

News from the National Centers for Coastal Ocean Science

The National Oceanic and Atmospheric Administration (NOAA) formed the National Centers for Coastal Ocean Science (NCCOS) in 1999 as the focal point for NOAA's coastal ocean science efforts. We provide coastal managers with the scientific information necessary to decide how best to protect environmental resources and public health, preserve valued habitats, and improve the way communities interact with coastal ecosystems.

NCCOS Contaminant Data Informs Listing of New EPA Superfund Site in Puerto Rico

Based on environmental contamination originally reported by NCCOS scientists, the U.S. Environmental Protection Agency (EPA) added a site in Guánica, Puerto Rico, in September to its National Priorities List of hazardous waste sites in the U.S., commonly known as the Superfund program. NCCOS identified high sediment concentrations of polychlorinated biphenyls (PCBs), chlordane, nickel, and chromium while characterizing the coral reef ecosystem in Guánica Bay. <u>Continue reading</u>



2020 State of Kachemak Bay Report Now Available

The 2020 yearly status report on the marine ecosystem in Kachemak Bay, Alaska, is <u>now</u> <u>available to the public (PDF)</u>. Kachemak Bay had a frigid start to 2020, followed by warmer than average summer waters, and then the best winter snowpack since 2012. Pacific cod populations increased, as did mussels in intertidal areas, but seabird breeding success remained low. Though some field work was cancelled due to the COVID-19 pandemic, researchers found ways to sample safely and start new projects, including listening for whales. <u>Continue reading</u>



First Real-time Toxicity Assessment of Lake Erie Algal Bloom by Autonomous Underwater Vehicle Achieved

This August, NCCOS scientists and their partners achieved the first real-time toxicity assessment of an algal bloom in Lake Erie by an uncrewed subsurface vehicle. The Long-Range Autonomous Underwater Vehicle (<u>LRAUV</u>) deployed housed a third-generation Environmental Sample Processor (<u>3G ESP</u>) equipped with sensors developed by NCCOS

that provided the first "on-the-fly" measurements of the algal toxin microcystin. <u>Continue</u> reading



Researchers Estimate Flood Protection Benefits of Coral Reefs in Florida and Puerto Rico

In 2017, coral reefs buffered Florida and Puerto Rico from Hurricanes Irma and Maria, but were severely damaged by the storm surge and waves. NOAA, the U.S. Geological Survey (USGS), and the University of California Santa Cruz (UCSC) have released <u>three</u> <u>new reports</u> that quantify the long-term consequences of these storms, putting a dollar value on increased flood risk resulting from damage to natural infrastructure. <u>Continue</u> <u>reading</u>



Natural Algicide Eliminates Toxic Algae with Minimal Harm to Non-target Organisms NCCOS-sponsored research on a natural algicide produced by *Shewanella* bacteria found that the compound can kill toxic algae without much harm to other organisms. The findings suggest that nature itself may offer environmentally friendly ways to control harmful algal blooms. <u>Continue reading</u>



NOAA Ecological Forecast Helps Solve Mystery in Lake Erie

Residents of several northeast Ohio Lake Erie towns were surprised by a strong, foul smell during the first days of September. The residents, fearing a dangerous gas leak, called their local <u>fire departments</u>. The local gas company investigated and quickly reassured communities that no gas leak was found. They informed the public that the unusual smell was actually coming from the lake. And they knew because NOAA had alerted them to the phenomenon. <u>Continue reading</u>



Researchers Evaluate Long-term Effect of Adding Sand to Dauphin Island Beaches NCCOS-sponsored <u>research</u> assessed the effectiveness of beach and dune nourishment on the morphological resilience of Dauphin Island, Alabama, for a 30-year period of beach management. Overall, the researchers found that adding sand can help maintain the barrier island's geometry and volume over decadal timescales. <u>Continue reading</u>



<u>New Publication Provides Insight into Resident Perceptions of Coral Reef</u> <u>Ecosystem Services</u> A new NOAA <u>publication</u> suggests that outreach efforts have been successful in communicating to the public the benefits provided by coral reef ecosystems. <u>Continue reading</u>



Firebird: Protecting marsh birds through fire management on the Gulf Coast

Peaking through coastal marsh grasses, a ruby red eye is barely discernible. Tucked into the heavy cover of the high marsh is a bird so elusive that researchers have dubbed it a "secretive marsh bird." But the black rail is not only secretive, it's rare. The species was federally listed as threatened in 2020. This squat, grayish bird, which stands less than half a foot tall, is one of three bird species in the northern Gulf of Mexico being studied as part of a research project funded by the NOAA RESTORE Science Program in 2019. Continue reading



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