

Maryland Coastal Bays

2022 Report Card



Gold star partnerships promote educational and outreach programs across the region

Without the assistance of our friends, students, partners, and visitors, the Maryland Coastal Bays Program (MCBP) would not be able to accomplish our important goals.

For the past five years, the **Ocean City Recreation and Parks Department's** partnership has been essential for the delivery of Coastal Bay's Estuary Explorers summer camp. Through their organization, marketing, and support, MCBP has been able to provide this immersive, week-long camp to over 175 residents and visiting youth.

Since the inception of the MCBP program, **Ocean City Public Works** has been a phenomenal partner. They have been an important part of the marine debris/trash cleanups and maintenance at the Lewis Road Kayak Launch site. Thanks to the dedication and support of their great staff, local waters are cleaner and more accessible.

For 12+ years **Sunset Marina** has graciously donated a slot in their Boatel which provides safe storage for the MCBP boat when not in use and easy access when needed. MCBP is incredibly appreciative of the facility and grateful for their helpful staff.

The Worcester County Public School (WCPS) science department works tirelessly to expand environmental literacy and outdoor education opportunities to their teachers and students through experiential student and professional development programs. Since 2019, WCPS has been redeveloping their environmental literacy plans and rewriting curriculum to reflect the local area and relevant challenges. WCPS fully supported the first ever MCBP high school leadership and career development program called WETLANDS in 2022.



Campers spend the day exploring, along the Coastal Bays.



Sunset Marina Boatel provides safe storage.



WCPS students during an outdoor education program, by WCPS.

Overall Coastal Bays health is slightly better

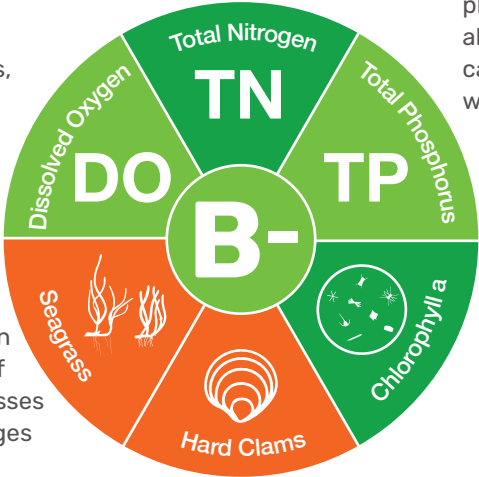
Coastal Bays health is defined as the progress of **four water quality indicators** (nitrogen, phosphorus, chlorophyll *a*, and dissolved oxygen) and **two biotic indicators** (seagrass and hard clams) toward scientifically derived ecological thresholds or goals. The Coastal Bays had an overall score of **B-** for 2022, an incremental improvement over last year.

Dissolved oxygen (DO) is vital for the survival of animal species such as crabs, fishes, and molluscs.

Nitrogen is often a limiting factor in plant growth, but excess nitrogen can cause algal blooms.

Phosphorus can limit plant growth if it is not abundant enough, or it can cause algal blooms when in excess.

Seagrass growth is an important indicator of water quality. Seagrasses are sensitive to changes in water quality.



Because they are filter feeders, **hard clams** are a good indicator species: species whose health reflects the health of the ecosystem.

Chlorophyll *a* is a measure of the amount of algae in the water. High chlorophyll indicates poor water quality (seagrass shading and possible dead zones).

What do the scores mean?

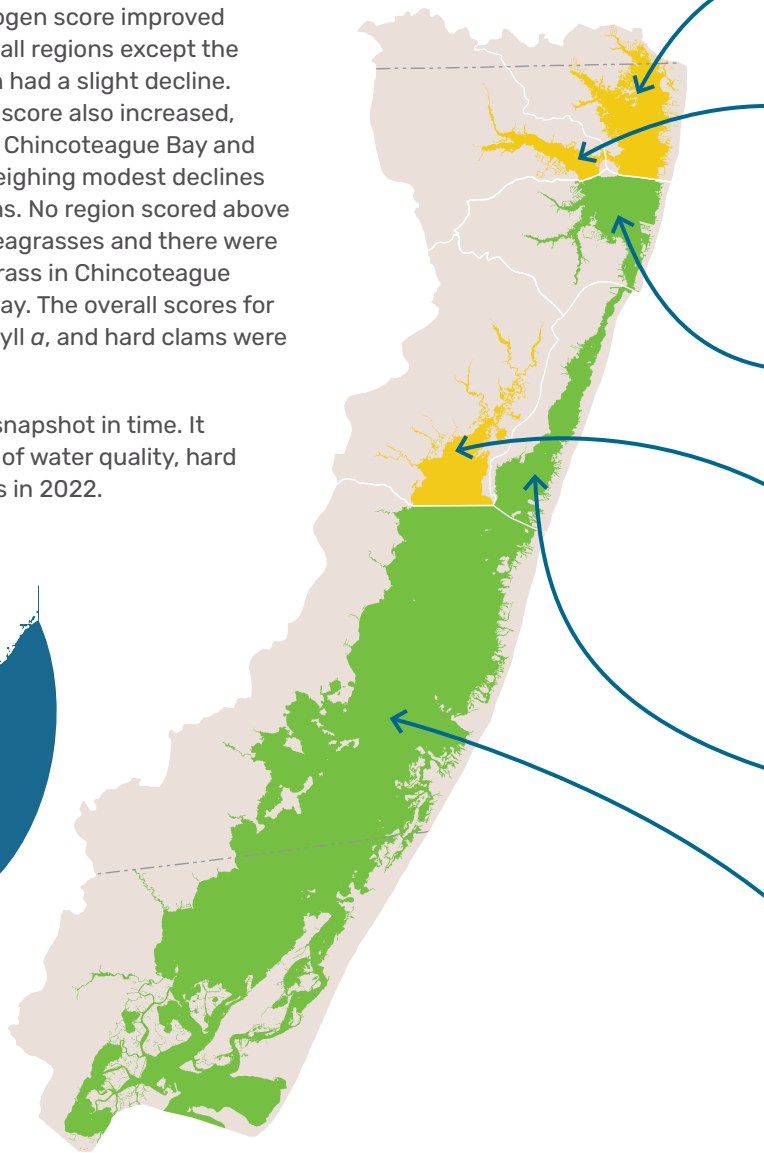
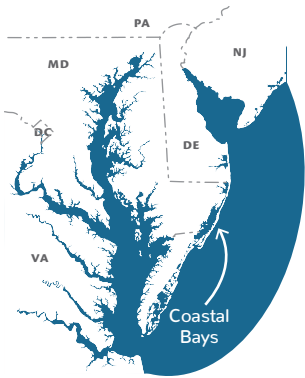


Photo by Laura Scarle.

Nitrogen, dissolved oxygen improve; seagrass continues to decline

The Coastal Bays nitrogen score improved or stayed the same in all regions except the St. Martin River, which had a slight decline. The dissolved oxygen score also increased, with improvements in Chincoteague Bay and Sinepuxent Bay outweighing modest declines in several other regions. No region scored above a poor condition for seagrasses and there were large declines in seagrass in Chincoteague Bay and Sinepuxent Bay. The overall scores for phosphorus, chlorophyll *a*, and hard clams were similar to last year.

This assessment is a snapshot in time. It represents the status of water quality, hard clams, and seagrasses in 2022.



Dissolved Oxygen

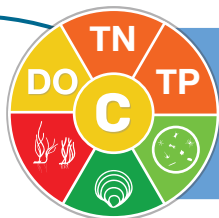
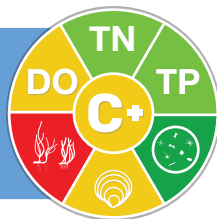


Total Nitrogen



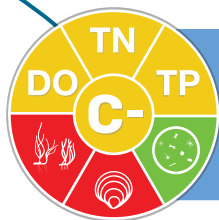
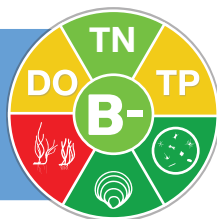
Total Phosphorus

Assawoman Bay received a grade of **C+**, a strong improvement from a C last year. All indicator scores improved except for dissolved oxygen and seagrass.



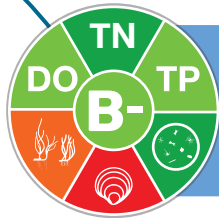
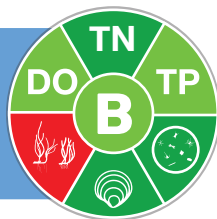
St. Martin River received a grade of **C**, the same as last year. Nitrogen and phosphorus had the lowest scores of any region. Despite this, St. Martin had a very good hard clams score.

Isle of Wight Bay received a grade of **B-**, an improvement from a C+ last year. There were strong improvements in nitrogen, phosphorus, and chlorophyll α .



Newport Bay received a grade of **C-**, an increase from a D+ last year. While chlorophyll α , nitrogen, and phosphorus scores improved from last year, Newport Bay continues to be the region with the lowest score.

Sinepuxent Bay received a grade of **B**, the same as last year and the highest score of any region. All indicators improved or remained the same, except for a decline in the seagrass score.



Chincoteague Bay received a grade of **B-**, the same as last year. Despite improvement in the dissolved oxygen score, a decline in the seagrass score prevented the overall score from improving.



Chlorophyll α



Hard Clams



Seagrass

Living fossil gets a helping hand

To remediate mass horseshoe crab casualties caused by strandings, MCBP organized and trained a group of volunteers for the 2022 spawning season to help rescue stranded horseshoe crabs. **The Stranded Spawning Horseshoe Crab Recovery Team** consisted of 11 volunteers who went out 67 times to rescue horseshoe crabs between mid-May and late July at three sites in the Coastal Bays during low tides. In total, an estimated 3,568 stranded horseshoe crabs were rescued, making this a successful year for the program! MCBP hopes to grow this program in the future to continue protecting an important species that visits the beautiful Coastal Bays each summer.



Young volunteer demonstrates how to hold a horseshoe crab.

Capturing stories on the Coastal Bays waterfront

“Voices of the Coastal Bays” is a fisheries heritage project. With grant funding provided by the Beach to Bay Heritage Area, this project highlights Ocean City’s rich commercial fishing history, showcasing stories and pictures of fishing families operating out of the Ocean City Fisherman’s Marina. “Voices” has renewed an appreciation for both the commercial fishing industry and the people who work to keep it alive. It also created a virtual timeline of the West Ocean City Harbor, interviewed local fishermen and women on their experiences and challenges, and developed a “Smart Seafood Guide” for Ocean City, which explains what seafood is in season and when.



Black sea bass catch at Seaborn Seafood, by Zach Garmoe.

Acknowledgments

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