

Deep Sea Apollo (MS-119)

Describe how your team is giving back to the community and why do you think it is important?

In 2018, red tide hit Florida West Coast causing the death of marine life and affecting tourism and local business (Hendricks, 2018). It was not safe enter or get in contact with the water, so scientists had a hard time monitoring, sampling, predicting when the red tide will be over. After a team discussion, the crew members decided to address the problem creating a system to monitor red tide in Florida. For that purpose, the team develop a tracking system using data from satellites and scientific instruments to monitor red tide at macro levels, designed, built, and tested an underwater robot with a water sample collector device. Through the device attached to the robot, and the help of a crane, humans will not need to enter or touch the water to get the sample and the data need it to monitor at micro levels the *Karenia brevis*, the phytoplankton that caused the red tide. Collecting a water sample will help NOAA and NASA and our community with information to monitor the concentrations of *Karenia brevis* in Florida waters.



With the development of the Florida Red Tide Monitor System (FRTMS) to monitor the red tide in our community, Deep Sea Apollo contributes to minimize human contact with water, independently if the waters are impacted or not by the red tide. This project empowers our community not only letting the people know when the waters are safe but providing a monitor system that is made with readily available and low-cost materials easy to replicate.

We shared this project and its results with the community. Our DTV Production Club and its program Apollo Report, joined our adventure recording every moment during the water sample and quality monitoring activity at Anna Maria Island. This special program will be airing the last day of school previous the International SeaPerch Challenge. You can access through our school facebook page. In addition, The Ledger the local newspaper will be highlighted our story. Moreover, EarthEco and MyNASADData in its social media will be sharing our adventure and results.

Supporting Resources:

- Facebook Page: <https://www.facebook.com/navigatoracademydavenport/>
- EarthEco: <https://www.facebook.com/earthecho/>
- MyNASADData: <https://www.facebook.com/groups/MyNASADData>