



Leveraging Aquaculture for Restoration: An Overview of the Supporting Oyster Aquaculture and Restoration (SOAR) Program

Brianna Group
Brianna.group@tnc.org



The Nature Conservancy and Pew Charitable Trusts



Phoebe Racine
Estuarine Project Director,
California



Zack Greenberg
Officer, Conserving Marine
Life in the U.S., Pew, New
Jersey



Stephen Kirk
Coastal Program Manager,
Massachusetts



Hannah Packman
Marketing & Comms
Mgr, Provide



Molly Bogeberg
Marine Conservation
Manager, Washington



Brianna Group
Great Bay Program
Manager, New Hampshire



Daniel Sweeney
Agriculture Program
Director,
Maryland/Delaware



Bill Shadel
Coastal Projects Manager,
New Jersey



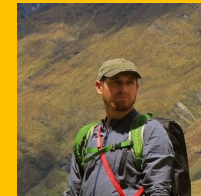
Rebekah Borgert
SOAR Project Coordinator,
Global Aquaculture,
Provide



Boze Hancock
Senior Marine Habitat
Restoration Scientist, Protect



Sally McGee
Director of Climate and
Strategic Initiatives, Global
Aquaculture Program



Adam Starke
Estuary Specialist, New
York



Helena Tatgenhorst
Coastal Program Manager,
Maine



Jessica Griffin
Coastal Sustainability
Postdoctoral Fellow, TNC
and Northeastern University



Tiffany Waters
Manager Global
Aquaculture, Provide

Pandemic Impacts on Oyster Aquaculture in the United States

Origins of the Supporting Oyster
Aquaculture and Restoration
Program

Large-Scale Restaurant
Closures

Decreased
Demand

up to 90%
decrease in sales

Increased
Surplus

Oversized
Oysters on
Farms





SOAR Phase One Outcomes: 2020 – 2022

3.5 million

oysters
purchased

125

farms
supported

450

jobs
sustained

25

restoration
sites

40

acres of oyster
reef supported

Farmer Support for SOAR

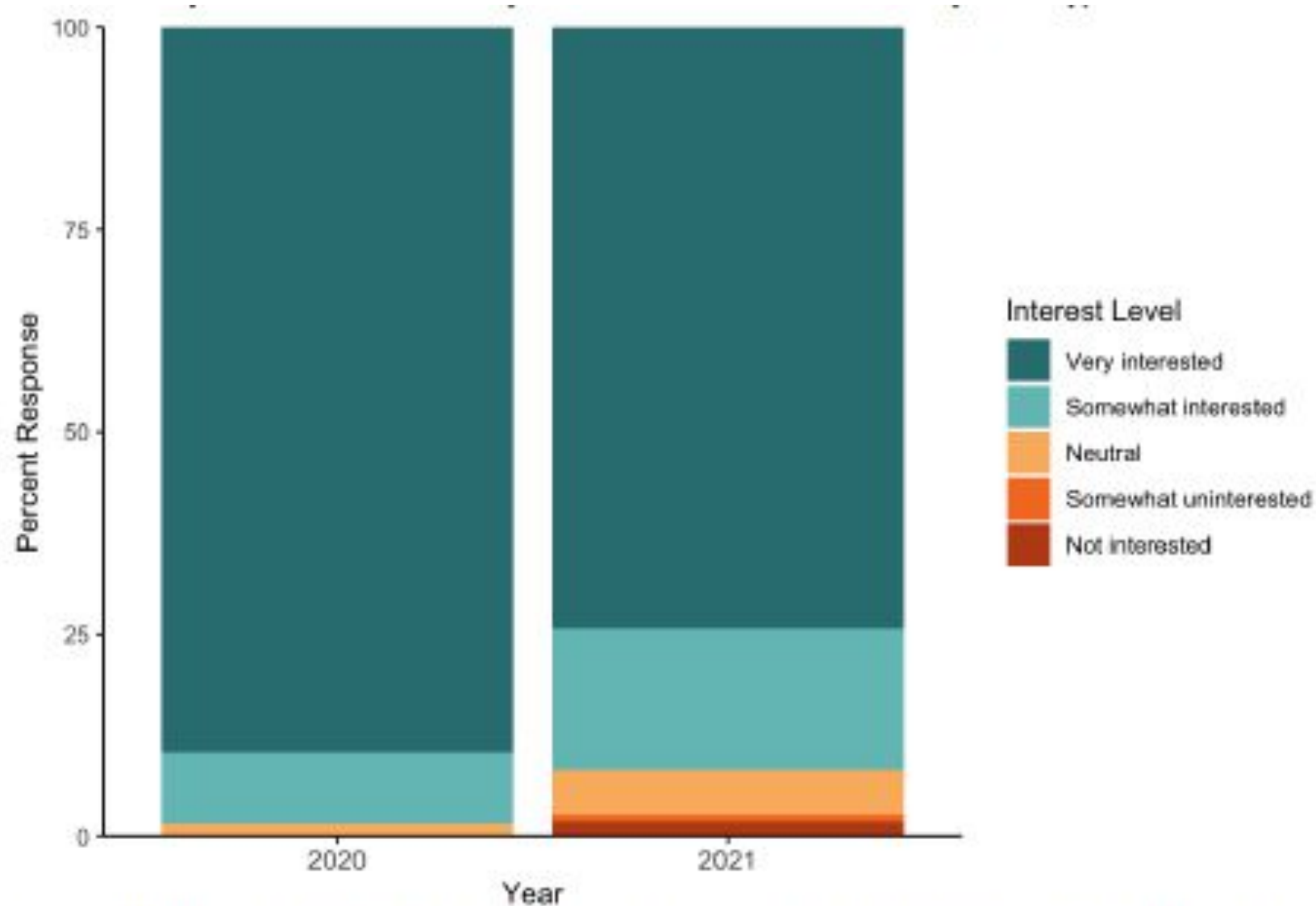
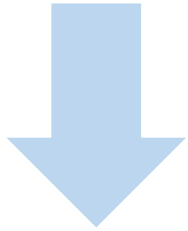


Figure 9. Percent of individuals for each interest level for future SOAR participation

SOAR 1.0 to SOAR 2.0

Provide economic relief to farmers impacted by COVID-19 while restoring one of our oceans' most productive ecosystems for cleaner water, more abundant marine life and safer coastlines.



Build enduring partnerships with shellfish farmers to accelerate the restoration of coastal ecosystems and create a thriving and diverse industry that is resilient to future threats.



SOAR 2.0 - \$6.3 million (Public and Private)

- **Purchase program**
Leverage aquaculture for conservation
- **Shellfish Growers Resiliency Fund**
- **Monitor and demonstrate effectiveness**
- **Secure long-term funding**
Enable public/private partnerships



Photo: Diana Garland, TNC

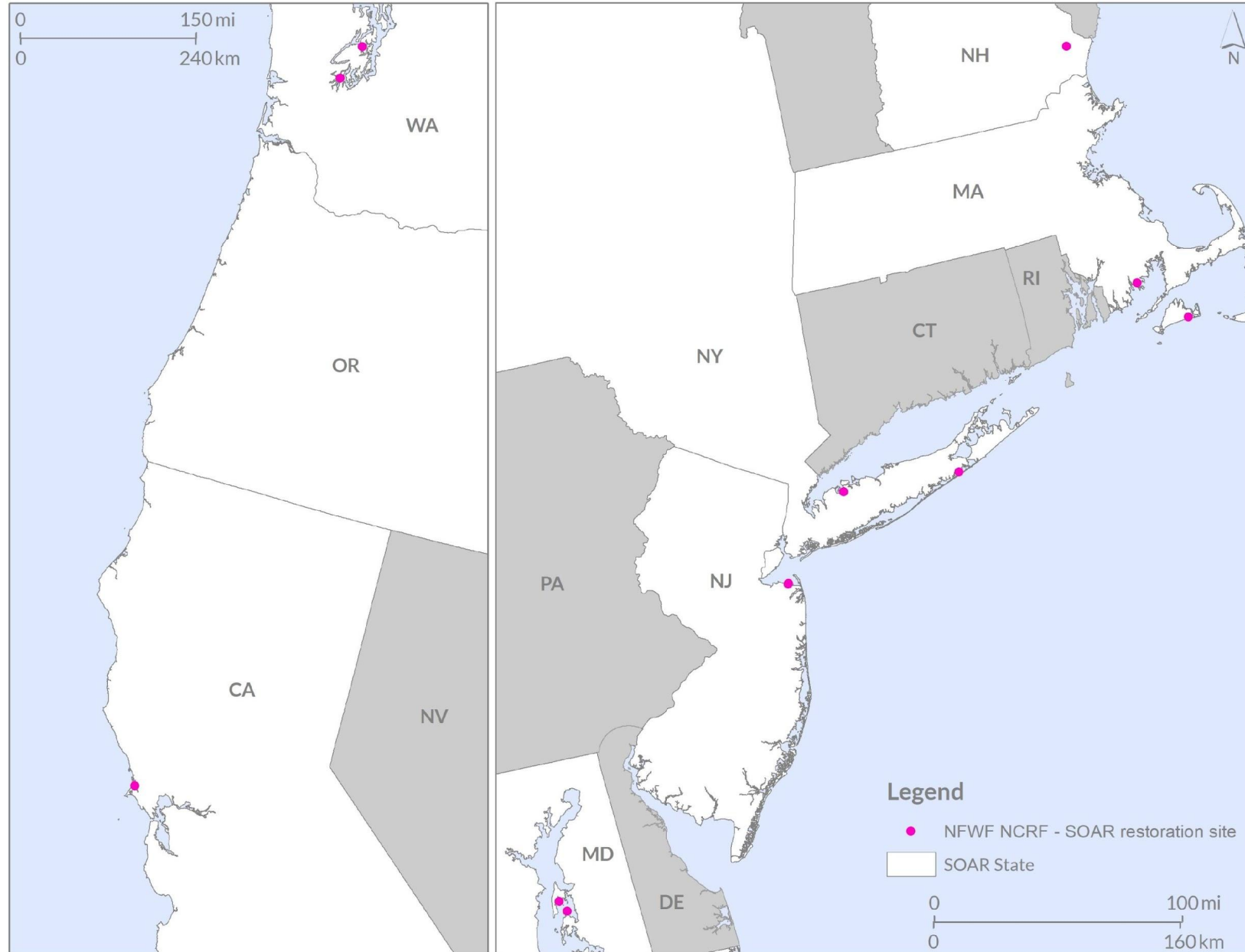


	Oysters Purchased	Farms Participated	Jobs Supported	Restoration Sites	Acres of Reef Supported
SOAR Phase One Purchase Program Outcomes: 2020-2022	3.5M	125	450	25	40
SOAR Phase 2 Purchase Program Target Outcomes: 2023-2026	2.5M	100 (50 new)	360	13* (ME and CA)	30*

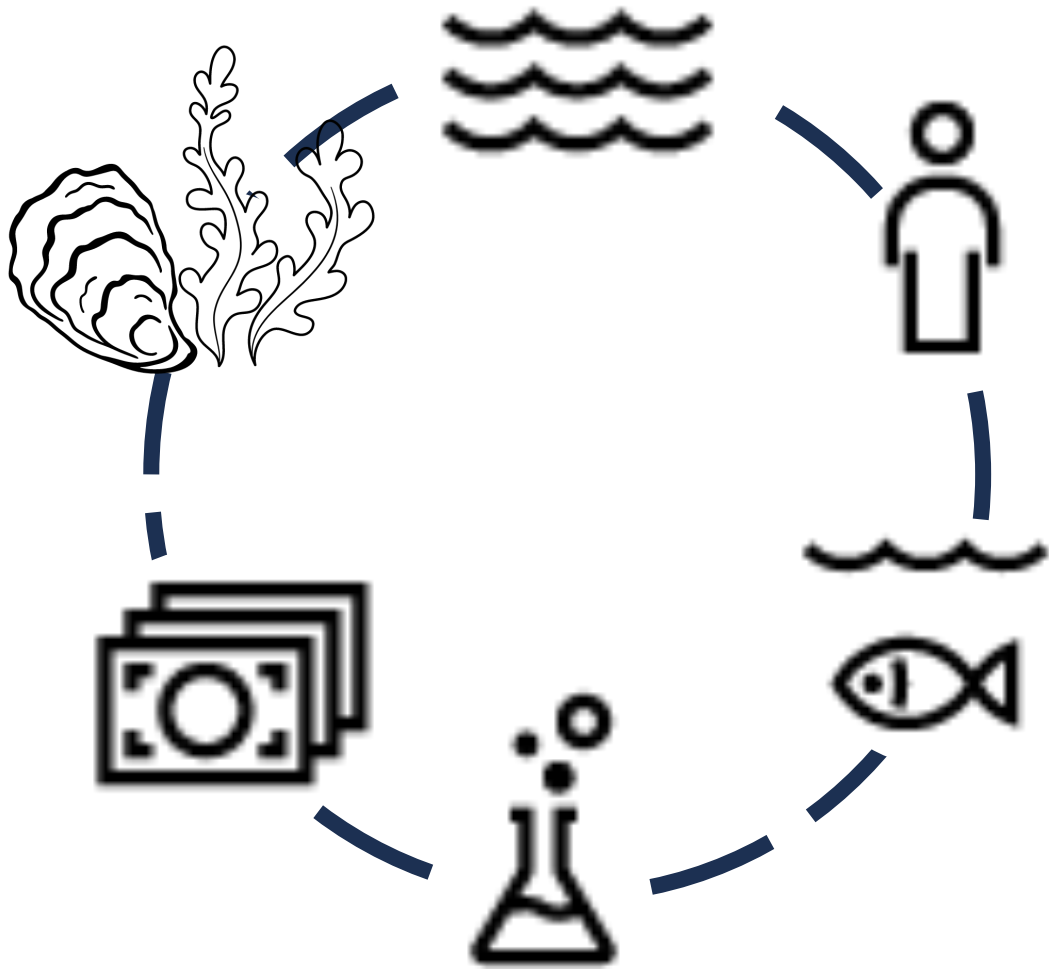
SOAR 2.0

Considerations

- Site selection
- Grower eligibility
- Oyster availability



SOAR 2.0: Monitoring



The SOAR Resiliency Fund

Farmer engagement in shellfish restoration, marine conservation, or environmental outcomes

Projects that increase farmer engagement in shellfish restoration, marine conservation, or enhance environmental outcomes of farming

Efficient farming operations

Projects intended to improve efficiency and cost savings in farming operations and/or provide increased or enhanced industry support services or reduced carbon footprint

Expanding access to aquaculture training and jobs

Projects, such as training, mentorship, or programs, that support communities not already engaged in the aquaculture and restoration industry

Resiliency Fund- Awards



Image: Jerry and Marcy Monkman

83 Projects Awarded

- **2021- \$1,000,000**
 - 36 projects (28 small awards for industry led projects and 8 large awards)
 - Across 16 states
- **In 2024- \$898,000**
 - 47 industry-led projects
 - Across 18 states

A resilient aquaculture industry can advance conservation goals.

Next Steps- Best Management Practices

- Title: *"Best practices for using adult diploid oysters in oyster restoration and enhancement projects: building on SOAR"*
- Purpose: provide guidance for resource managers, industry and non-profit partners to establish an implement a SOAR-like program
- Share lessons learned from TNC and Pew Charitable Trusts
- Work in progress (expected publication in late 2025)



Image: Molly Bogeberg

Next Steps- Identifying Barriers & Sustained Funding

- Identify sustainable funding within an agency.
- Support bills that could provide funding to an agency to for carrying out a SOAR-like initiative (e.g. state NRCS programs)
- Address barriers to native shellfish restoration such as permitting challenges and shell substrate availability

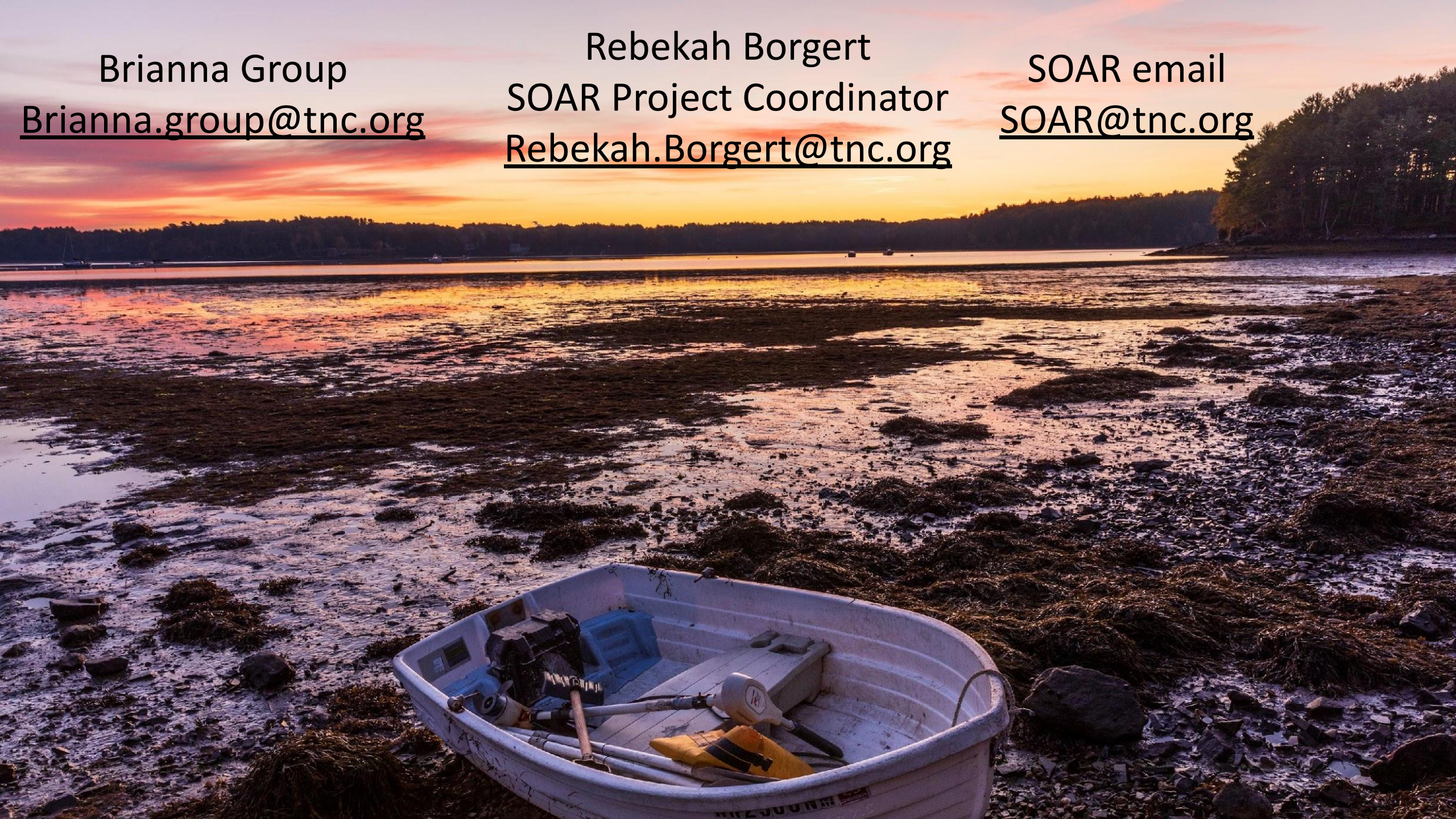


Image: Debbie Ross Preston

Brianna Group
Brianna.group@tnc.org

Rebekah Borgert
SOAR Project Coordinator
Rebekah.Borgert@tnc.org

SOAR email
SOAR@tnc.org



Future of SOAR

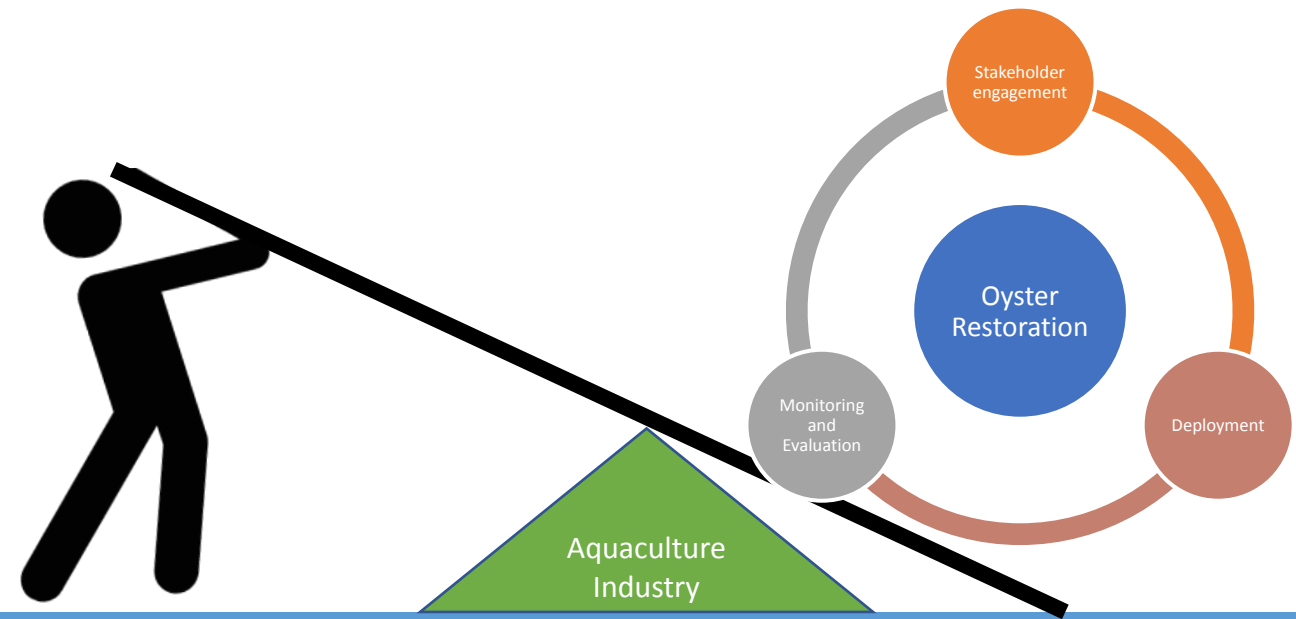
Engage federal agencies to secure long-term funding for SOAR

- High level engagement with USDA, NOAA, and NRCS
- Looking to the Farm Bill to support NRCS Programs
- Secure long-term funding for 3 state programs



SOAR

2 phases to date



SOAR 1.0 – 2020 to 2022 \$5 million (Private)



Oyster Purchase Program



Monitoring



Resiliency Fund

The Supporting Oyster Aquaculture and Restoration (SOAR) program supports a resilient oyster industry and leverages aquaculture in reef restoration —a win-win for oyster aquaculture businesses and for our coastal ecosystems.

Resiliency Fund

- Established March 2021
- created to support a resilient and sustainable shellfish industry in the U.S.
- and to advance marine conservation.
- Proposals from industry that address the intersection of aquaculture and restoration





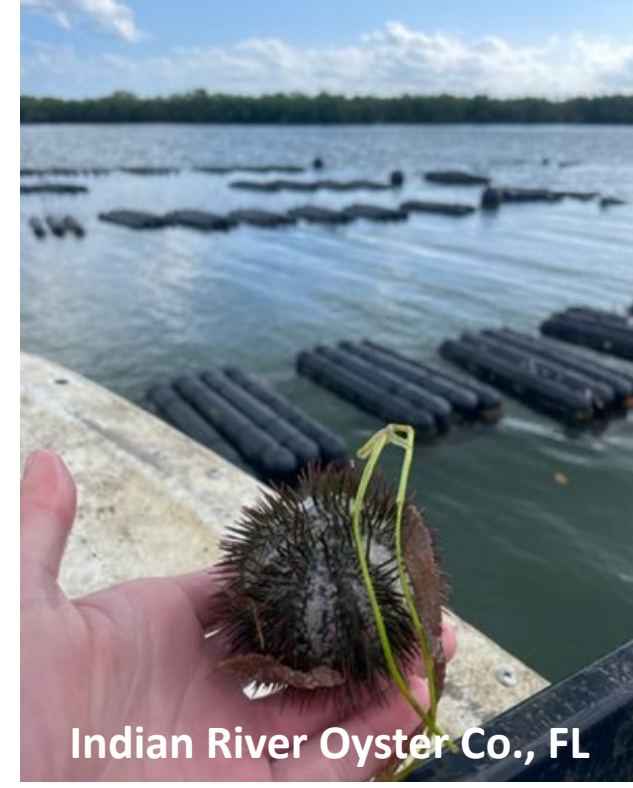
Shell to Shore, GA



Serona Shellfish, FL



OceansAlaska, AK



Indian River Oyster Co., FL

SOAR 1.0

\$1.27 million in grants

36 grants awarded

3 US coasts

12 month grant term

Priorities

Farmer engagement in shellfish restoration, marine conservation, or environmental outcomes

Efficient farming operations

Product marketing to increase demand

New products and species

Diversity, equity, and inclusion in the shellfish aquaculture industry

SOAR 2.0 Provide 50 additional innovation awards to farmers (Resiliency Fund)

- 18–24-month grant term
- Targeting 50 industry-led projects
- Release RFP in Spring 2023
- 153 proposals received

2023	WEST COAST	EAST COAST	GULF COAST
SUBMITTED	15	109	29

- Review in final stage
- Notification in Feb

[Nature.org/SOAR](https://www.nature.org/soar) - Resiliency Fund

