FGCU RESEARCH REEF: Kimberly's Reef

Location

Located 10 miles offshore, 30 feet deep in the Gulf of Mexico, and a 30 min boat ride, The FGCU Research Reef: Kimberly's Reef brings a living laboratory to the coastal waters off Collier and Lee Counties. The reef's aerial size and location lends itself to essential research and community outreach.

Education

The inter-disciplinary research and education platform will provide students and the scientific community with hands on applications and solutions within their fields of study — ranging from environmental sciences and conservation to marine engineering, chemistry, biology, business; economics, engineering sciences, computer science and technology; the health sciences, art installation and education. The site will be the exclusive training site for the American Academy of Underwater Sciences (AAUS), FGCU scientific divers.

Sustainability/Conservation

The reef complex will be a research platform in the Gulf of Mexico coastal waters providing research data on water quality, sustainability, ecosystem, and human health – all of which impact coastal communities in the state of Florida. This local data bank will provide valuable resources and assistance to coastal communities throughout Florida and other parts of the United States. The oceanographic sensors and instrumentation housed on the buoy will monitor the meteorological and oceanographic conditions of the reef area and relay data to the base station installed at the Vester Field Station, located in Estero Bay.

Habitats

The reef will provide favorable habitats for fish, sea turtles, coral, sponges, and other marine life, augmenting the resiliency of our coastal waters against impacts including red tide, hypoxia, and eutrophication. Such resiliency is needed to provide faster recovery from red tide and other impacts, and the data being collected on-site in real time will allow us to study the impacts and recovery in greater detail, thereby providing a mechanism to devise solutions to reduce and mitigate such impacts.

Economy

The reef generates multiple recreational benefits to the hospitality industry, boating and fishing, scientific (AAUS certified) and recreational diving—all business and tourism related. It will also create marine and land-based business opportunities in biotech and scientific industries that locate their business operations near specialized graduate academic institutions.

Collaborations

The oceanographic sensors and instrumentation housed on the buoy will monitor the meteorological and oceanographic conditions of the Gulf and reef area and relay the data to the base station installed at the Vester Field Station. Through the Buoy System, we become an integral tracking center, part of the National Weather Service network for marine and weather forecasting, hurricane and severe storm warnings, and climate monitoring. Kimberly's Reef will be instrumental in:

- protecting health and public safety
- supporting healthy ecosystems and water quality
- mitigating the effects of storms and man-made disasters
- ensuring safe and efficient marine operations
- monitoring the Gulf for long-term changes and environmental trends

Outreach

The FGCU Water School, Vester Marine, and the Friends of Vester are working with public and private schools this brings an underwater classroom for students to participate in environmental school projects to teach at every grade level the importance of environmental stewardship. Dive events and scientific dive days at state institutions are a couple of the community outreach prospects.