



REAL - WORLD INNOVATION

In partnership with the Choctawhatchee Basin Alliance, the Aqua Bobcats have developed a plan to test water quality in the watershed using a Sea Sense water quality tool.

ABSTRACT

The Aqua Bobcats are located in beautiful Walton County, along the world's most beautiful beaches on the Gulf to the south and bordering Alabama to the north. Tourism and watersports are an important part of our area and economy, but not at the expense of our local water quality.

It is our goal through this project to help our local water authority to do our part to help monitor water quality to ensure it remains pristine. We will provide water quality testing as well as video recordings from under water that will both be submitted to scientists for evaluation.

MOTIVATION

When you think of Northwest Florida, most people automatically think of beautiful, sandy beaches. However, our bays and river system are a pristine ecosystem that we take much pride in. Our local Choctawhatchee Basin Alliance (CBA) monitors water quality in the Choctawhatchee Bay.

They have historically focused on the bay, but would now like to expand their monitoring to the northern part of the watershed. The creeks and rivers north of the bay all dump water into the bay, so the quality of these bodies of water directly affect the bay. We met with the CBA about working with their scientists to help carry out this new focus.

METHODOLOGY

The Aqua Bobcat's first step in this journey was coordination with the CBA to obtain a greater understanding of the water quality issue. Following contact with the CBA, it was time to form a plan. With the main mission of improving water quality in the northern watershed, reliable technology was required. The Sea Sense appeared to be a perfect fit.

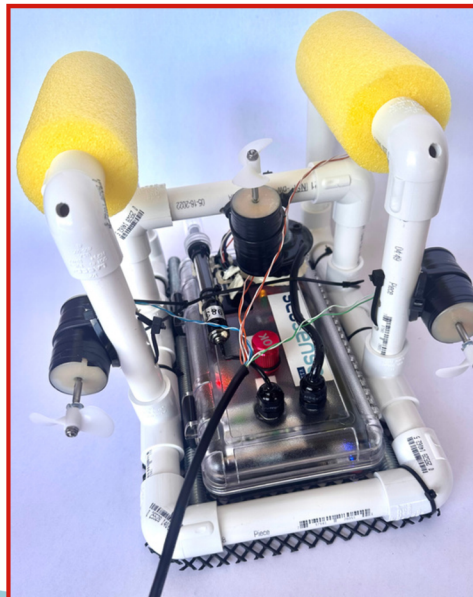
The Seasense bot is capable of testing multiple water parameters. It includes a conductivity sensor for measuring the salinity of both fresh and saltwater, a temperature sensor for monitoring air and water temperature, a pressure sensor for determining water depth, and a turbidity sensor for assessing water clarity.

RESULTS

Thus far in the project we have built a bot compatible with transporting the Seasense water quality sensor as well as an endoscope camera with lights to allow us to carry out both goals of the project: acquiring water quality data and video of the underwater ecosystem.

We have identified multiple locations where we will conduct testing and are currently working to acquire written permission to test at these sites.

We anticipate beginning testing in the very near future.



CONCLUSION

In conclusion, our project is on track to fulfill a very real need by the scientists at the CBA, providing data that will allow them to better serve the public and provide more in depth reporting to local governmental agencies.

We also look forward to continuing this partnership with the CBA in the future by potentially working on an additional project where a smaller Seaperch bot fitted with the camera only could be used to provide confirmation data regarding the percent of grasses in various areas of the Choctawhatchee Bay. This is currently done by human divers, a cumbersome and time consuming process. Utilization of the bot would be more efficient and provide the opportunity for more data points.