10th Annual
Coastal Georgia
Ecosystem Report Card
for the year 2023
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%).

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 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.

Grading scale for overall score
Rounded to the nearest whole number

<table>
<thead>
<tr>
<th>Grade</th>
<th>Score Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>80-100%</td>
<td>All water quality, fisheries, bird, and sea turtle indicators meet desired levels.</td>
</tr>
<tr>
<td>B</td>
<td>60-79%</td>
<td>Most 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.</td>
</tr>
<tr>
<td>C</td>
<td>40-59%</td>
<td>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.</td>
</tr>
<tr>
<td>D</td>
<td>20-39%</td>
<td>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.</td>
</tr>
<tr>
<td>F</td>
<td>0-19%</td>
<td>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.</td>
</tr>
</tbody>
</table>

Scoring Legend

- **A** 80-100% good
- **B** 60-79% moderately good
- **C** 40-59% moderate
- **D** 20-39% poor
- **F** 0-19% very poor

Water quality index indicators:
- **Fecal coliform**
- **Enterococcus**
- **Dissolved oxygen**
- **Shrimp**
- **Red drum**
- **Blue crabs**

Fisheries index indicators:
- **American oystercatcher**
- **Wood storks**
- **Bald eagles**

Sea turtle index indicators:
- **Sea turtle hatching**
- **Sea turtle nesting**

Bird index indicators:
- **American oystercatcher**
- **Wood storks**
- **Bald eagles**

Sea turtle index had perfect scores.

Indices highlights
- **Water quality index**
- **Fisheries index**
- **Sea turtle index**
- **Bird index**
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.

### Coastal Georgia Scores 2014–2023

- **Overall Health Score**
- **Water Quality Index**
- **Fisheries Index**
- **Bird Index**
- **Sea Turtle Index**

### 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.

### Report card highlights in 2023

#### 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 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.

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.

Acknowledgments

This report card was produced by the Integration & Application Network, University of Maryland Center for Environmental Science and Georgia DNR and published in April 2024. Data were collected by Georgia DNR’s Coastal Resources Division and Wildlife Resources Division. This report card provides an assessment of coastal Georgia ecosystem health for 2023. This report card was funded by grant award #NA22NOS4190152 from the Office for Coastal Management, National Oceanic and Atmospheric Administration. The statements, findings, and conclusions do not necessarily reflect the views of OCM or NOAA. All photos from Georgia DNR’s Coastal Resources Division, unless otherwise specified. For detailed information on indicators, thresholds, and methodology visit CoastalGaDNR.org/ReportCard. Cover photo by Tyler Jones/DNR.

Visit CoastalGaDNR.org to learn more.