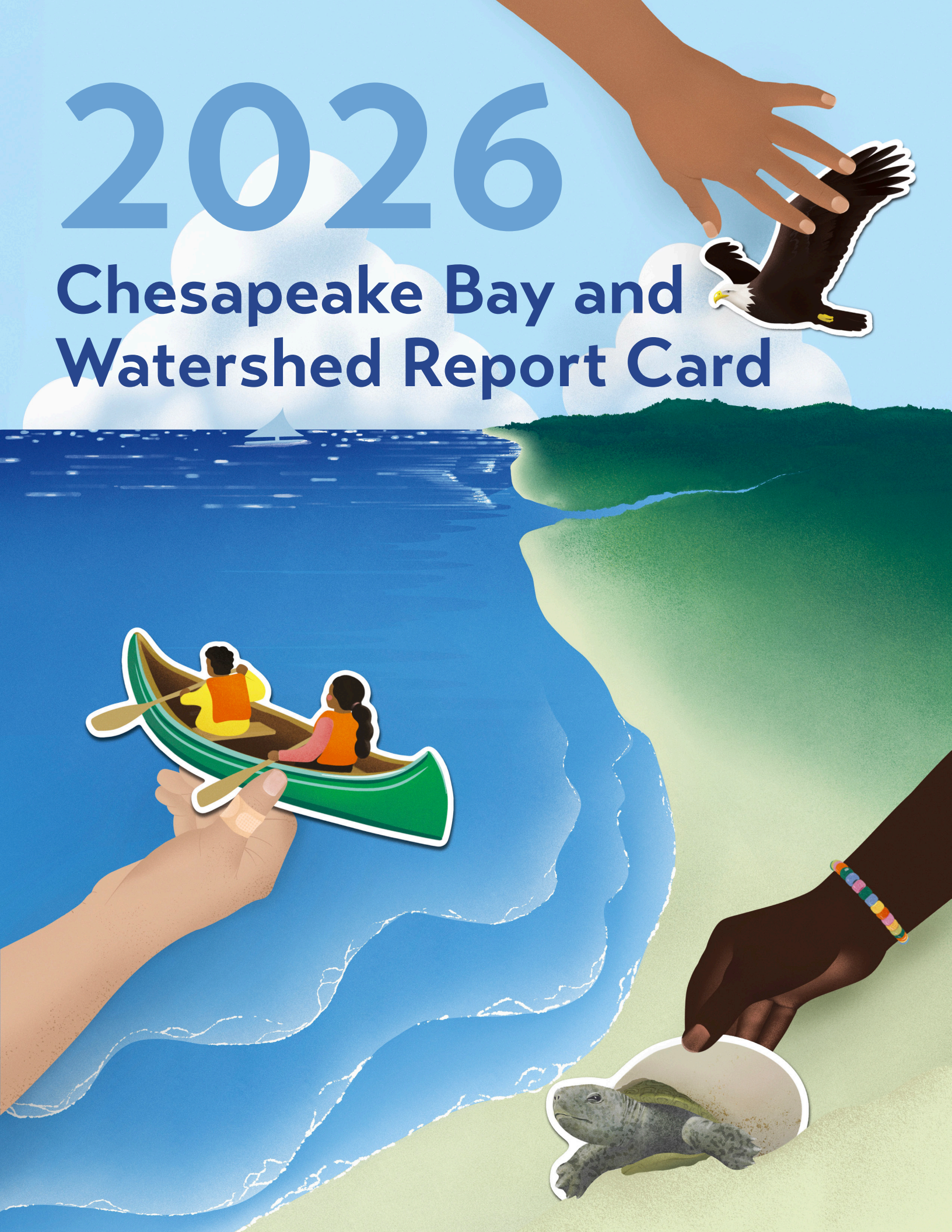
2026

Chesapeake Bay and Watershed Report Card



About the report card

The Chesapeake Bay and Watershed Report Card includes seven bay indicators and twelve watershed indicators. The bay indicators assess aquatic ecosystem health, while the watershed indicators cover ecological, societal, and economic conditions. The bay indicators use 2025 data, except for Aquatic Grasses, which uses 2024 data. Watershed indicators use data from different years, depending on what was available. This is the 20th year that the report card has been produced; for the first time, the report card includes trends for water quality in the watershed.

For more information on the data used, please visit **ChesapeakeBayReportCard.org**.

Bay indicators



Total Phosphorus measures the amount of phosphorus in bay waters.



Total Nitrogen measures the amount of nitrogen in bay waters.



Dissolved Oxygen measures how much oxygen is present at different depths in the bay.



Benthic Community measures the condition of organisms living in or on the bottom areas of the bay.



Water Clarity is a measure of how deep light penetrates through the water column.



Chlorophyll *a* is used as a measure of phytoplankton (microalgae) biomass.



Aquatic Grasses, or submerged aquatic vegetation, measures the area of grass beds in bay regions.

Watershed indicators

Ecology



Protected Lands measures the amount of all lands protected in the watershed.



Water Quality index includes metrics for total phosphorus, total nitrogen, turbidity, and conductivity.



Fish Community index, developed by the EPA, examines river health by assessing native species and pollution tolerance.



Benthic Community measures the condition of the organisms living on the bottom of streams.



Temperature Stress measures if summer water temperatures are too hot for many aquatic organisms.

Society



Heat Vulnerability index uses metrics for tree canopy, impervious surfaces, air temperature, and households in poverty to assess vulnerability to heat.



Social Index uses data about social vulnerability from the U.S. Census and measures how a community can respond to hazardous events.



Walkability measures how many people can walk to a park in 10 minutes from where they live.

Economy



Household Income measures the amount of money people are receiving through their employment.



Jobs Growth measures the percentage of jobs gained or lost (net) from 2022 to 2023.



Income Equality measures disparity between low and high earners.



Affordable Housing measures how much housing is available at a cost that is less than 30% of people's income.

Highest grade ever for Chesapeake Bay health

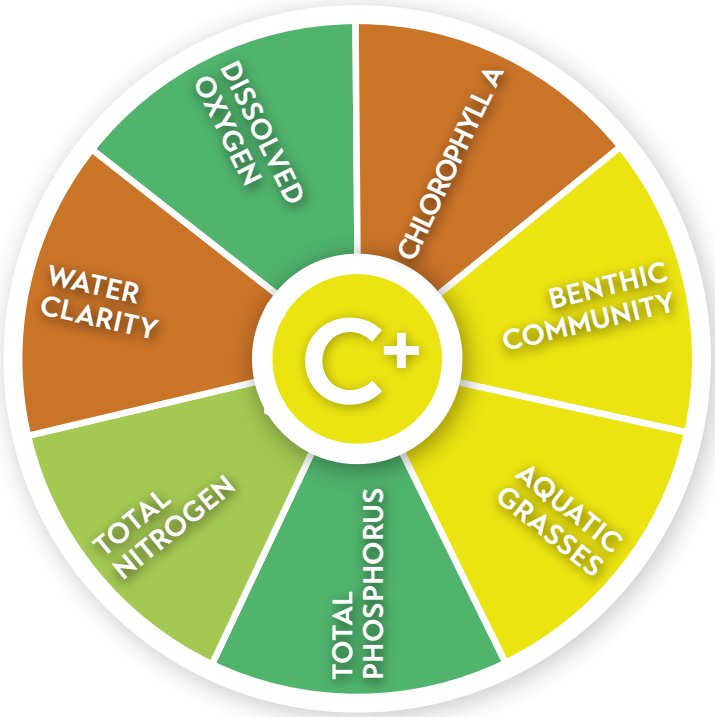
The Chesapeake Bay scored a C+ (56%) overall, the highest it's ever achieved in 40 years of tracking. In addition to the increase since last year, long-term trends continue to improve for most regions and indicators.

These improvements are the result of ongoing investments in restoration action across the watershed. Additionally, 2025 was a relatively dry year, so less water carried pollutants from the land into waterways.

Dissolved Oxygen was the highest-scoring indicator with an A (85%), despite decreasing from the previous year. All other indicator scores increased, with the largest improvements in scores for Chlorophyll *a* and Total Nitrogen. Water Clarity was the lowest-scoring indicator (D, 25%), but increased from last year's F. Dissolved Oxygen, Aquatic Grasses, Total Phosphorus, and Total Nitrogen all continue to show significantly improving trends over time. Chlorophyll *a* and Water Clarity are still showing declining long-term trends, and Benthic Community had no trend.

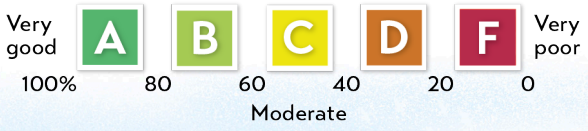
Of the fifteen Bay regions, eight had improving health trends and seven had no trend. The Lower Bay achieved the best score on record for a region, a B+ (76%). The Lower Western Shore scored the lowest (D-, 24%).

A healthier bay is not just about improving grades, but building a more resilient system able to recover from stressors and support the livelihoods of those who depend on it. While the Bay will face new challenges every year, the work people are putting into protecting, restoring, and cleaning up the bay is reflected in the improving grade. As we continue taking care of the Chesapeake Bay, we can keep setting record high grades for the years to come.



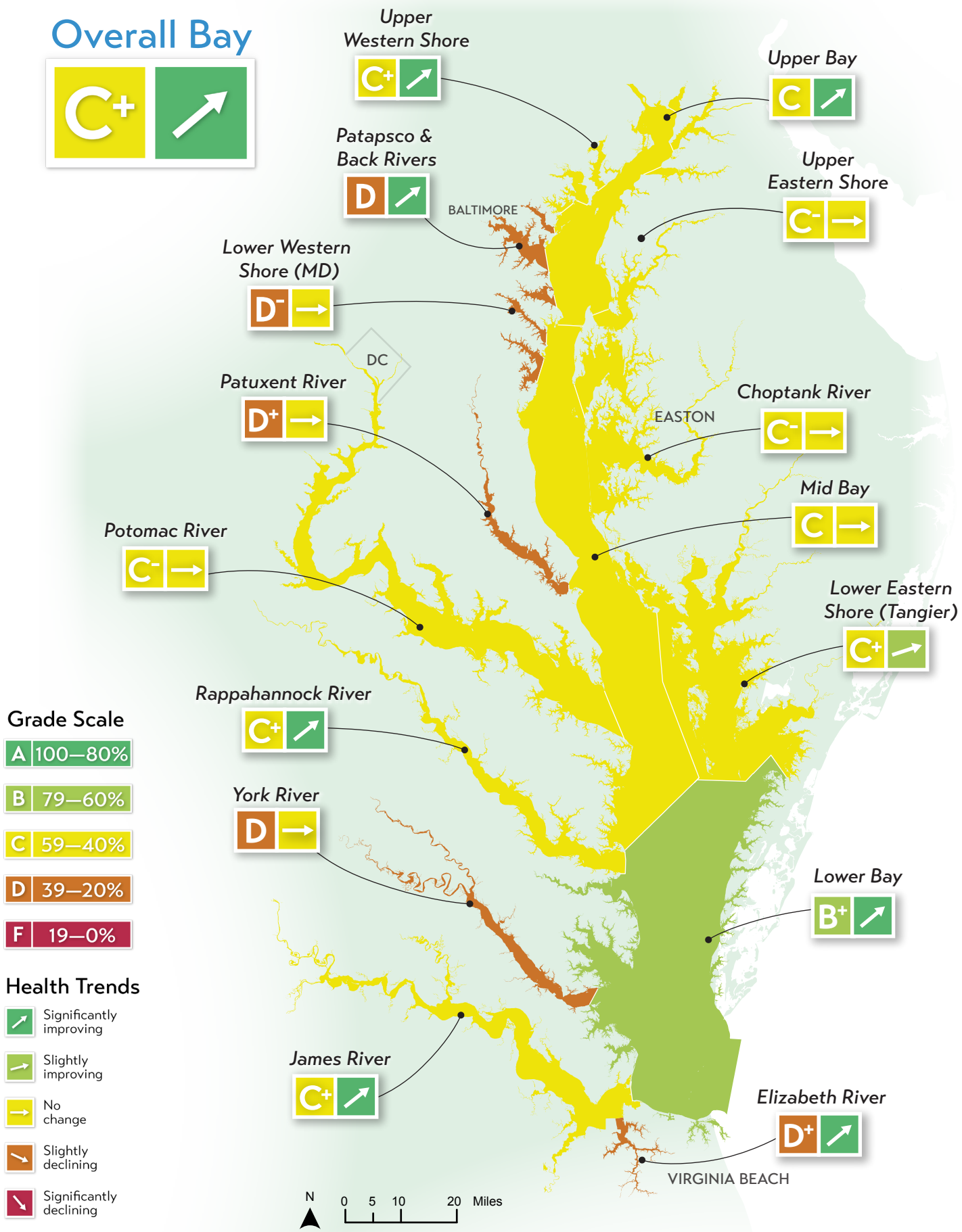
Indicator	Score	Grade	Trend
Dissolved Oxygen	85%	A	↗
Chlorophyll *a*	39%	D+	↘
Benthic Community	50%	C	→
Aquatic Grasses	41%	C-	↗
Total Phosphorus	83%	A-	↗
Total Nitrogen	68%	B	↗
Water Clarity	25%	D	↘

Grade Scale





Scores improving across the Chesapeake Bay



Chesapeake Bay Watershed scores hold steady

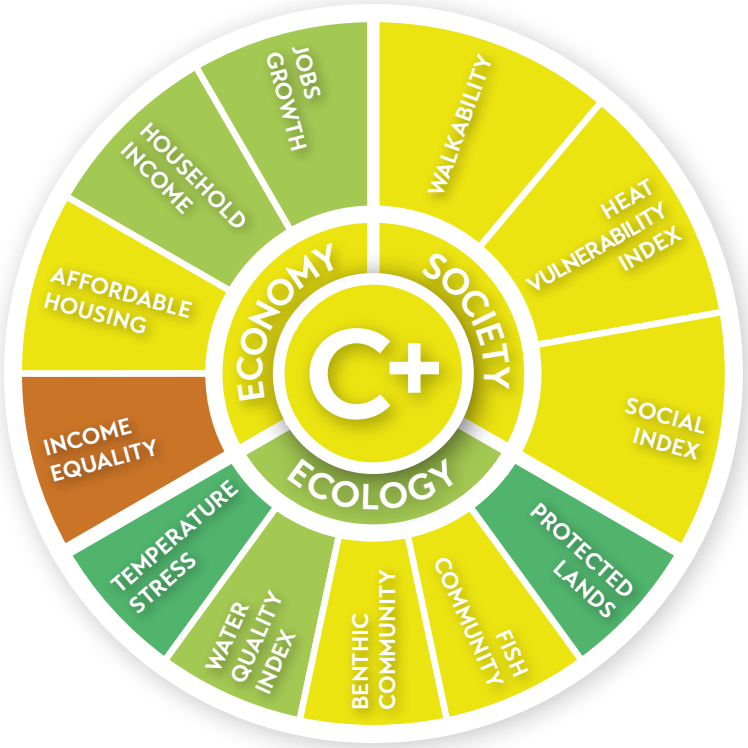
The Chesapeake Bay Watershed scored a C+ (56%) overall, the same grade as last year. Ecology was the highest-scoring category with a B (65%). Economy (50%) and Society (52%) both earned C grades.

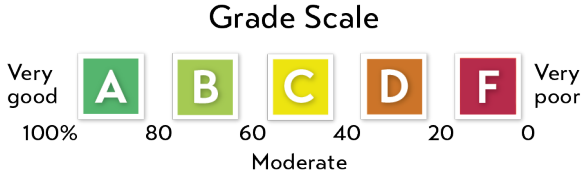
The highest-scoring indicators were Temperature Stress (84%) and Protected Lands (80%), which both earned A- grades. The Patuxent, Shenandoah, Upper James, and West Branch Susquehanna all earned A+ Protected Lands grades, which means that at least 30% of all the land in those watersheds is protected. The largest increase in the Protected Lands score was in the Rappahannock region, which earned an A- (81%), a 16-point increase from the previous year's score.

The lowest-scoring indicator was Income Equality, which scored 25%, a D. This means that income is very unevenly distributed among people in the Chesapeake Bay watershed.

Most categories experienced minimal changes from last year, with the exception of Jobs Growth, which slowed compared to last year.

Nearly all regions scored in the C range. Only the Upper James earned a B-, in part due to its high Ecology indicator scores across the board. The Choptank had the lowest score, a C- (43%), followed by the Elizabeth and Chemung (both 47%, C).





What is a watershed?

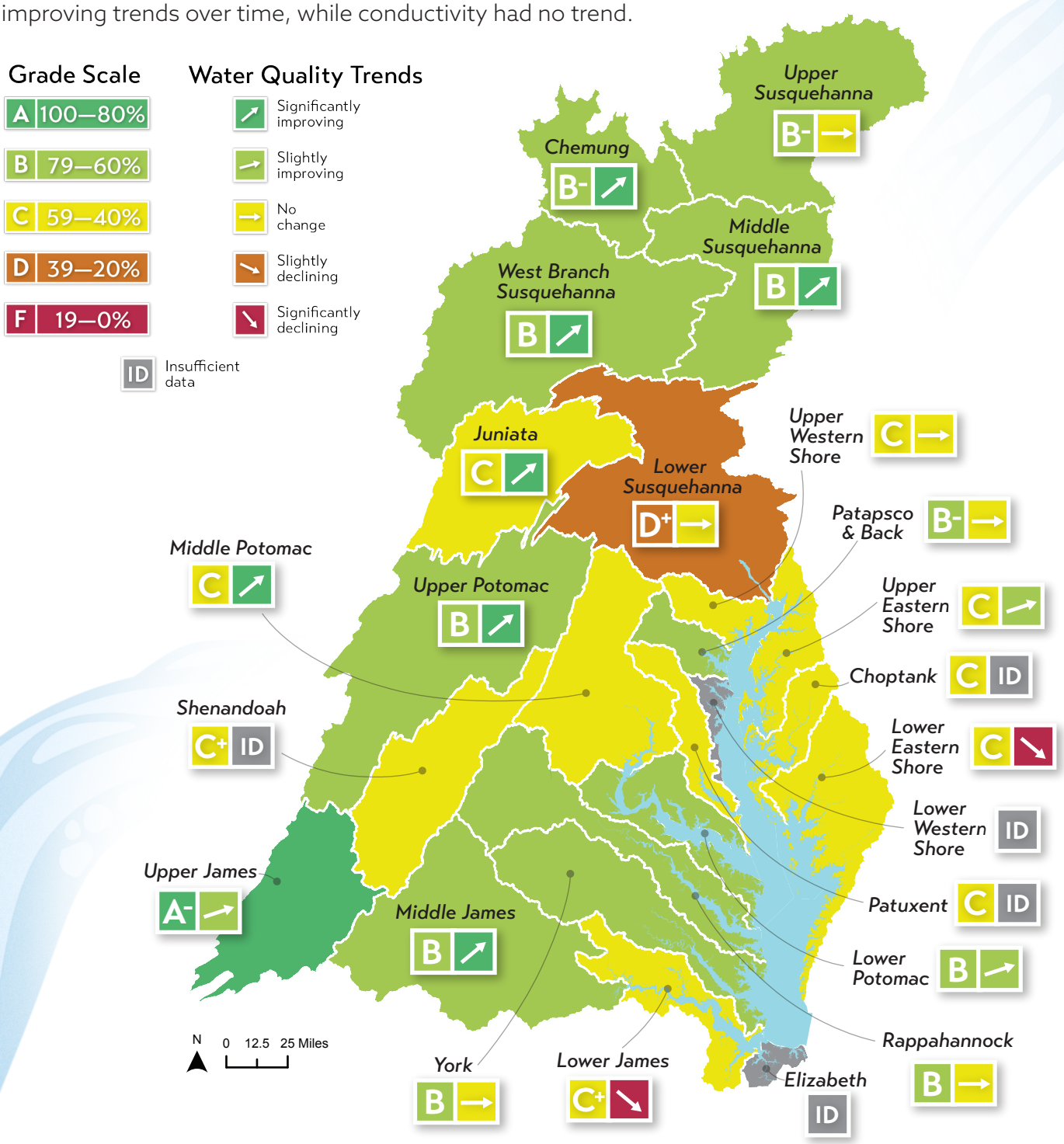
When rain falls in your neighborhood, watch where the water goes; you might see some of it fall in your yard and be absorbed into the dirt, and you might see some flowing down the street and into a storm drain. No matter where you live, you live in a watershed. A watershed is an area of land where water drains to a particular body of water, whether it be an ocean, a stream, a river, or an estuary. Water that soaks into the ground seeps through the dirt and rocks underground and ends up in a creek, stream, etc.

The Chesapeake Bay Watershed is the area where water flows to the Chesapeake Bay. All the rivers, streams, and creeks in the watershed drain to the Bay. The watershed reaches as far north as central New York and as far west as the ridges of the Appalachian Mountains.



Watershed water quality is improving over time

Overall, the Water Quality Index scored 61%, B- and it is showing significant improvement over time in the Chesapeake Bay Watershed. Of the 23 watershed regions, 10 are showing improving trends. Only two regions are showing declining trends, the Lower Eastern Shore and the Lower James. All other regions have no trend or insufficient data. The highest-scoring region for water quality was the Upper James, with an 80% score, A-. The lowest-scoring region was the Lower Susquehanna with a 39%, D+. The Water Quality Index includes scores for total nitrogen, total phosphorus, turbidity, and conductivity over the most recent three years available 2022–2024. Nitrogen, phosphorus, and turbidity are all showing significantly improving trends over time, while conductivity had no trend.



This is the first year water quality watershed trends have been calculated. Region scores are based on a 3-year rolling average and a generalized linear model with a log sample weight was used to calculate trends for the indicators and regions. The overall date range was from 1986–2024, but some regions had different start years based on data availability.

World's largest oyster reef restoration completed

In 2025, the Chesapeake Bay Program partners celebrated a major outcome of restoring oyster reefs in Chesapeake Bay. Since 2014, 11 bay tributaries in Maryland and Virginia restored and protected approximately 2400 acres of oyster reef habitat. Over 7.5 billion oysters were planted throughout this effort.

While the project as defined in 2014 was completed, it is just one step in restoring Chesapeake Bay oyster populations. Oysters are an important commercial and recreational fishing species. They also filter the water of the bay and their reefs provide habitat for fish, crabs, and other species. UMCES is working with partners to include oysters, along with other fisheries indicators, in future report cards.



Oyster restoration on Maryland's Eastern Shore. Photo by Charlie Nick, courtesy of the Chesapeake Bay Program.

Sewage spill further endangers Potomac River



UMCES scientists taking water samples on the Potomac River after the spill. Photo by Judy O'Neil.

In January 2026, a sewer pipe collapsed in Montgomery County, MD, near Washington, D.C., resulting in one of the largest sewage spills in U.S. history. About 240 to 300 million gallons of raw sewage containing bacteria, excess nutrients, and a foul odor flowed into the Potomac River. Water monitoring showed that bacteria levels were hundreds of times higher than normal.

The spill was eventually contained, and drinking water was not affected, but political, economic, and environmental consequences remain. There were shellfish closures, recreational use advisories, property contamination, business disruptions, and a loss of public trust.

The Potomac River sewage spill is not reflected in the grades of the 2026 report card, but any effects of the spill on water quality can be expected in the 2027 report card. Current bacteria counts along the spill site can be found at *potomacinterceptor.dc.gov.*

How do the indicators connect to the cover?



Terrapins need access to shoreline and sand dunes in order to lay their eggs. They are threatened by habitat loss, so **Protected Lands** in coastal areas are essential to their survival.



Bald eagles eat mostly fish, so **Fish Community** helps us see what's on the menu for them. **Aquatic Grasses** serve as important habitat for young fish in the Bay, so more grasses means more fish!



When there is too much **Nitrogen** or **Phosphorus** in the water, those nutrients can fuel algae blooms that may make it unsafe for you or your pets to canoe, swim, or play in the water.

Dive deeper into our Bay work

Do you value clear, science-based reporting on Bay health? Your support is key to sharing important communications like the Report Card.

If you want more details on the scores and regions, or want to look at previous years' grades, head to ***ChesapeakeBayReportCard.org***.

Check out ***ChesapeakeBayStory.umces.edu*** for an all-ages interactive timeline of Chesapeake Bay health through the years.

Invest in science!

Acknowledgments

The Chesapeake Bay Watershed is the land of many Native peoples, including the Chickahominy, Mattaponi, Monacan, Nansemond, Pamunkey, Rappahannock, Cheroenka (Nottoway), Patawomeck, Accohannock, Assateague, Nause-Waiwash, Piscataway, Pocomoke, Nentego (Nanticoke), Susquehannock, Shawnee, and Lenape.

Report card released in October 2026 by the Integration and Application Network, University of Maryland Center for Environmental Science. The data and methods underpinning this report card represent the collective effort of many individuals and organizations working in the Chesapeake Bay scientific and management community. Funding was provided by the National Fish and Wildlife Foundation. Document design and content by Ann Foo, Conor Keitzer, Lili Badri, Heath Kelsey, and Alexandra Fries. Illustrations by Ann Foo. Outreach and promotion supported by the Chesapeake Bay Foundation.

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Center for Environmental Science
Integration and Application Network