# Coastal Alabama Fisheries Fund Market Analysis and Program Description



Prepared By

Henry Perkins Business Resource Manager Mobile Bay National Estuary Program 118 N. Royal Street, Suite 601 Mobile, AL 36602

## Table of Contents

Part I, Commercial Fishing and Oyster Aquaculture	
Segmentation and General Market	3
Target Market Demographics	4
Traditional Funding and Auxiliary Support	5
Barriers to Entry	6
Environment and Climate	8
Part II, Coastal Alabama Fisheries Fund.	10
Mission Statement	10
Main Objectives	10
Keys to Success	10
Strengths, Weaknesses, Opportunities, Threats	11
Market/Competitor Analysis Other Funding Options	12
Core Strategies	13
Program Overview	14
Regulation	17
Citations	18

## Part I, Commercial Fishing and Oyster Aquaculture

Commercial fishing is a major industry in the Mobile Bay region, historically and currently. Alabama commercial fishermen land a variety of seafood, including shrimp, blue crabs, oysters, red snapper, vermillion snapper, Spanish mackerel, flounder, menhaden, mullet, and sharks.

There is a need for capital in the industry. Much of the fleet is outdated and needs modernization, and new entrants into the industry often find themselves priced out of getting started.

The Coastal Alabama Fisheries Fund seeks to provide some of these capital requirements as well as various auxiliary services and peer organizing to create a more robust and efficient industry.

The first targeted industry for CAFF is oyster aquaculture, which has a relatively low-cost of entry compared to other industries, has a positive ecological impact which will support other industries, is of small enough scope to be comprehensively understood, and is also well-positioned for growth.

#### Segmentation and General Market

In coastal Alabama, the commercial marine seafood industry provides more than 12,000 jobs, \$555M in sales, \$219M in income, and \$287M in general profits annually. Oyster landings account for roughly 2% of this revenue. Alabama's seafood economy is less reliant on imports than other states, with imports accounting for slightly more than 3.6% of the total economic impact.<sup>24</sup>

Oyster market prices in 2019 ranged from \$0.50 to \$0.70 with a weighted average price of \$0.59.<sup>21</sup> Alabama oysters are considered high-quality and fetch higher prices, selling for 85¢ per oyster in 2019, which nearly doubles historic highs<sup>6</sup>. Between 2007 and 2016, Alabama oysters sold for \$1.50 more per pound than the national average.<sup>24</sup> In 2019, the market value for Alabama oyster commercial operations was at least \$1,452,000, and the total number of single market oysters sold was at least 2.425 million.

The market demand for Alabama oysters has consistently outpaced supply, and therefore any aquaculture development or expansion in Alabama can reasonably expect a positive return on investment.

There are two methods of oyster harvest employed in Alabama: wild caught oysters harvested from reefs and oysters produced via aquaculture, a method of controlled farming.

In 2019, there were 21 commercial oyster aquaculture operations in Alabama. In 2009, there were as yet no oyster farms in Alabama, demonstrating how young this industry is in this State. 9 Oyster

farmers reported 34 full-time employees and 30 part-time employees in 2019. At least 74 acres were permitted for oyster aquaculture, with at least 40 acres used in production.<sup>6</sup>

#### Target Market Demographics

The initial focus of CAFF is oyster aquaculture. This market has been analyzed in more detail: there is distinction between established oyster aquaculturalists and start-up oyster aquaculturalists, both of which are initial targets for CAFF.

## Established Aquaculturalists

There are 18 established oyster farms in Mobile and Baldwin counties. Gathered from interviews, many Alabama oyster farmers are from families of legacy seafood workers or otherwise have an established connection to the water. Alabama oyster farmers are generally white males local to the region, with some exceptions in gender.

Appealing to these aquaculturalists is the opportunity to manage their own business, still connected to the water, but more reliable than conventional fishing or harvesting wild oysters from reefs. Operating their own farm provides enough income to raise a family, send kids to college, etc., but not enough to become especially wealthy.<sup>11</sup>

Established aquaculturalists can be subdivided into different groups depending on the size of their operation: large-scale, medium-scale, and small-scale farmers. Each of these categories of established aquaculturalist has distinct needs.

Size	Number of Full Time Employees	Acreage
Small	Owner operated	1–2
Medium	<4	4–6
Large	5+	6+

Small and medium-scale farmers will be the primary targets for CAFF among established farmers, as large-scale farmers will not generally have need for the loan size CAFF offers or will have an established line of credit with a financial institution.

All established oyster farmers need capital for equipment replacement, equipment upgrades, and business expansion. Oyster farming equipment is highly specialized and subject to deterioration due to exposure to salty air and water and occasionally powerful storms. Replacing or repairing this equipment is a constant requirement, as is securing and protecting it. Upgrading or purchasing supplemental equipment is one of the simplest ways to increase production.

All farms require oyster seed, or spat, every spring. This is a thousands of dollars expense in a season when there is little income.

Expansion is possible with the acquisition of more equipment, additional labor, more access to water bottoms, and more seed. These step-costs can be challenging for medium and small-scale farmers without additional financing, and many may lack the collateral or security necessary to secure traditional loans.

#### Start-up Aquaculturalists

It is likely that the demographics of new farmers attracted to the industry will be similar to those of established farmers, all of whom were new farmers during the last decade. We can expect those attracted to the industry to continue being predominantly from families of legacy fishermen or individuals connected to the water, local, male, and white. Providing access to capital will give less-economically established individuals the opportunity to become oyster farmers, which may affect the demographic composition.

These aquaculturalists should, like the established aquaculturalists, desire the opportunity to run their own business connected to the water as well as be attracted to the notion that running their own farm will provide enough income to raise a family, send kids to college, etc., though not enough to become especially wealthy.<sup>10</sup>

The foremost need for start-up farmers is also capital to secure access to water bottoms, equipment, oyster spat, etc. They also require capital to cover operating costs until they can harvest their product if they have no savings or other supplemental income.

Start-up farmers require various attributes: a knowledge of oyster aquaculture, business skills required to manage an operation, knowledge of local distribution infrastructure, etc. These needs will be addressed by the auxiliary services aspect of CAFF, or through additional resources, such as the Auburn University Shellfish Program.<sup>12</sup>

#### Traditional Funding and Auxiliary Support

Traditional funding is non-optimal for this industry. Aquaculturalists will be able to better develop their businesses with auxiliary support, including legal, marketing, and financial, and other services and training in accounting, inventory management, and other general business practices. Many aquaculturalists, particularly small-scale farmers or those managing start-ups, have little to no training in these fields and will experience a higher rate of failure than those with access to these services and trainings.

Maryland and Virginia both have large and successful oyster-specific loan funds and have seen their oyster market share grow substantially. They have a variety of programs geared specifically towards oyster aquaculture and have shaped their fund structures to cater to this industry. Maryland Agricultural & Resource-Based Industry Development Corporation (MARBIDCO) in Maryland, for example, helps aquaculturalists develop business and production plans while also collecting interest-only payments for the first three years of the loan. There are clear advantages to specific and targeted funding programs; general funding options are inadequate for fully realizing the potential size of this industry.

An adequate fund in Alabama may not exist currently, in part because modern oyster aquaculture is a relatively young industry in the State. Established farms are relatively few in number, and they have only been developing for a decade, so it is not surprising that a niche lender has yet to emerge.

Barriers to Entry

#### a) Water Bottoms

Alabama has 53 miles of Gulf coastline and over 600 miles of tidal coastline. Much of this coastline is either prohibited for oyster aquaculture by the Alabama Public Health Department or unsuitable for other reasons, and almost all the water bottoms are currently parceled and owned. To raise oysters, farmers need to purchase coastal property or lease water bottoms, that are suitable and approved for aquaculture, from property owners or the State.<sup>9</sup>

Even in conditions conducive to oyster growth, not every water bottom will be able to produce the same quantity or quality of oysters, with differences in salinity, nutrients, etc. all affecting the final product. There are also waters more vulnerable to storms, flooding, and other factors that can increase oyster mortality.<sup>3</sup>

The primary locations for oyster operations in Mobile County are along the coast of the Mississippi Sound (Grand Bay, Portersville Bay, and West Fowl River), where the majority of existing oyster farms are located; Dauphin Island, where there are public reefs and excellent potential for aquaculture development; and the western side of Mobile Bay, where farmers are forced to deal with semi-frequent mortality events related to rain events and the outflow from Mobile Bay.

Suitable areas in Baldwin County for oyster aquaculture include Skunk Bayou in the Bon Secour Watershed, but much of the rest of prospective Baldwin County water bottoms are prohibited, conditionally restricted, or unclassified by the Alabama Marine Resources Division (AMRD). The unclassified regions, especially Little Lagoon, have potential for aquacultural development, should they gain approval by AMRD.<sup>9</sup>

## b) Capital

In a 2011 survey of North Carolina shellfish leaseholders, nearly 40 percent of respondents identified lack of available loans and capital as a factor inhibiting growth of the industry. This barrier is true in Alabama as well. Traditional funding sources are wary of niche and perceived high-risk, low-reward industries and are reluctant to provide smaller loans as well. Start-up, small and medium-scale farmers often lack collateral required for loans, compounding this issue.

Few, if any, oyster-specific funds in a given region exist, and farmers generally rely on conventional agricultural funds and loans or, more commonly for start-ups and small-scale farmers, pay for their operations out of pocket. Maryland and Virginia have shellfish-specific funds, have consequently seen high rates of industry growth, and have been able to realize some of the fastest growth of oyster market share in the country. 5,14

The median household income in Mobile County zip codes where opportunities exist for oyster aquaculture is 25% lower than it is for the County, which is already significantly lower than the national average. For example, per capita income for the area around Bayou la Batre\* is low, at \$17,170. Mobile and Baldwin county areas which are suitable for aquaculture tend to be lower-income and rural.

Low-income areas are, in general, not as well served by financial lenders, and individuals from these areas tend to have less access to capital for collateral and have lacked the opportunity to develop robust credit scores. These issues can make securing the initial investment for an aquaculture operation challenging and limit business opportunities to those who already have established wealth.

The initial investment for a two-acre oyster farm with 100,000 to 300,000 oysters ranges between \$20,000 and \$60,000 and generally includes the cost of the water bottom, aquaculture equipment, and spat. The range of cost increases to \$60,000-\$80,000 by the end of the first year of operations, though this assumes the owner is engaging in a substantial portion of the labor required. An oyster farmer can expect to break even in three to five years.

The fixed costs for oyster production range between \$20,000 and \$40,000 dollars, and the variable cost is \$.20 per oyster. Oysters are harvestable 12 to 18 months after "planting," and 72% of the harvest is generally viable for sale. 12,9,19

Oyster farmers need expensive, specialized equipment\*\* to operate, such as cages for oysters, tumblers for processing, etc. This equipment is subject to the elements and needs semi-frequent replacement or repair. This, with water bottoms and seed, represents the bulk of fixed costs, but additional miscellaneous costs, such as crop insurance, also exist.

A targeted fund will address all of these issues and is able to provide less privileged niche borrowers the requisite funding to get started or expand an aquaculture business.

#### c) Labor

Unemployment estimates vary significantly in range, but the Bureau of Labor Statistics estimates unemployment for Mobile County is currently at 8.5% and Baldwin County at 5.2%. The City of Mobile has an estimated unemployment rate of 14.2%. Working-age individuals (those between 18 and 65) comprise over 60% of the population of Mobile County and 57% of Baldwin County. On the population of Mobile County and 57% of Baldwin County.

<sup>\*</sup>Importation of foreign seafood and climatic events threaten the health and economy of small coastal cities.<sup>22</sup> Domestic oyster aquaculture reduces the seafood deficit, and oyster reefs can help protect communities from the effects of climatic events.

<sup>\*\*</sup>Shortages of commercial-scale oyster seed hatcheries, microalgae larvae feed, and oyster substrate suppliers have created bottlenecks in aquaculture growth. As market demand grows, the industry will need to scale to increase the volume as well as variety of its supply. Niche oyster aquaculture tools are in short supply with rapid growth, but those manufacturers are working to catch up.<sup>26, 27</sup>

This represents a potential labor pool of over 44,000 individuals from which oyster farmers could potentially draw. The skillset of this pool is less consequential, as training time is relatively brief. The Auburn University Shellfish Laboratory takes only a year to train someone to own and run an entire operation. The labor required is physically demanding, however, and not every unemployed person may be capable of performing the necessary tasks.

Oyster aquaculture requires approximately 60 hours of labor a week per 100,000 oysters, so a two-acre farm can be managed by one or two full time employees, depending on their level of dedication and training. These hours do not need to be spread evenly throughout the week, so it may be possible to maintain a farm working weekends and late afternoons a few days a week.

For start-up aquaculture operations, this means keeping a day job may be possible until the farm expands beyond two acres, and additional hired labor may not be a requirement.

## d) Marketing

Oysters are in high-demand, but Gulf Coast oysters have developed a reputation of being dangerous due to the 2010 BP *Deepwater Horizon* oil spill and cleanup efforts, as well as the sporadic outbreaks of *Vibrio* endemic to the region. Warning labels for raw Gulf Coast oysters are required in some states, and there is evidence this has affected sales of Gulf oysters. <sup>13</sup>

Connoisseurs, however, praise Gulf Coast oysters as some of the best in the country with unique flavors due to the meroir <sup>10</sup>, a term for unique flavoring conditioned by the local marine environment. Marketing for Gulf Coast oysters will need to sell the flavor of the oysters as well as reassure consumers that precautions are taken and regulations are enforced to keep *Vibrio* and other bacteria, pollutants, and toxins out of any Gulf oysters that go to market.

A collective marketing campaign sponsored by or partnered with CAFF can address these concerns and further increase demand for Alabama oysters.

Environment and Climate

#### Threats and Climate Change

Climate and severe weather have significant impacts on oyster aquaculture. Besides the long-term effects of warming increasing ocean acidification and reducing oyster shell thickness<sup>25</sup>, there are shorter-term impacts of powerful storms and freshwater events that must be addressed.

To protect consumers, rainfall events can trigger harvest closures. These closures are determined by the length of a rainfall event or, for much of the Mobile County harvest area, when the flood stage at the Barry Steam Plant exceeds eight feet. This amount has been increased to 17 feet for portions of the Baldwin County harvest area, as it has been determined that freshwater runoff has a smaller impact on the east side of the Bay. Significant freshwater events can affect the health of the oysters and can lead to large-scale mortality events.

The Alabama Department of Public Health preemptively closes aquaculture operations for harvest if a tropical storm or hurricane is approaching and works to quickly re-open farms if the storm was not a significant freshwater event.

Tropical storms and hurricanes not only cause these types of rainfall events but also have impacts that can physically damage or destroy aquaculture equipment. Aquaculturalists can take proactive measures to reduce this damage, though these measures are associated with greater equipment cost in robust cages or anchoring equipment and increased labor costs in securing or temporarily removing the cages.

As these storms and freshwater events become more frequent and powerful, aquaculturalists will need to compensate with more robust equipment and a greater tolerance of downtime.<sup>21</sup>

## Impact and Benefits

Oysters are one of the most sustainable foods in the world. As bivalves, they require no greenhouse gas-producing feeds or inputs but instead filter nutrients from up to 50 gallons of water per day, thereby improving water quality and conditions for other aquatic plants and animals.

Oyster reefs also help protect the coastline from the effects of winds and waves and provide foraging and nursery habitat for many species, forming the base of marine food webs. Reef height even rises with sea level as oysters reproduce, providing added resilience. One acre of reef provides a value of \$6,500 in denitrification (removing nitrogen) and \$2,125 in shoreline stabilization per year<sup>23</sup>. Due to these benefits, oyster farming is increasingly a part of habitat conservation and restoration, as well as economic revitalization, strategies for coastal areas. <sup>16,4</sup>

Oysters grown for consumption are generally polyploid (having an extra set of chromosomes), and different from normal diploid oysters grown for restoration - the key being that polyploid oysters cannot reproduce, resulting in faster growth. Still, the methods for growing any type of oyster are similar. A farmer can take advantage of funds available for restoration by growing a variety of oysters. This diversification also insulates the farm against events such as COVID lockdowns, which temporarily arrest the oysters-for-consumption market.

There are various funds available for oysters grown for restoration<sup>17</sup>, and Maryland and Virginia have had success combining restoration programs with aquaculture, having restored nearly 700 acres of wild reefs alongside private aquaculture.<sup>20</sup>

## Part II, Coastal Alabama Fisheries Fund

#### Mission Statement

The mission of the Coastal Alabama Fisheries Fund (CAFF) is to pilot a peer lending program to support fishing business investment in best management practices through the creation of an inventory of successful fishing community peer-lending programs, development of public-private partnership frameworks for sustainable operation of peer-lending programs, and establishment of peer councils to develop policies for use and loan terms.

#### Main Objectives

- a) Secure capital for the purpose of loaning to commercial fishermen, initially oyster aquaculturalists, through grants, donations, etc.
- b) Establish a council or body to review and approve loan applications, ideally comprising partially of peer members from the relevant fishing industry.
- c) Partner with a financial institution to set the terms of and issue loans to borrowers approved by the council or body and to then recover payments and interest from borrowers.
- d) Grow CAFF through further fundraising as well as interest collected to better serve commercial fishing industries.
- e) Establish, assist or otherwise develop a third party entity to manage and grow this fund in a dedicated and sustainable capacity.

#### Keys to Success

#### a) Peer Council

A primary driver of success is the degree to which the relevant fishing community, in this case the aquaculture community, is invested. A high degree of participation will ensure community ownership of CAFF, and thus the community will work to ensure its use and success. This will reduce loan default rates as well, especially among established aquaculturalists, as a council of peers will be better aware of who is likely at risk of default and who is reliable for repayment.

## b) Loan Structure

The interest and terms of the loans must be flexible. Aquaculture and agriculture in general is unsteady, though predictable, in its rate of return. Especially for a start-up, there can be substantial time between the initial investment and any return. For CAFF to

be useful and utilized, it must cater to these niche needs. This may involve interest-only payments for a period of months to years.

## c) Auxiliary Services

Services or programs provided must be relevant to aquaculture operations, especially to the knowledge and skills required to grow and expand the business. These services must be provided in a manner that is attractive and accessible to the aquaculturalists, and at low to no cost to CAFF.

#### d) Advertising

The target markets (established and start-up oyster aquaculturalists) must be aware of CAFF. The number of established oyster farmers in the region is limited enough that personal contact should be sufficient to communicate the existence of CAFF, especially for established aquaculturalists. For start-up farmers, word of mouth may suffice to reach already established watermen, though some other forms of advertising and outreach will likely be required.

#### e) Value

The target markets must necessarily find value in CAFF. Small-scale farmers, some medium-scale farmers, and start-up aquaculturalists will be able to use CAFF to secure capital for equipment upgrades and purchases, as well as seed, which would otherwise have been inaccessible to them. CAFF must be distinct a conventional loan or line of credit.

#### f) Metrics

The metrics of success will be quantitative when possible; how many dollars were leant, what is the default rate, what is the number of aquaculture operations that were improved, etc. The growth if the industry and distribution of loans are measurable and will be useful for determining and communicating success. These metrics can be used to justify expansion of CAFF.

Strengths, Weaknesses, Opportunities, Threats

business.

Strengths
CAFF is flexible and accessible for borrowers, with low interest and reasonable terms. In addition to capital, borrowers will receive access to various other auxiliary resources to help develop and manage their

Weaknesses
Auxiliary services will be heavily reliant on volunteer service, and low interest rates will make organic growth of CAFF slow.

Business interest rates are low in general, reducing the appeal of CAFF's loans. Community element invites collaborates and brings new ideas together.

Opportunities
Bringing in established
aquaculturalists as part of a peer
council creates new
opportunities for collaboration.

Success of CAFF creates a model that could be replicated for other commercial fishing industries.

**Threats** 

A greater than expected default rate can damage CAFF, though this threat is reduced if borrowers are reviewed by a peer council, financial experts, and others.

New water bottoms may not be opened by the Alabama Department of Public Health, limiting room for growth.

Market/Competitor Analysis

Other Funding Options

#### a) Banks & Traditional Loans

Banks and traditional loans can provide more capital than CAFF and, in the current financial climate, likely at comparable interest rates. However, a bank loan process can be difficult to access, particularly for a new business or for small amounts of capital. CAFF may be able to help a new farmer supplement other funding sources or help provide collateral for a bank loan.

Established farmers are more likely to utilize conventional loans, as with established operations they will not have the same difficulty in accessing them, though auxiliary services and other advantages can make CAFF more attractive.

#### b) Grants

There are existing grants an oyster aquaculture business may be able to utilize, but these grants are highly competitive and require a specific skill set to secure. Grants may be effective for a farmer choosing to produce for restoration purposes but will likely be insufficient for a conventional commercial operation.

#### c) Microloans

Microloan programs are excellent for building community support and buy-in for a business and are outstanding marketing tools. However, the amount of capital achievable by these loans is generally outweighed by the hours of work it takes to manage these fundraisers. These are best reserved for small amounts of supplemental income or for marketing campaigns.

# d) Maryland Agricultural and Resource-Based Industry Development Corporation (MARBIDCO)

The MARBIDCO aquaculture loan fund is not a direct competitor, as they operate in the Chesapeake Bay region, but is a program to study and possibly emulate. Their fund requires borrowers to have a Production Plan as well as a Business Plan and 10% of the requested loan amount in cash or preferably aquaculture equipment value. The loan is also not released until the borrower has a settled lease for a waterbottom.

The loan sizes range from \$5K to \$100K, and interest ranges between 3% to 5.25%. Payments for the first three years of the loan are interest-only, and no collateral is required. A first-time borrower is forgiven 40% of the principal, and for each subsequent loan they are forgiven 25%.

A credit check is performed on each borrower, and at least three years of tax returns are required. MARBIDCO funds can be used for equipment, oyster shell, and oyster larvae or spat. MARBIDCO reports that approximately 80% of their borrowers are established aquaculturalists, while 20% are start-ups. Overall they, in collaboration with other programs, have demonstrated marked success in developing the Chesapeake Bay oyster industry.

#### Core Strategies

#### a) Loans

The fundamental aspect of the program is that loans will be accessible and affordable, with flexible terms catered to the niche industry being targeted. The terms of the loan are to be established.

#### b) Auxiliary Services

In order to promote the greatest level of success, the CAFF aims to provide borrowers with access to auxiliary resources that improve their skills and grow their business. Financial, marketing, legal, technical, and business management experts are being sought out to partner for this purpose.

Auburn University Extension is contributing to this important effort by making training and business planning assistance available to current and prospective commercial shellfish growers.

#### c) Peer Council

Buy-in from the community at large is desired for this program to increase use of CAFF by established aquaculturalists and to increase investment in the success of new aquaculturalists. A peer review of applications also provides the added advantage of the wisdom of experience, i.e., those who have done this before and know the pitfalls, risks, and what to look for in a serious and dedicated aquaculturalist.

#### d) Oversight

Unless a replenishing source of funding is established, the default rate of loans will need to stay relatively low. Applications passing through multiple levels, peers, financial experts, etc. will greatly reduce the risk of default. Further, general oversight of CAFF and its management will be handled by a qualified financial institution.

#### e) Marketing

The MBNEP is in development of a broad marketing strategy to increase sales and the reputation of Alabama Oysters as a whole. Opportunities to incorporate this campaign into CAFF as an auxiliary service are anticipated.

## f) Key Operations

These include advertising CAFF, approving borrowers, issuing loans, recovering payments, tracking success, and providing auxiliary services.

## g) Long-term Sustainability

The sustainability of this fund will require further development. It is dependent on the success of initial borrowers, a renewable source of funding to be identified, and a dedicated third party managing the fund.

There are many organizations in the region that perform similar functions issuing low interest loans and have offered support (Small Business Administration organizations, South Alabama Regional Planning Commission, etc.), but none target this niche specifically, nor do they have the capacity to adopt this focus at this time. The MBNEP working with a financial partner is more than adequate for a pilot program, but the long-term costs and labor required are unsustainable.

The next stage of this project will be the identification or establishment of an organization whose mission is to manage and grow this fund.

Program Overview

#### A. Borrower Requirements

#### 1. General Requirements

1. The borrower must be a resident of Alabama proposing the establishment, development or maintenance of an oyster aquaculture operation in waters conditionally approved by the Alabama Department of Public Health.

#### 2. Eligibility Criteria

1. An applicant must have an Aquaculture Number and Certificate of Operation from the Alabama Department of Public Health.

- 2. An applicant must demonstrate that the proposed use of funds for shellfish aquaculture production will begin within 12 months of loan approval.
- 3. An applicant must demonstrate technical knowledge of oyster aquaculture, either through completing the Auburn University Extension Shellfish Lab's Oyster Farming Fundamentals or equivalent professional, educational, or developmental experience.
- 4. A credit bureau score of at least 620 and no bankruptcy within the last seven years. For borrowers with credit scores of less than 620, a qualifying loan cosigner will be required.
- 5. Equity of at least 10% of loan amount (as a cash contribution used to implement the aquaculture project -- however, ownership of a commercial workboat or other equipment could help to satisfy this requirement).
- 6. All applicants must have production and business plans that demonstrate the financial feasibility of the planned aquaculture operation, along with various other required attachments outlined in this application.

## 3. Lending Limits

1. \$5,000 to \$10,000

#### 4. Loan Terms/Costs

- 1. Substrate and Seed maximum of 2 years (18 months interest-only and remainder P&I)
- 2. Capital Equipment maximum of 7 years (1-3 years interest-only and 4 years P&I)
- 3. Blended Purchases maximum of 6 to 7 years (1-3 years interest-only and 4 years P&I)

#### 5. Interest Rate

1. 3.00%-5.25%

The rate is lower during the first one to three years of the term of the loan depending on the length of the interest-only period that is needed.

### 6. Uses of Funding

This fund is for commercial aquaculture projects, with approved business plans, to raise oysters in the waters of the Mobile and Baldwin counties. For this funding, all the requested loan proceeds would be used to purchase:

• substrate (e.g., shell)

- seed (or larvae)
- capital equipment or infrastructure (equipment or infrastructure with a 15-year life expectancy with routine maintenance)

On-bottom and water column (i.e., cages or floats) aquaculture production projects are all potentially eligible to be funded. However, the purchase of motor vehicles, including boats and trucks, are not eligible expenses under this program.

## 7. Collateral Security

 These loans do not require traditional collateral security. Only the personal guarantees of all borrowers will be required. In addition, if a shellfish crop insurance product becomes commercially available in the future, borrowers must then purchase appropriate coverage and make CAFF a loss payable assignee for the total amount of the loan obligation. USDA offers partial crop insurance at no cost to oyster farmers.

## 8. Loan Application Process/Fees

- 1. \$125 \$400, varies by size of loan.
- 9. Loan Review and Approval Process/Timeline

Month one

Application Received

Month two

Review

Month three

Approval

#### B. Proposed Management Structure

a) The bank or financial partner will issue and recovers loans. Expenses incurred by the bank or financial partner are paid through an EPA grant, and defaulted loans are reimbursed through a guaranty fund.

## C. Proposed Loan Approval Structure

- a) The Business Resource Council under the MBNEP will approve loans based on quality of application and objective measurements of the business, using community knowledge when available to make appropriate judgements. Objective measurements will be derived from the following documents, required with a borrower's application:
  - 1. Description and history of the applicant individual or company
  - 2. A copy of the deed or lease

- 3. Production and business plan for the project to receive financing (including 5 years of financial projections)
- 4. Applicant and business operation tax return(s) for the preceding year
- 5. Completed Balance Sheet
- 6. Completed Pro Forma Income Statement
- 7. Completed Debt Repayment Schedule

## Regulation

Regulatory needs will be determined after the structure of CAFF is finalized with the assistance of a loan managing financial partner.

#### Citations

- Fisheries, NOAA. "Understanding Shellfish Aquaculture." NOAA, www.fisheries.noaa.gov/insight/understandingshellfish-aquaculture.
- Myer, Rolla. "Oyster Terms in the Puget Sound Region." American Speech, vol. 23, no. 3/4, 1948, p. 296., doi:10.2307/486938.
- Knowles, Graeme Walter. "The Influence of Changing Salinity and Other Seasonal Factors on Farmed Oysters." University
  of Tasmania, MANZCVSc, 2014,
  doi:http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.736.1308&rep=rep1&type=pdf.
- "Future City Lab: Oysters and Their Habitat." Www.mcny.org, Museum City of New York, mcny.org/sites/default/files/2017-11/OystersAndTheirHabitat\_Handout.pdf.
- Metcalf, AJ. "New Economic Report Details Growth of Oyster Aquaculture in Maryland." Chesapeake Bay Foundation, Apr. 2020, www.cbf.org/news-media/newsroom/2020/maryland/new-economic-report-details-growth-of-oyster-aquaculture-in-maryland.html.
- Rainer, David. "Alabama's Oyster Production Makes a Comeback." Alabama NewsCenter, Alabama Department of Conservation and Natural Resources, 10 Feb. 2020, alabamanewscenter.com/2020/02/11/alabamas-oyster-production-makes-a-comeback/.
- Price, Todd A. "With Restaurants Closed Due to COVID-19, Oyster Farmers Look for a Way Forward." The Tennessean, The American South, 20 May 2020, www.tennessean.com/story/news/american-south/2020/05/20/gulf-coast-oyster-farms-struggle-coronavirus-restaurants-closed/5182968002/.
- "MARBIDCO Loan Programs." Maryland Agriculture & Resource Based Industry Development Corporation, 2020, www.marbidco.org/\_pages/programs\_loans/loan\_programs\_msal.htm.
- 9. Alabama Oyster Aquaculture, Alabama Seafood Marketing Commission, 2020, alaquaculture.com/.
- Daniel, JH. "How Alabama Is Farming Its Way to an Oyster Revolution." Civil Eats, 3 Dec. 2016, civileats.com/2015/12/07/how-alabama-is-farming-its-way-to-an-oyster-revolution/.
- 11. ALABAMA DRAFT STATE EXPENDITURE PLAN . Submitted Pursuant to the Spill Impact Component of the RESTORE Act 33 U.S.C. § 1321(t)(3) , 2018, restorealabama.org/Portals/0/Documents/ALABAMA% 20DRAFT% 20SEP.pdf.
- Hudson, Karen, et al. "2012 Cultchless (Single Seed) Oyster Crop Budgets for Virginia User Manual." Virginia Institute of Marine Science, College of William and Mary, 2012, doi:https://scholarworks.wm.edu/cgi/viewcontent.cgi?article=2456&context=reports.
- KEITHLY, WALTER R., and HAMADY DIOP. "The Demand for Eastern Oysters, Crassostrea Virginica, from the Gulf
  of Mexico in the Presence of Vibrio Vulnificus." National Marine Fisheries Service, NOAA, 2001,
  doi:https://spo.nmfs.noaa.gov/sites/default/files/pdf-content/MFR/mfr6313.pdf.
- 14. Carroll, Michael, et al. "An Analysis of the Impacts of the Deepwater Horizon Oil Spill on the Gulf of Mexico Seafood Industry." U.S. Department of the Interior Bureau of Ocean Energy Management Gulf of Mexico OCS Region, 2016, doi:https://www.wavy.com/wp-content/uploads/sites/3/2018/05/Effects20of20DeepwaterC2A0Horizon20spill20on20Gulf20of20Mexico20seafood20indus try\_1526336640398\_42593345\_ver1.0.pdf.
- "Alabama Economy at a Glance." U.S. Bureau of Labor Statistics, U.S. Bureau of Labor Statistics, 2020, www.bls.gov/eag/eag.al.htm.
- "Oyster Reef Restoration." Southern Solutions For A Global Problem 1, www.nature.org/en-us/about-us/where-we-work/united-states/south-carolina/stories-in-south-carolina/oyster-reef-restoration-southern-solutions-for-a-global-problem-1/.
- Fisheries, NOAA. "Aquaculture Funding Opportunities and Grants." NOAA, 29 Nov. 2019, www.fisheries.noaa.gov/national/aquaculture/aquaculture-funding-opportunities-and-grants.

- "36509 Income Statistics." 36509 Income Statistics Current Census Data for Zip Codes, US Census Bureau Derived Data, 2020, www.incomebyzipcode.com/alabama/36509.
- Parker, Matt, et al. "Contained Culture Cost Analysis." *Mdseagrant.org*, Maryland Sea Grant, 2014, www.mdseagrant.org/store/index.php?publication=AGNR-EM-14-07.
- Averill, Graham. "Eat More Oysters. It's Good for the Environment." Outside Online, Outside Magazine, 28 June 2019, www.outsideonline.com/2398648/oyster-farming-environment.
- Grice, Russel, and Bill Walton. "Alabama Shellfish Aquaculture Situation & Outlook Report: Production Year 2019."
   Alabama Cooperative Extension System, 2020, www.aces.edu/blog/topics/aquaculture/alabama-shellfish-aquaculture-situation-outlook-report-production-year-2019/.
- Martin, Mac. The Future of Bayou La Batre: Creating a Better Community through Planning and Design. Auburn University, MBNEP, www.mobilebaynep.com/images/uploads/library/Bayou\_La\_Batre\_Comm.\_Planning\_Mac\_Martin.pdf.
- Fisheries, NOAA. "Infographic: Value of Oyster Habitat." NOAA, 21 Aug. 2020, www.fisheries.noaa.gov/infographic/infographic-value-oyster-habitat.
- National Marine Fisheries Service. 2018. Fisheries Economics of the United States, 2016. U.S. Dept. of Commerce, NOAA Tech. Memo. NMFS-F/SPO-187, 243 p. https://www.fisheries.noaa.gov/resource/document/fisheries-economics-united-states-report-2016
- 25. Ries, Justin. "Shell-Shocked: How Different Creatures Deal with an Acidifying Ocean." EARTH Magazine, 20 Jan. 2012, www.earthmagazine.org/article/shell-shocked-how-different-creatures-deal-acidifying-ocean.
- Monica Jain, Jana Hennig. "Building Value in the Oyster Industry." Fish 2.0 Investment Insights, July 2017, www.fish20.org/images/resources/Fish2.0-OYSTERS-Investor-Insights.pdf.
- 27. Spence, Andrew, et al. "Premium Oyster Demand Drives Global Growth of Innovative Aquaculture Systems." *The Lead SA*, 11 Oct. 2018, theleadsouthaustralia.com.au/industries/manufacturing/premium-oyster-demand-drives-growth-of-innovative-aquaculture-systems/.