

Shark alert! Warnings high- and low-tech seek to protect (Update)

May 30 2016, by Philip Marcelo And Bruce Smith



In this Wednesday, May 25, 2016 photo, a replica of the great white shark head used in the movie "Jaws" is displayed at the Atlantic White Shark Conservancy's Chatham Shark Center in Chatham, Mass. Officials and researchers from Cape

Cod to the Carolinas are looking at responses ranging from the high-tech to the decidedly low-tech as they deal with a growing great white shark population. (AP Photo/Philip Marcelo)

From drones and smartphone apps to old-school flags and signs, a growing great white shark population along the East Coast has officials and researchers turning to responses both high- and low-tech to ensure safety for millions of beachgoers this summer.

On Cape Cod, Massachusetts, new warning flags and signs are cropping up at some of the coastline's most popular beaches and a local shark research nonprofit is developing a shark tracking app for the entire Eastern Seaboard.

Researchers at Duke University and the University of North Carolina, meanwhile, are testing shark-seeking drones in a scientific study that may one day give beach lifeguards a new eye in the sky.

"The days of burying our heads in the sand and saying, 'What sharks? We don't have sharks here' are over," said Gregory Skomal, a Massachusetts state biologist who has been studying Cape Cod's surging white shark population. "It's time to move past that and be forthright and honest with the public about the presence of these animals."

The new measures are the latest acknowledgements of the new reality taking hold on Massachusetts' famous coastline, where Skomal's team identified 141 different great whites last year, up from about 80 the previous year.

The region, like others along the East Coast, has dozens of other species of sharks including blue and mako sharks, but many tend to stay farther

offshore and be less aggressive than great whites, Skomal said.



In this Wednesday, May 25, 2016 photo, Leslie Reynolds, chief ranger at the Cape Cod National Seashore, displays a shark-alert flag at the U.S. Parks Service's Cape Cod headquarters in Wellfleet, Mass. The new flags will be used to warn beachgoers to avoid going in the water at areas where sharks have been sighted. (AP Photo/Philip Marcelo)

The great whites are being drawn to Cape Cod's waters because seals, their favorite food, have dramatically rebounded there, thanks to a 1972 law that made it illegal to kill them.

Researchers, beach managers and public safety officials have been convening in recent years an unofficial "shark working group" to come

up with ways to educate the public. Among the ideas they developed for this summer were the warning flags, which are purple and emblazoned with the unmistakable silhouette of a great white.

The flags will start flying at some town beaches starting this Memorial Day weekend and appear on beaches administered by the National Park Service starting June 16, when those beaches are staffed with lifeguards.

Towns are also posting dramatic billboards at beach entries. Many bear a large great white image and advise visitors against swimming near seals.



In this March 11, 2016 photo made available by North Carolina Coastal Reserve and National Estuarine Research Reserve, Matt Kenworthy, a student at UNC Institute of Marine Sciences, at Rachel Carson Reserve in Beaufort, NC., uses a drone to detect sharks in coastal waters. Researchers at Duke and the University of North Carolina will be using drones this summer to try and develop a better way to detect the presence of sharks in shallow water and alert swimmers to their

presence. (Emily Woodward/North Carolina Coastal Reserve and National Estuarine Research Reserve via AP)

"It's certainly not to sensationalize the situation. You just really need to jam it down their throats," said Nathan Sears, natural resources manager for the Cape Cod town of Orleans. "Whatever you can give them—pamphlets, signs, flags."

By July, when Cape Cod's waters warm and great whites begin to appear in earnest, those measures will get high-tech reinforcement.

A smartphone app being launched by the Chatham-based Atlantic Great White Conservancy will let beachgoers from Canada to Florida monitor the movements of tagged great whites and report their own possible shark sightings.

That comes as North Carolina researchers study whether drones can effectively track sharks on the East Coast, as communities in California and Australia already do. They've been testing the technology on decoys so far, but they expect to begin tracking real sharks in the coming week.



In this March 11, 2016 photo made available by North Carolina Coastal Reserve and National Estuarine Research Reserve, Matt Kenworthy, right, a student at UNC Institute of Marine Sciences and Julian Dale from Duke Marine Lab, stands at Rachel Carson Reserve in Beaufort, NC., using a drone to detect sharks in coastal waters. Researchers at Duke and the University of North Carolina will be using drones this summer to try and develop a better way to detect the presence of sharks in shallow water and alert swimmers to their presence. (Emily Woodward/North Carolina Coastal Reserve and National Estuarine Research Reserve via AP)

The challenge is that the waters off the East Coast are murky. Mounting infrared cameras on the drones may be a solution, the researchers said.

"We are trying to find out at what range and what depths and under what conditions we are going to be able to use this technology," said Dave Johnston, at Duke's Marine Lab in Beaufort, North Carolina. "There will be conditions where it's just not going to work."

While the new measures provide a degree of security, researchers stress there's little chance beachgoers will become shark bait anyway.

Worldwide, there were only 98 unprovoked shark attacks in 2015, resulting in six deaths.



In this undated photo made available by North Carolina Coastal Reserve and National Estuarine Research Reserve, Martin Benavides, left, and Matt Kenworthy, both PhD students at the UNC Institute of Marine Sciences at Rachel Carson Reserve in Beaufort, NC. The students are setting out plywood shark decoys at low tide, and then fly drones to try to track the decoy sharks in varying water depths. Researchers at Duke and the University of North Carolina will be using drones this summer to try and develop a better way to detect the presence of sharks in shallow water and alert swimmers to their presence. (Emily Woodward/North Carolina Coastal Reserve and National Estuarine Research Reserve via AP)

Of those, 59 were in the United States, including 30 in Florida and 16 in the Carolinas, according to the International Shark Attack File maintained at the Florida Museum of Natural History.

In the Cape Cod area, which includes the resort island of Martha's Vineyard, where "Jaws" was filmed, two kayakers escaped unharmed after they were knocked off their boats in 2014 by a great white.

But the last time a shark actually bit a person was in 2012, when a man bodysurfing suffered leg bites from a great white. The last fatal attack was in 1936.

Longtime residents welcome this year's new measures, but some hope officials soon turn their attention to what they see as a more pressing issue: controlling the seal population that's drawing the sharks in the first place.

"Even if they don't reduce the quantity of seals, they can at least figure out a way to scare them away from certain areas," said Justin Labdon, a shop owner who created Chatham Whites, a clothing line inspired by the town's latest attraction. "There really shouldn't be huge seal colonies on the beach where people are swimming with their kids and making a bull's-eye for great whites."



In this Wednesday, May 25, 2016 photo, a shark-themed T-shirt is on sale in a souvenir shop in Harwich, Mass. Officials and researchers from Cape Cod to the Carolinas are looking at responses ranging from the high-tech to the decidedly low-tech as they deal with a growing great white shark population. (AP Photo/Philip Marcelo)



In this Wednesday, May 25, 2016 photo, a replica of a great white shark's jaws and teeth are displayed at the Atlantic White Shark Conservancy's Chatham Shark Center in Chatham, Mass. Officials and researchers from Cape Cod to the Carolinas are looking at responses ranging from the high-tech to the decidedly low-tech as they deal with a growing great white shark population. (AP Photo/Philip Marcelo)

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