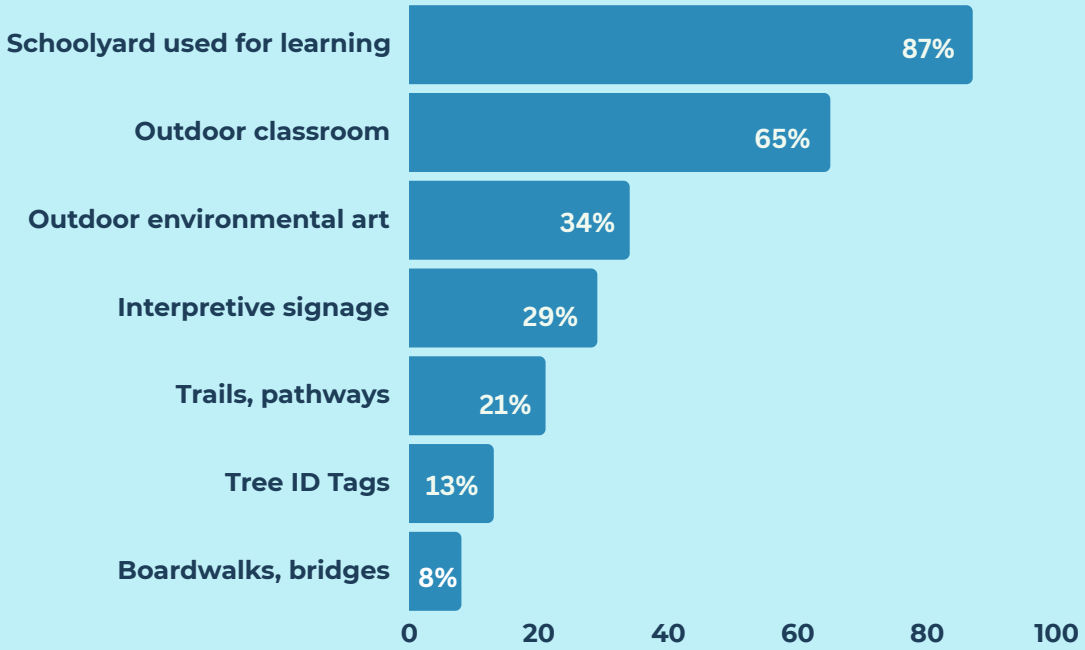
Habitat restoration metrics, as seen with the other sustainability categories, show wide ranges in school-reported values and likely represent unreliable data.

Further, the specific habitat restoration practices tracked by the Green Schools program are not inclusive of all practices that awarded schools are conducting. For example, many schools install bat houses or other non-bird animal habitats - activities not currently captured in the annual metrics survey.

To more accurately measure the impact of habitat restoration activities performed by Green Schools, the metrics survey could be revised to include metrics that capture the maintenance of previously restored habitat. Commitment to managing already-restored habitat is not currently reflected in these data.

# ENVIRONMENTAL LEARNING

**One of the most common green practices Green Schools participate in is utilizing schoolyards for outdoor learning. Practices involving installation of new features, such as boardwalks, are less common - in many cases because schools have already installed such features in prior years.**



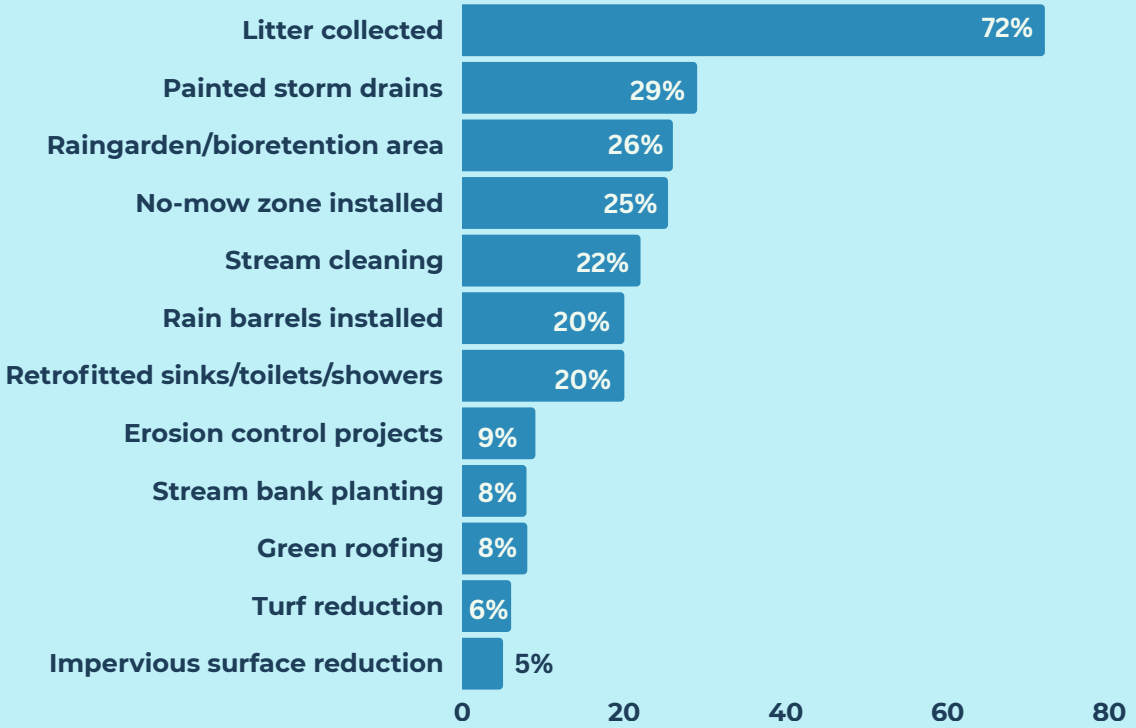

Self-reported participation (% of schools who answered yes) in a series of practices to promote environmental learning structures across Maryland Green Schools (n=119) in 2024-25.

Most schools participated in outdoor learning, including the use of schoolyards for learning (87% of schools) and the use of outdoor classrooms (65% of schools). However, the number of times that schoolyards were used for learning is unreliable due to reporting confusion. Some schools reported the number of classes (a higher number), while others reported the types of different activities that occur outside (a lower number).

Less reported practices included building nature-based infrastructure (e.g., trails, signage, boardwalks, and bridges). Many Green Schools maintain existing outdoor infrastructure, and as such, are not building new installations. These efforts currently go unaccounted for in the annual sustainability metrics survey.

# WATER CONSERVATION

**Green Schools most often participated in water conservation activities by collecting trash to reduce pollution in local waterways. Other practices are much less common.**



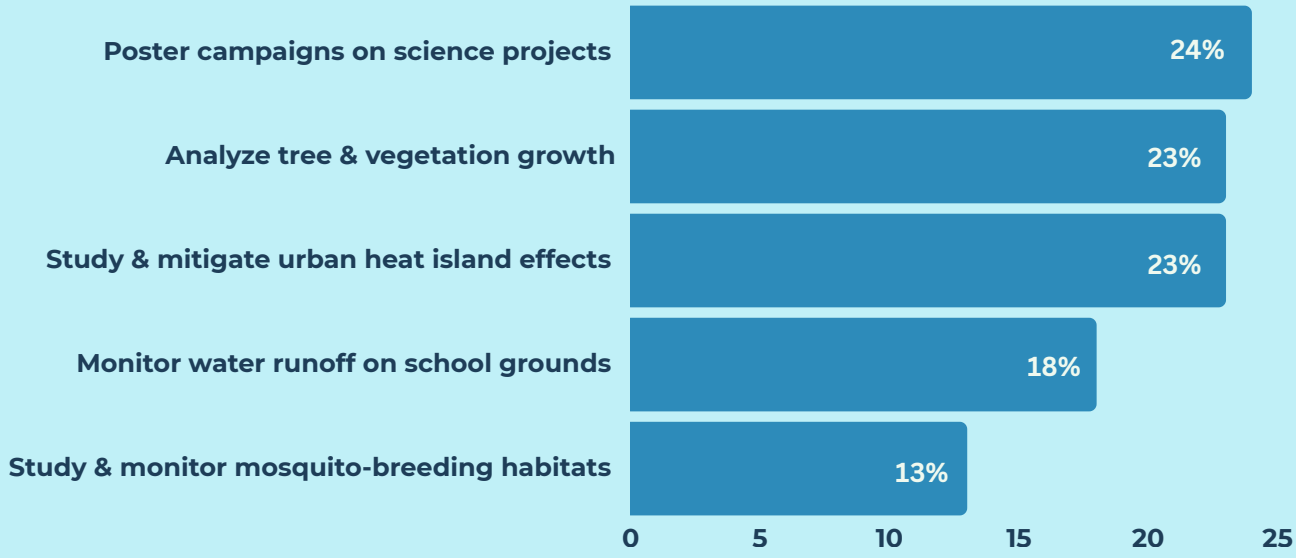

Self-reported participation (% of schools who answered yes) in a series of practices to conserve water across Maryland Green Schools (n=119) in 2024-25.

Apart from litter clean-up in nearby aquatic habitats, water conservation practices were not common in 2024-25 (nor in previous years). Many of these practices, such as retrofitting water infrastructure (e.g., sinks, toilets, showers) and installation of green roofing, are costly. Several schools also indicated that renting the property, as opposed to owning it, prohibits such installations. Alternatively, individual and collective water conservation behaviors can significantly conserve water on school grounds, but such efforts are not currently measured by the annual green metrics survey and may be difficult for schools to accurately report.

School-reported metrics for water conservation may contain unreliable data. For example, estimates of annual water saved ranged from 5 - 255,000 gallons, with an average of ~16,000 gallons. The metrics survey would benefit from including additional practices that were mentioned by schools, such as having motion-sensor sinks that turn off automatically.

# COMMUNITY SCIENCE

**Green Schools are much less likely to participate in community science initiatives than other green practices. This is a newer reporting category in the annual metrics survey, and is highly contingent on establishing partnerships with local environmental organizations.**




Self-reported participation (% of schools who answered yes) in a series of practices to engage in community science across Maryland Green Schools (n=119) in 2024-25.

Community science practices, as was seen with water conservation practices, had comparatively low engagement from Green Schools than other sustainability practices included in this evaluation. Two potential factors may explain low levels of school participation in community science projects. First, this practice is newer to Green School reporting, and therefore newer to teachers and schools. Additional training may be required to set up schools for success and empower them to undertake community science projects with their students. Second, community science often requires collaboration with the NGO or academic institution that hosts the project. The MDGS program may need to further facilitate connections between schools and project hosts to ensure long-term participation, as well as secure additional funding for these partnerships.

Community science is an important activity not only to achieve sustainability, but also to improve scientific literacy and facilitate career networking opportunities for students.

# CONCLUSIONS & RECOMMENDATIONS

## Maryland Green Schools Program

2024-2025

# PROGRESS TOWARD GOAL

## 38% of Maryland schools are Green Schools.

MAEOE's signature initiative, the Maryland Green Schools program, has incrementally improved its statewide school award rate each year, with a 2.5% increase in 2024-25. Exploring how the award rate differs by school attributes and student demographics helps to identify areas of success for the MDGS program and areas still in need of improvement.

Private schools comprise just 8% of all Green Schools. Suburban schools have a proportionally high Green School award rate (48%), close to the statewide target of 50%. Additionally, larger schools maintain a higher award rate than smaller schools. Title 1 schools, and schools with a higher proportion of FARM-eligible students, have lower representation in the MDGS program. Together, these insights suggest that school resource availability may impact their engagement in the Green School program.

## Award rates are on the rise in several counties.

In the past year, Kent County joined Calvert and Queen Anne's counties as counties with a 100% public school award rate, and another five counties (Dorchester, Kent, Caroline, Frederick, and Montgomery) improved their public Green School award rate by at least 5% since last year. Of the 24 counties in Maryland (including Baltimore City), 23 have Green Schools and eight have an award rate of 50% or better.

## MDGS support helps aspiring Green Schools.

Schools are likely to complete successful Green School applications and maintain their award status if they participate in training, professional development offerings, and/or receive funding support from MDGS mini-grants. The MDGS support seems most critical for first-time applicants of the program. Of 117 Green Schools awarded in 2025, just 20 received mini-grants. But of these schools, 12 (60%) were first-time applicants. Additionally, Green Center and Green Ambassador support helps schools to successfully apply (and re-apply) for the Green Schools program - of 119 schools that submitted applications this year, 102 were supported by a Green Center and/or Green Ambassador.

# CHALLENGES TO PROGRESS

## Outcome-aligned growth of the Green Schools program

Though the MDGS program is successful in many parts of Maryland, it is helpful to identify areas that present a challenge to school recruitment and long-term commitment to the program. An ongoing challenge for MDGS is private school participation. While public schools are the state priority for this program and maintain a 45% award rate, the 50% award rate will be difficult to achieve without increased recruitment of private schools. Additionally, MDGS has lower engagement in urban schools, Title I and high FARM-eligibility schools, and small schools. These are likely resource-related challenges and may require new forms of support.

The MDGS program must consider its long-term goals and determine the relative importance of achieving the target rate as opposed to reaching a more diverse representation of schools. Depending on the preferred outcome, additional support may be needed for MDGS outreach efforts to under-resourced schools and regions.

## Regional challenges

The Green Schools program has had more success in certain counties and regions than others. Portions of Western Maryland and the Lower Eastern Shore have low levels of participation. Somerset County in southeastern Maryland is the only county without a Green School. Targeted outreach and increased promotion of support options available to these areas are needed to improve recruitment and engagement.

## Quality and inclusiveness of school sustainability data

The documented positive environmental impact of the MDGS program provides justification for continued state legislative support. However, the methods by which sustainability practices are currently evaluated have produced unreliable data. Recommended revisions to the annual Green Schools environmental metrics survey include 1) re-structuring questions in order to improve validity of responses and 2) the addition of metrics to capture sustainability practices with fewer barriers to participation and maintenance of green installations and restoration projects. Additionally, the development of a specialized metrics training portal for the school staff who are accountable for completing the survey could improve the accuracy of school-reported data.

# RECOMMENDATIONS

## Clarify program goals to provide evidence-based support to targeted schools and regions

The 50% Green School target award rate is achievable, but only if significant advances are made in the next three years. Additional funding must be allocated to develop a data-driven approach to school outreach, based on the initial findings of this evaluation.

To get started, revisit MDGS program outcomes in order to strategically guide future outreach efforts. A central question is: **Is it more important to 1) achieve the 50% target award rate, or to 2) reach a greater diversity of schools?**

If the answer is #1:

- Develop an outreach strategy targeted at schools with the greatest likelihood of seeking and maintaining Green School awards. This likely includes larger, suburban schools, but will be further informed by an in-depth cross-sectional analysis (e.g. socioeconomic factors, school and regional attributes, geographic factors, etc.).

If the answer is #2:

- Develop an outreach strategy targeted at schools least likely to be reached by the program. This could involve school and community needs assessments to identify schools most in need of support and development of case-specific plans for how to best support their journey.

For both approaches:

- Conduct research to identify barriers that cause schools to lapse out of the program, as well as motivations that influence long-term commitment.
- Conduct evaluations of MDGS support programs to inform strategic use of finite resources.
- Systematically analyze school feedback data (e.g., experiences with MDGS professional development, grants, and training offerings, challenges faced with metrics reporting and the application process, etc.).

These exercises will help to refine a strategy for the MDGS program that is most likely to achieve desired program goals.

# RECOMMENDATIONS, CONT.

## Improve the reliability of school sustainability data to better tell the story of Green School environmental impact

Collecting sustainability metrics data from awarded Green Schools has the potential to quantify the statewide environmental impact of the program, further motivate individuals and schools to engage in green practices, and secure additional funding for the MDGS program. These outcomes, however, are dependent on the reliability and accuracy of the data. It is critical that MDGS **1) identify and implement necessary improvements to survey design**, and **2) offer a training program** for teachers and staff that provides instruction on how to collect and report these data.

Availability of certain data (such as renewable energy usage) required to complete the sustainability metrics survey is currently also a challenge for schools. To increase the accuracy of these metrics, MDGS may want to consider working with utility companies or school districts to readily provide these data to schools in a clear and concise format.

An important oversight in the process used to document school sustainability practices is the omission of required maintenance and/or long-term commitment to those practices. In the sustainability metrics survey, emphasis is placed on the installation of new sustainable infrastructure and the creation of newly restored habitat, but does not acknowledge the effort and resources required of schools to continue with long-term usage or maintenance.

Sustainability practices arising from behavior change campaigns, such as remembering to turn water faucets off, or bringing refillable water bottles to school, are not included in the metrics survey. In survey comments, many schools indicated that they are engaged in these types of practices, and it is recommended they be added to the survey.

Finally, it is recommended to allocate additional resources to analysis of the annual survey so that MAEOE staff can effectively respond to the feedback provided by schools. Both data and feedback from the survey are important tools for improving the impact of the Maryland Green Schools program and ensuring schools do not encounter unnecessary barriers to participation.


MAEOE

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