

Seaside Chats

Mission: Iconic Reefs – An Ambitious Plan to Restore 7 Sites in the Florida Keys

Unanswered Webinar Questions

The following information provides responses to questions asked, but not answered, during live webinar. Most of these responses were copied directly from various NOAA websites and others associated with the Mission: Iconic Reefs effort. Links to the source websites are provided along with the responses. In addition, questions on similar topics have been grouped together.

Coral Disease:

Do you think the SCTL D disease is virus caused?

Stony coral tissue loss disease (SCTL D) is a new lethal disease first reported in Florida in 2014. The cause of the disease is unknown but it is affecting >20 species of corals especially brain, pillar, star and starlet corals.

<https://www.agrra.org/coral-disease-outbreak/>

Restoration:

Is John Pennekamp part of the restoration project?

No. Using the best available restoration science, we will restore diverse, reef-building corals at seven reef sites within Florida Keys National Marine Sanctuary:

- [Carysfort Reef](#). (PDF, 2 pages)
- [Horseshoe Reef](#). (PDF, 2 pages)
- [Cheeca Rocks](#). (PDF, 2 pages)
- [Newfound Harbor](#). (PDF, 2 pages)
- [Eastern Dry Rocks](#). (PDF, 2 pages)
- [Sombrero Reef](#). (PDF, 2 pages)
- [Looe Key Reef](#). (PDF, 2 pages)

These sites represent the iconic diversity and productivity of Florida Keys coral reefs. They span the geographic extent of the region, a variety of habitats, and a range of human uses. They also have a history of restoration success, or have characteristics that indicate restoration is likely to succeed.

<https://www.fisheries.noaa.gov/southeast/habitat-conservation/restoring-seven-iconic-reefs-mission-recover-coral-reefs-florida-keys>

How are the sea urchins and crabs helpful on the coral reefs?

We intend to supplement the reefs with sea urchins and Caribbean king crab, which eat algae that can overgrow coral reefs.

<https://sanctuaries.noaa.gov/news/dec19/noaa-launches-mission-iconic-reefs-to-save-florida-keys-coral-reefs.html>

Are you collaborating with other NMS or natural protected areas from the region to better address challenges for coral reefs of the region? Are there any International partnerships within the Caribbean? Is the research and restoration work in Keys applicable to other coral reefs around the world?

In an unprecedented response, more than 60 government agencies, academic institutions, and other organizations are methodically working to identify the pathogen responsible for the disease, create innovative treatments, conduct aggressive interventions, search for resilient corals, and undertake strategic restoration. The collaborative effort focused on Florida stands to benefit coral reefs in the Caribbean and worldwide.

<https://sanctuaries.noaa.gov/news/dec20/stony-coral-tissue-loss-disease.html>

Across NOAA, offices involved in this effort include:

- [Office of Habitat Conservation](#)
- [Florida Keys National Marine Sanctuary](#)
- [Office of National Marine Sanctuaries](#)
- [National Centers for Coastal Ocean Science](#)
- [Coral Reef Conservation Program](#)
- [Southeast Regional Office - NOAA Fisheries](#)

Outside of NOAA, our partners include:

- [Coral Restoration Foundation](#)
- [The Florida Aquarium](#)
- [Florida Department of Environmental Protection](#)
- [Florida Fish and Wildlife Conservation Commission](#)
- [Mote Marine Laboratory & Aquarium](#)
- [National Marine Sanctuary Foundation](#)
- [The Nature Conservancy](#)
- [Reef Renewal](#)
- [University of Florida](#)

<https://www.fisheries.noaa.gov/southeast/habitat-conservation/restoring-seven-iconic-reefs-mission-recover-coral-reefs-florida-keys>

How long after out-planting do the new corals spawn?

The first observation of this took place in August 2020 from corals out-planted as fragments in 2015.

<https://mote.org/news/article/mote-marine-laboratory-documents-another-first-for-massive-corals-in-florid>

What organizations do you go to to raise money?

It's ultimately expected that funding for this effort will come from a variety of sources and private organizations that recognize the importance of this work and the need to ensure its success.

<https://www.fisheries.noaa.gov/southeast/habitat-conservation/frequent-questions-mission-iconic-reefs>

In September 2020, NOAA announced more than \$1 million in funding for research and development, site preparation, and capacity-building to support the long-term work of *Mission: Iconic Reefs*. In February 2020, the United Arab Emirates announced a \$3.5 million gift to The United Way of Collier and the Keys in Florida to support the coral restoration efforts of *Mission: Iconic Reefs*.

<https://www.fisheries.noaa.gov/southeast/habitat-conservation/restoring-seven-iconic-reefs-mission-recover-coral-reefs-florida-keys>

NOAA's Restoration Center and the NOAA Coral Reef Conservation Program have awarded \$5.3 million in grants for restoration over the next three years. Subsequently, the plan will be funded through many public and private funding streams, coordinated by the new Florida Keys Restoration Council.

<https://sanctuaries.noaa.gov/news/dec19/noaa-launches-mission-iconic-reefs-to-save-florida-keys-coral-reefs.html>

How much the FKNMS will be off-limits to fishing under the new protection sites? Is the public allowed to get to these restoration sites?

Mission: Iconic Reefs is not a management or regulatory effort and therefore, does not require any new access or use restrictions. Six of the seven restoration sites are already within existing Sanctuary Preservation Areas, zoned to protect shallow reefs under the existing regulations and management plans. During active restoration work, there may be temporary access changes such as the temporary removal of mooring buoys. The public will be given ample notice should any of these types of restrictions be needed.

<https://www.fisheries.noaa.gov/southeast/habitat-conservation/frequent-questions-mission-iconic-reefs>

Access regulations to these areas will not change, and the public will still be able to visit these reefs. However, during active restoration, we may temporarily reduce access to allow for the work to be completed efficiently and safely.

<https://sanctuaries.noaa.gov/news/dec19/noaa-launches-mission-iconic-reefs-to-save-florida-keys-coral-reefs.html>

Threats to Reefs:

Is the number one cause of damage human activity? Besides Stony Coral Tissue Loss Disease and climate change, what poses the greatest threat to coral reefs in the Florida Keys? How much of an impact do motor boats etc. have on the coral reefs? Are there guidelines in place for motor boats on proper waste disposal?

There is no single cause for the decline of Florida Keys coral reefs. Locally, impacts to the reefs come from misplaced boat anchors, ship groundings, pollution, overfishing, storms, and disease. Globally, warming ocean temperatures can cause [bleaching](#), compromising coral health.

<https://www.fisheries.noaa.gov/southeast/habitat-conservation/restoring-seven-iconic-reefs-mission-recover-coral-reefs-florida-keys>

The Florida Keys have a long history of exploitation and impact. Many pressures on natural marine resources are chronic and, to some degree, cumulative. Today, pressures include: Vessel traffic, Diving, Commercial and recreational fishing, Disturbances to wildlife, Coastal development, Pollution, Harmful algal blooms, Coral disease, Marine debris, Invasive species.

Factors such as climate change, hurricanes, sea-level rise, and ocean acidification are large-scale issues that also affect Florida Keys coral reefs. Management to reduce impacts of local- and regional-scale stressors can increase the resilience of the ecosystem.

<https://www.fisheries.noaa.gov/southeast/habitat-conservation/frequent-questions-mission-iconic-reefs>

What is the impact of increasingly warmer temperatures?

Warmer water temperatures can result in coral bleaching. When water is too warm, corals will expel the algae (zooxanthellae) living in their tissues causing the coral to turn completely white. This is called coral bleaching. When a coral bleaches, it is not dead. Corals can survive a bleaching event, but they are under more stress and are subject to mortality.

https://oceanservice.noaa.gov/facts/coral_bleach.html

Stresses that may lead to bleaching include extremes in salinity, pollution, sedimentation and temperature. Most coral bleaching is the result of water temperatures that go beyond the corals' level of tolerance for too long. This usually means temperatures that are too high, but can also mean temperatures that are too low.

<https://flowergarden.noaa.gov/education/bleaching.html>

Water Quality:

What are the major water quality issues that affect coral & other reef life?

Water quality issues for coral reefs can include sedimentation, nutrient overload, drastic changes in salinity, and the amount of dissolved oxygen, just to name a few. Too many nutrients in the water can cause excess growth of algae, which can smother corals.

<https://floridakeys.noaa.gov/ocean/waterquality.html>

Does NOAA monitor water quality in the keys area regarding algae blooms?

The National Phytoplankton Monitoring Network (PMN) is a community-based network of volunteers monitoring marine phytoplankton and harmful algal blooms (HABs). This program includes many monitoring sites in the Florida Keys.

<https://coastalscience.noaa.gov/project/national-phytoplankton-monitoring-network/>