

10TH ANNUAL

COASTAL GEORGIA

Ecosystem Report Card

for the year 2023



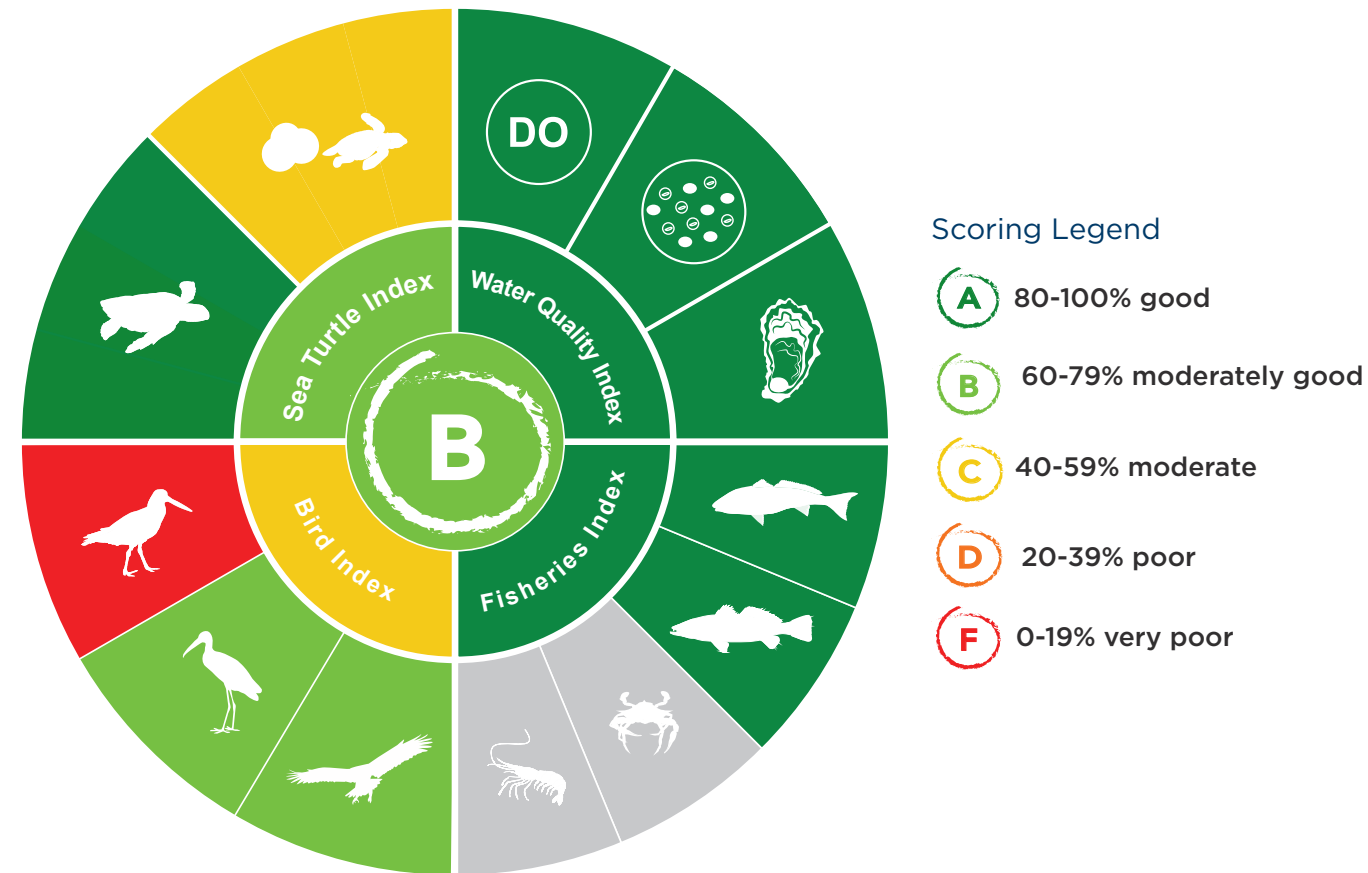
COASTAL RESOURCES DIVISION

Published April 18, 2024

Moderately good ecosystem health

Overall health

Overall, Coastal Georgia received a B, a moderately good score (78%). The twelve indicators that examine human health, fisheries, and wildlife are used to define Coastal Georgia health. The highest scoring indicators were red drum, spotted seatrout, and sea turtle nesting, and all had perfect scores (100%).



Grading scale for overall score

Rounded to the nearest whole number

- A** 80-100%
All water quality, fisheries, bird, and sea turtle indicators meet desired levels. Indicators within these indices tend to be **good**, most often leading to preferred habitat conditions.
- B** 60-79%
Most water quality, fisheries, bird, and sea turtle indicators meet desired levels. Indicators within these indices tend to be **moderately good**, often leading to acceptable habitat conditions.
- C** 40-59%
There is a mix of good and poor levels of water quality, fisheries, bird, and sea turtle indicators. Indicators within these indices tend to be **moderate**, leading to sufficient habitat conditions.
- D** 20-39%
Few water quality, fisheries, bird, and sea turtle indicators meet desired levels. Indicators within these indices tend to be **poor**, often leading to degraded habitat conditions.
- F** 0-19%
Very few or no water quality, fisheries, bird, and sea turtle indicators meet desired levels. Indicators within these indices tend to be **very poor**, most often leading to unacceptable habitat conditions.



Indices highlights

Fisheries index

The **fisheries index** scored 80% in 2023. There are four fisheries indicators and two, shrimp and blue crabs, are largely based on the catches from the Ecological Monitoring Trawl Survey aboard CRD's R/V Reid Harris. The Reid Harris was out of commission for the last quarter of 2023. These indices were not captured in the overall score of the report card. Red drum and spotted sea trout had perfect scores.



Water quality index

The **water quality index** scored an 89%, an A, in 2023. Overall, water quality indicators are good, meaning that it is generally safe to swim and to eat local shellfish, and that there are oxygen levels that support fish and other species. Fecal coliform (98%), enterococcus (85%), and dissolved oxygen (84%) all had good scores.



Sea turtle index

The **sea turtle index** scored 75% in 2023. Overall, sea turtle indicators are moderately good. Sea turtle nesting had a perfect score of 100% for the 10th year in a row, while sea turtle hatching scored 49%, likely due to predation. Sea turtle management in Georgia continues to promote populations and maintain excellent nesting.



Bird index

The **bird index** scored a 48%, a C, in 2023. Wood storks had a moderate score. American oystercatchers and bald eagles had moderate scores likely due to significant mammalian depredation at some nesting locations.



Notable developments

In Georgia, approximately 120 nesting pairs of American Oystercatchers (AMOY) breed annually, yet achieving target chick productivity remains challenging due to tidal overwash and terrestrial threats. The degradation of vital nesting habitats, such as offshore bars and shell rake habitats linked to marsh islands and the Intracoastal Waterway (ICW), is a growing concern for mitigating mammal predation and flood risks.

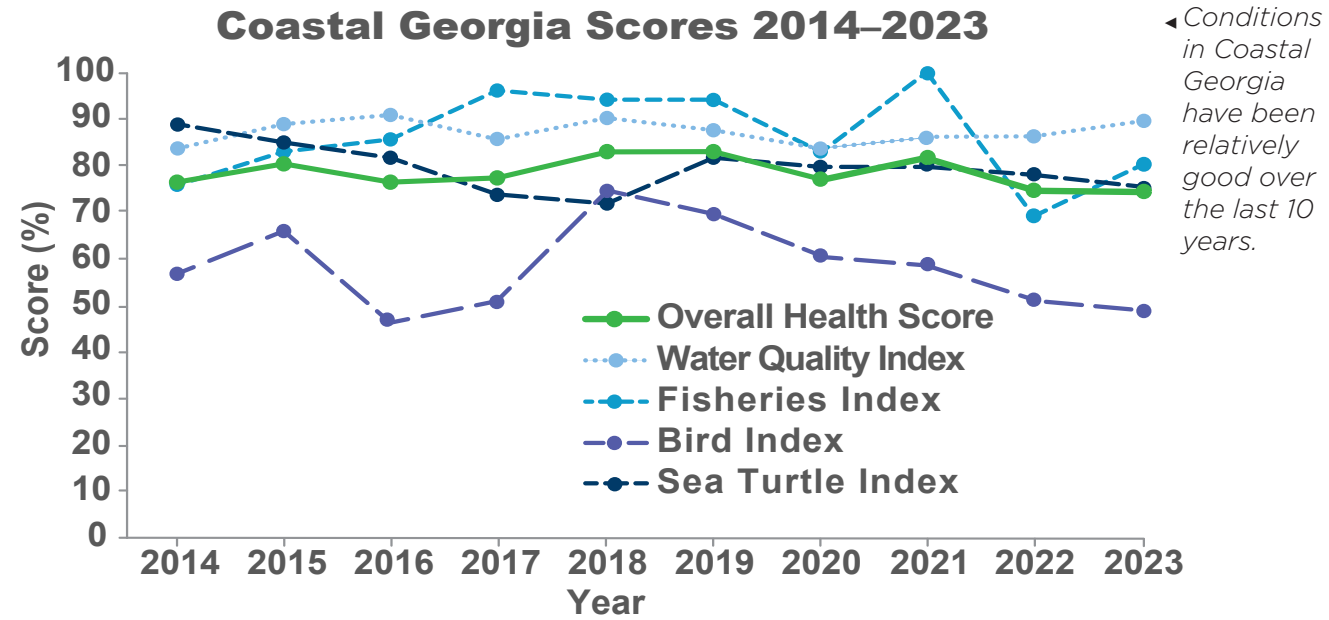
To address these issues, collaborative efforts with the U.S. Army Corps of Engineers are ongoing. Major initiatives involve utilizing dredge material to construct sand islands mimicking lost offshore bars, notably along the Cumberland Dividings section of the ICW, aiming for a 10-foot elevation to prevent overwashing during breeding seasons. This endeavor is expected to benefit AMOY and other priority beach nesting birds like Black Skimmers, Gull-billed Terns, and Least Terns.

Additionally, smaller-scale efforts focus on elevating existing shell rake habitats, particularly on Satilla Marsh Island and Stafford Island, where successful nesting has occurred. Five sites have been completed, with promising signs of attracting AMOY pairs, aiming to enhance nesting success and contribute to habitat conservation.



Report card scores from 2014-2023

In Coastal Georgia, report card scores vary from year-to-year. By tracking health over time, we can evaluate changes in the environment and prioritize management and restoration. For example, DNR actively manages wood stork and American oystercatcher populations by considering habitat creation, predator management and nesting area closures to prevent disturbances.



Indicator	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
fecal coliform	92%	92%	92%	80%	90%	98%	90%	95%	99%	98%
enterococcus	82%	91%	94%	94%	96%	78%	72%	78%	83%	85%
dissolved oxygen	79%	85%	87%	84%	84%	87%	90%	85%	75%	84%
shrimp	100%	100%	96%	84%	84%	75%	92%	100%	86%	89%
red drum	83%	69%	100%	100%	91%	100%	40%	100%	100%	100%
blue crabs	22%	62%	47%	100%	100%	100%	100%	100%	18%	32%
spotted seatrout	99%	100%	100%	100%	100%	100%	100%	100%	70%	100%
American oystercatchers	47%	61%	28%	13%	78%	78%	66%	47%	40%	8%
wood storks	67%	70%	64%	84%	81%	78%	59%	68%	70%	66%
bald eagles	NA	66%	46%	57%	62%	51%	57%	62%	48%	70%
sea turtle hatching	77%	69%	64%	47%	44%	64%	60%	59%	73%	49%
sea turtle nesting	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Importance of a report card

Environmental report cards are powerful tools used around the world to highlight long-term survey data, increase public awareness of coastal resource statuses, and influence decision makers to act to improve the health of a watershed through policy and restoration projects. These report cards have formats that are easy to understand to show broad level assessments and changes over time. It is a great public resource to share what we know about coastal resources and encourage others to take action by helping us protect the coast.



Coastal Georgia is a gem of biodiversity and natural wonders

Barrier islands, sandy beaches, salt marshes, and maritime forests comprise the diverse habitats of Georgia's 100-mile coastline. The region is rich in abundant wildlife like sea turtles, fishes, shellfish, birds, and mammals. Recreational opportunities abound, such as boating, fishing, bird watching, kayaking, and swimming. Protecting the ecosystems and their inhabitants helps support the local economy, recreational opportunities, tourism, the seafood industry, and resilient coastal communities.



A bottlenose dolphin jumps out of the surf. DNR photo by Berkeley Boone.

Report card highlights in 2023



A spotted seatrout caught on Great Dunes beach on Jekyll Island. DNR photo by Tyler Jones.

Spotted Seatrout

Spotted seatrout scores improved this year over 2022, in both Wassaw and Ossabaw sound systems. Seatrout numbers in the survey have continually improved since Georgia's regulation change increasing the minimum size limit in 2016. St. Andrews Sound was added as a third sampling location in 2019 and will provide additional data in years to come.



Sea turtle hatchlings head for the open ocean. DNR photo by Mark Dodd.

Sea turtle hatching

The sea turtle index dropped from an A in 2022 to a B in 2023. This was driven by a decline in sea turtle hatching by 24 points from 73% to 49%. Hatching success was lower this year due to high nest predation by feral hogs and raccoons on some of the barrier islands. The nesting score has remained at 100% since the Report Card's inception.



The Coastal Resources Division of the Georgia Department of Natural Resources, headquartered above in Brunswick, is committed to balancing development and protection of the coast's natural assets, socio-cultural heritage and recreational resources for the benefit of present and future generations. DNR photo by Tyler Jones.

About the Coastal Resources Division

The Coastal Resources Division is one of five divisions of the Georgia Department of Natural Resources. Its mission is to balance coastal development and protection of the coast's natural assets, socio-cultural heritage, and recreational resources for the benefit of present and future generations.

Fishery management

CRD ensures that saltwater fishes, crustaceans, and shellfish popular with anglers and commercial fishermen remain abundant, healthy and accessible for present and future generations. We achieve this through surveys, research projects, monitoring water quality and representing Georgia in federal and interstate fishery management processes.

Data collection and surveys

The Division conducts a variety of surveys to collect data for effective fishery management. Our fishery-independent surveys, such as the Ecological Monitoring Trawl Survey conducted aboard the 56-foot Research Vessel Reid W. Harris, and the Coastal Longline Survey, are conducted by CRD biologists to learn about the health of fisheries populations. Fishery-dependent surveys are similarly important, but rely on the public's participation. Dependent surveys include the Cooperative Angler Tagging Project, and the Recreational Angler Survey. CRD shares the data it collects with federal and interstate fishery management bodies.

Protection of marshlands and shores

The vast coastal marshlands, tidal waterways, and barrier island beaches are irreplaceable treasures delivering ecological and human benefits ranging from seafood to hurricane protection. To protect them, the Division administers the Coastal Marshlands and Shore Protection acts, issues revocable licenses for waterbottoms, and coordinates with other state and federal agencies to implement sound regulatory policy. Since 1997, many of these functions have been carried out by the Georgia Coastal Management Program, a partnership with the federal government and a mandate from the state legislature.



An angler holds up a red drum, the state saltwater game fish of Georgia. Provided photo by David Cannon.

You can help protect the coast



Septic maintenance

Maintaining your septic system prevents bacteria from entering waterways and can help reduce beach advisories and shellfish harvest closures.



Lighting rules

Preventing sea turtles from becoming disoriented by artificial light is the law, and beach lighting ordinances occur during nesting and hatching seasons.



No litter

Taking trash with you after visiting recreation areas will help keep waterways and parks free of debris that could harm wildlife.



Purchase licenses

Buying a Georgia hunting or fishing license supports research and conservation of coastal species and habitats.



Catch limits

Following recreational fishing catch-and-size regulations help sustain a healthy community of fish species.



Citizen science

Participating in monitoring and clean-up activities in local waterways can help alert managers to potential issues.

Acknowledgments

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Visit CoastalGaDNR.org to learn more.





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