

Survival in the sand

SEA TURTLE PATROL HILTON HEAD ISLAND PREPARES FOR A 2025 SEASON OF RESILIENCE AND RESTORATION.

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Each sea turtle nesting season brings a new focus for outreach and awareness, a cornerstone of the Sea Turtle Patrol Hilton Head Island mission. Our annual theme reflects the significant efforts and initiatives planned for the year ahead.

In 2024 the theme "Next Generation" celebrated the introduction of STEM-based programming into classrooms. It featured children of all ages as presenters in educational videos showcased at Park Plaza movie theaters and across social media. For 2025 we are embracing "Resilience" and "Restoration" — honoring the ability of sea turtles to persevere against environmental challenges and human impact. We will highlight ongoing efforts to restore Hilton Head's beaches, a vital nesting habitat. This dual focus also recognizes the dedication of our leadership and volunteers in protecting an endangered species and rebuilding their populations.

Resilience: A testament to survival

The official South Carolina sea turtle nesting season spans May 1 to Oct. 31, with Hilton Head's first nest typically discovered in early May. During this time STPHHI marks, monitors and evaluates every nest on the island. Additionally, DNA samples are collected to support groundbreaking research in collaboration with Dr. Brian Shamlin's lab at the University of Georgia. Since 2010 this partnership has identified 4,986 individual nesting loggerhead turtles on Hilton Head Island, offering a new glimpse into their life cycles and habits.

Despite predictions for a low nesting density in 2024, the season brought an unexpectedly low total — only 204 nests



DECADES TO MOTHERHOOD

Female loggerhead sea turtles reach sexual maturity at around 30 years of age, embarking on their reproductive journey after decades in the ocean. Each nesting season a single female can lay multiple clutches. These nests, carefully dug in the sand, become the starting point for the next generation of these ancient mariners.



Amber Kuehn is the executive director of Sea Turtle Patrol Hilton Head Island, a volunteer organization committed to the conservation of sea turtles. Through beach monitoring, nest relocation and community education, the team plays a vital role in protecting these endangered species on Hilton Head Island. Discover more about its mission at SeaTurtlePatrolHHI.org.



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across Hilton Head's 20 miles of nesting habitat. DNA analysis revealed that 62 female loggerheads were responsible for these nests, 16 of whom were first-time nesters. Remarkably, five of these newcomers were daughters of loggerheads already in the database, with their mothers now known to be over 60 years old. Even more astonishing, three of these daughters represent the first generation of offspring to return to Hilton Head's shores to nest.

These insights are critical for understanding the health of the loggerhead population. In another 15 years we will gain vital data on the survival

rate of female loggerheads that left the beaches of Georgia, South Carolina, and North Carolina as hatchlings, survived 30 years, and returned to reproduce. While this long timeframe can seem daunting, it underscores the urgency of our work.

Sea turtles possess a remarkable ability to recover, but their resilience is continually tested by human interference and environmental changes. As they face these challenges with quiet persistence, STPHHI remains committed to swift and effective action. From advocating for beach ordinances to educating the community and visitors about conservation, our efforts aim to protect both the turtles and their habitat.



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Restoration: A foundation for the future

Hilton Head's beaches undergo renourishment every 8-10 years to counteract natural erosion and accommodate tourism. This large-scale effort involves adding sand dredged offshore to restore the shoreline — a process that can disrupt sea turtle nesting. During the 2016 renourishment project, STPHHI managed the sea turtle nesting season by relocating 100 percent of the nests from construction zones and maintaining nightly patrols to monitor activity.

In 2025 with another renourishment project scheduled during nesting season, STPHHI will once again be on the beach every night. If a sea turtle emerges to nest in the construction area, operations will halt temporarily, and the nest will be carefully relocated. This rigorous monitoring is a requirement for the municipality to obtain a permit for renourishment during sea turtle nesting season, ensuring a balance between human needs and wildlife protection.



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KEEPING WATCH Members of the Sea Turtle Patrol Hilton Head Island will monitor construction zones nightly during this summer's beach renourishment project. To ensure the safety of sea turtles, all nests within construction areas will be carefully relocated.



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2024 IN PERSPECTIVE Hilton Head Island recorded 204 sea turtle nests in 2024, a significant decrease compared to previous years: 353 nests in 2023 and 423 nests in 2022. Historically, nesting numbers have fluctuated widely, as shown in this graph.

Looking ahead

The resilience of sea turtles and the restoration of Hilton Head's beaches are essential to the success of our conservation efforts. Through our outreach programs, we hope to inspire the next generation, residents and visitors to contribute to the protection of these incredible creatures. By raising awareness of the challenges sea turtles face, we can all take part in preserving the unique natural heritage of Hilton Head Island and supporting the recovery of an endangered species that depends on our environmental stewardship. *LL*



CRACKING THE CODE

Scan this QR code to watch the NBC News feature on Sea Turtle Patrol Hilton Head Island's collaboration with the University of Georgia.

The report highlights researchers extracting DNA from thousands of sea turtle eggs to advance conservation efforts. Watch the video to learn more about this groundbreaking research.



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FROM SAND TO SEA The journey of a loggerhead sea turtle begins with a determined dash toward the ocean, leaving delicate tracks etched in the sand as a testament to their first steps into the wild.

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