

Restoring Apalachicola oysters

Community can help shape new management plans to restore the bay



By CHAD HANSON

Apalachicola Bay's famous oyster industry thrived for more than a century. But unsustainable harvesting, pollution, storms, changes in water salinity, and other problems pushed oyster populations to a critically low level in 2012, prompting the National Oceanic and Atmospheric Administration to declare a federal fishery disaster a year later.

Since then, several restoration efforts have failed to help rebuild the shellfish population. So, in 2020, the Florida Fish and Wildlife Conservation Commission officially prohibited for all harvesting of wild oysters in Apalachicola Bay for five years.

This decline in oysters may be symptomatic of an overall change in the area's ecosystem, which raises important questions about the health of the bay. To help find the answers, in 2019, Florida State University established the Apalachicola Bay System Initiative (ABSI) with funding from Triumph Gulf Coast Inc. — a non-profit corporation that oversees expenditures of money recovered by Florida's attorney general for economic damages following the 2010 Deepwater Horizon oil spill.

ABSI's goal is to understand why the oyster population is declining and the ecosystem is not recovering, and to identify potential pathways to a healthy bay and oyster fishery.

ABSI's approach is

twofold: Come up with science-based restoration and management strategies, and engage the community to help develop and implement them. In partnership with local oystermen, ABSI's researchers are investigating where and how to conduct small-scale restoration experiments that can inform large-scale reef restoration.

For example, laboratory experiments can reveal oyster survival rates, larval life span, and the behavior of oyster larvae under various environmental conditions; field experiments will help determine optimal restoration strategies, survival rates of young oysters, and survival and productivity of different local oyster strains to identify potentially resilient ones for restoration projects and aquaculture.

ABSI is also mapping the bay to get data on existing oyster reefs, and creating hydrologic models that can predict salinity, nutrients, and other environmental conditions under a variety of river flow levels.

Finally, ABSI has constructed a hatchery to raise oysters for restoration experiments in the lab and the bay.

To engage local stakeholders, ABSI established a community advisory board in 2019 to create a consensus-building process for developing a management and restoration plan.

The 23-member board comprises commercial seafood harvesters and dealers, recreational guides and anglers, aquaculture business owners, and representatives from state natural resource agencies, businesses, local governments, and nongovernmental organizations.

With guidance from this advisory board and input from stakeholders and the pub-

lic, development of a science-based ecosystem management and restoration plan, focused on the recovery of Apalachicola Bay, is now under way. Eventually, the advisory board also will seek long-term funding to ensure that the plan is implemented.

Our members have met 13 times. All materials, including agendas, presentations, summary reports, and video recorded meetings, are available at marinelab.fsu.edu./absi.

ABSI also hosted two workshops to engage and learn from local oystermen on suitable locations and materials for restoration and management alternatives.

Those of us on the community advisory board want the community to be informed and engaged in scientific and management decisions as the project moves forward.

ABSI is looking for volunteers to help its scientists with sample processing and general lab work, and is developing in-person workshops (while following Covid-19 safety guidelines), including ones Sept. 16 at the St. George Island Civic Club, Sept. 29 at Eastpoint Brewery as part of the ongoing Apalachicola National Estuarine Research Reserve SciCafé series, and late summer or fall at the Eastpoint Civic Association.

If you're interested in participating, volunteering, learning more about ABSI, or have questions and suggestions for the team, please email fsucml-absi@fsu.edu.

Chad Hanson, a policy analyst with The Pew Charitable Trusts, is a member of the Apalachicola Bay System Initiative's community advisory board.

