AQUACULTURE DESCRIPTION FORM

Name: Last Davenport **First** Jamie **M.I.** D

Business Name (optional): Scituate Oyster Company

Mailing Address 16 Booth Hill Road

City/Town Scituate **State** MA **ZipCode** 02066

Telephone [redacted] **Cell Phone** [redacted]

E-Mail Address [redacted]

A. SITE DESCRIPTION

Location of proposed aquaculture license sites and access routes (Include site map in USGS 1:24,000 or 1:25,000 format with boundaries clearly outlined)

City/Town: Scituate

Shellfish Growing Area (SGA): MB10

# of Acres: 1

Site boundaries in decimal degrees (i.e. 42.36115, -71.057083):

NW Corner - 42.247662, -70.779077 NE Corner - 42.248021, -70.778653
SW Corner - 42.247189, -70.778412 SE Corner - 42.247501, -70777921

Have you conducted a survey of the site (Y/N)? Yes Date? 8/6/2022

Method of Survey:

Inspected the proposed aquaculture acreage at low and high tide, both in a vessel and on foot. Identified the most suitable acre and confirmed the coordinates using GPS.

Average Depth at Mean Low Tide (MLW): 2'

Mean High Tide (MHW): 11'

What type of sediment or bottom substrate is on the site? (Benthic Habitat Conditions):
Mostly hard bottom dominated by cobble and rock, and diverse assemblages of macroalgae.

Is eelgrass present on or within twenty-five (25) ft. of the proposed grant site (Y/N)? No

Are there shellfish currently on the site (Y/N)? No

If yes what species and approximate densities?

Is the proposed grant site located within an Area of Critical Environmental Concern (**ACEC**) (Y/

No

Is the proposed grant site located within an Natural Heritage Endangered Species Project (**NHESP**) mapped habitat (Y/N)?

Yes

Is the proposed grant site located within an Outstanding Resource Waters (Y/N)?

No

Is the proposed grant site located in whole or in part within a 1-mile and 5-mile radius of Environmental Justice (EJ) Populations (See EEA EJ Maps Viewer) (Y/N)?

No

Additional information
The site falls within a NHESP mapped habitat, but is exempt per 321 CMR 10.14.

B. SPECIES TO BE CULTURED

What species of shellfish do you plan to cultivate? (Select all that apply)

- Eastern Oyster ☑
- Quahog or Hard Clam ☐
- Soft Shell Clam or Steamer ☐
- Surf Clam ☐
- Razor Clam ☐
- Bay Scallop ☐
- Blue Mussel ☐
- Other

C. GEAR

What methods of culture will be used (specify by species if necessary)?

On- bottom ☐ Off- bottom ☑ Both ☐

Describe the type of gear to be utilized, include dimensions (Cages, Racks, Trays, Bags, Nets, Floating):

Seed oysters will be placed in 6mm diamond mesh growout bags and deployed inside 6-chambered steel mesh "condo" cages, 45"L x 40"W x 18"H

Juvenile and adult oysters will be grown inside 2-tiered steel mesh bottom cages, 48"L x 36"W x 12"H

(Include with your submission of this form a site map on a USGS 1:24,000 map with site boundaries clearly outlined and a cross-section schematic of the gear to be deployed on the site.)

If you will utilize floating gear, what measures will you take to deter birds?

- Zip ties/spikes ☐
- Kites/streamers ☐
- Faux predators ☐
- Wire cage exclusion ☐
- Sweeps/spinners ☐
- Other ☐

Please describe your bird deterrence plan:

What methods will you utilize to harvest shellfish? (Hand, Drag, Other) Please describe:

Shellfish will be harvested by hand onsite, or removed and culled at an offsite location and resubmerged.

How will the proposed license site be marked? (Buoy color, Type, Lines, Anchor)

In accordance with Scituate Aquaculture Regulations, the 4 corners of the site will be clearly marked using 12" diameter spherical orange buoys. Buoys will be fastened using polysteel line and attached to 42"L x 6" helical anchors that screw into the ocean floor. Each orange sphere buoy shall be plainly marked in white on two sides with the uniform state waterway marking system (symbol) for Danger.

The four corners will also be marked with a boundary stake. Each stake shall be a plastic pole with a diameter no greater than 1.5", not higher than 18" above the surface of the ground with a yellow sign, measuring 8" x 10" with 2" inch block black lettering, bearing the words "LICENSE NO.__". Signage shall be visible at mean low tide only.

How will you access the license site?

Site will be accessed using a skiff with an outboard motor. The boat will be launched from one of several local boat ramps, including but not limited to the public ramp at Parker Ave, Cohasset, and the Jericho Boat Launch, Scituate. The site may also be accessed, if necessary, using a skiff less than 12' in length from the kayak launch at the Minot Beach parking lot, Scituate.

What equipment do you plan on utilizing to maintain the license site and transport product?

Vehicle: Make: Toyota Model: Tundra

Boat: Make: Carolina Skiff Model: 178DLX

Will any accessory structures be used on the license site? (barge, float, upweller, etc.)

No

Has the site been used for private shellfish propagation within the last two years (Y/N)?

No

Has the site been used for municipal shellfish propagation within the last two years (Y/N)?

No

All information furnished on this application is true and accurate to the best my knowledge. I will notify the Marine Fisheries Shellfish Sanitation and Management Program immediately of any changes.

Signature of Applicant Jamie Davenport Date 8/12/2022

Division of Marine Fisheries

ATTN: Aquaculture Coordinator

706 South Rodney French Boulevard

New Bedford, MA 02744

Phone: (508) 742-9766

Scituate Aquaculture Proposed Sites March 15, 2023. Public Hearing.

Grant #1- Orange dotted line (One Acre). Applicant Jamie Davenport and Gregory Wallingford

Grant #2-Purple dotted line (One Acre). Applicant Michael Cotter

Grant #3- Red dotted line (One Acre). Applicant Lawrence Trowbridge

MA ShellfAST Snip 2023

Scituate Oyster Company

Shellfish Aquaculture License Application

Commonwealth of Massachusetts
Department of Fish and Game

COMMERCIAL PERMIT
SHELLFISH & SEAWORMS

Permit ID: 156931 **EXPIRES: 12-31-2020**

DAVENPORT OYSTER FARM (DAVENPORT, JAMIE D)
16 BOOTH HILL RD
SCITUATE, MA 02660

DOB: 07-05-1977
ISSUE: 02-07-2020

Signature: _____

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SHELLFISH & SEAWORMS
DAVENPORT OYSTER FARM (DAVENPORT, JAMIE D)

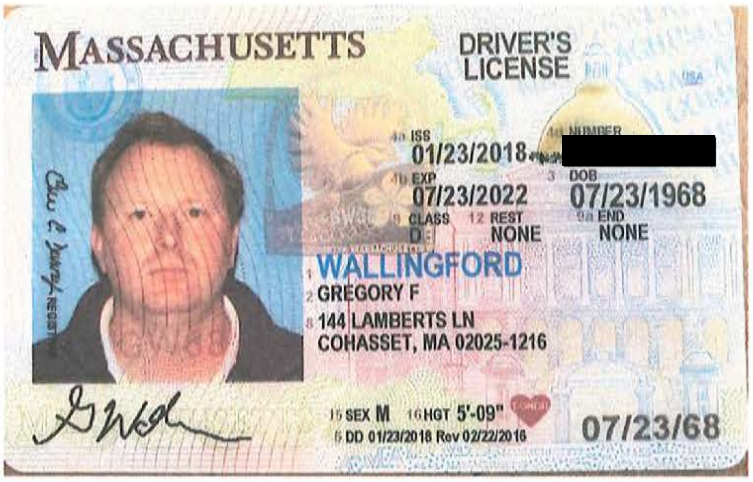
ENDRSMNTS: ETL,SHELLFISH

Acting
DIRECTOR: Daniel J McKiernan

Daniel J. McKiernan

CUSTOMER RECEIPT


MASSACHUSETTS
DRIVER'S LICENSE
NOT FOR FEDERAL ID
4a ISS 07/24/2018
4b EXP 07/05/2023
3 07/05/1977
9 CLASS D
12 REST NONE
9a END NONE
1 DAVENPORT
2 JAMIE D
8 16 BOOTH HILL RD
SCITUATE, MA 02066-1810
18 EYES BRO
15 SEX M
16 HGT 6'-05"
5 DD 07/24/2018 Rev 02/22/2016
07/05/77


MASSACHUSETTS
DRIVER'S LICENSE
4a ISS
01/23/2018
4b EXP
07/23/2022
3 DOB
07/23/1968
9 CLASS
D
12 REST
NONE
9a END
NONE
1
WALLINGFORD
2 GREGORY F
8 144 LAMBERTS LN
COHASSET, MA 02025-1216
15 SEX M
16 HGT 5'-09"
6 DD 01/23/2018 Rev 02/22/2016
07/23/68

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Experience: Jamie Davenport

A. Aquaculture, Fisheries, and Business

Born and raised on Cape Cod, I have spent most of my life within a few miles of the ocean. I have fished both recreationally and commercially, and operated watercraft since before I could drive a car. In 2009, my family purchased a house in Scituate. Today, my wife and I raise our 3 boys in this town we call home.

Since partnering with my father in 2008, I have owned and operated Davenport Oyster Company. My farm is located in East Dennis on the bicep of Cape Cod Bay. I saw a tremendous opportunity for growth in what my father had initially considered his retirement career. The shellfish aquaculture industry, specifically oysters, had been gaining momentum over the previous 5 years. In 2008 the farm purchased 200,000 oyster seed per year from a single seed hatchery, had no employees, and generated sales below six figures while doing business with one seafood dealer. Today Davenport Oyster Company grows 1.5 million seed, has 3 employees, and produced six figure sales in the last 9 consecutive seasons. Through my efforts, Davenport Oyster Company has strong relationships with 5 seafood dealers and 7 hatcheries.

Over the years, I have sought out and learned from the most reputable and experienced oyster farmers, as well as industry leaders. Much of this has been achieved through my membership in the Massachusetts Aquaculture Association and East Coast Shellfish Growers' Association. I also attribute my training to Dale Leavitt and Roger Williams University, which offers one of the premier shellfish aquaculture programs in the Northeast. I also attend trade shows and participate in festivals, shucking oysters alongside my peers while sharing knowledge of recent trends. Climate change poses a threat to shellfish aquaculture, so in an effort to stay informed of scientific research, I seize any opportunity to attend relevant lectures and seminars.

The intertidal flats in Dennis and the flats in Outer Cohasset/Briggs Harbor share similar environmental features. I believe my skillset in off-bottom culture of oysters in an intertidal zone is perfectly suited to this pilot program. Most of the processes and techniques I practice are directly transferrable from Dennis to Scituate. The major difference between the two farms is that instead of accessing the farm by truck, I will be accessing by boat. I already own and utilize a boat in the performance of some tasks on my existing farm, and I am familiar with all aspects of proper boat safety and operation.

For 12 years, I have dedicated my professional life to the advancement of the shellfish aquaculture industry. I believe oysters to be one answer to a sustainable, locally produced, nutrient rich protein. Since 2016, I have actively pursued the inception of a shellfish aquaculture program in Scituate. I met with various stakeholders, selectmen, and municipal committees and recommended the formation of the Shellfish Advisory Committee (SAC). The committee was formed, and I was elected to serve as an aquaculture industry expert. During my year of service, along with my colleagues, I worked exhaustively researching Massachusetts General Law (M.G.L.) c. 130 and the aquaculture rules and regulations of many surrounding towns. We produced a solid framework that was praised by the Division of Marine Fisheries as being one of the best they have seen to date.

If given the opportunity to grow oysters in Scituate, I pledge to lead both by example, and by making myself available to teach anyone willing to learn the best management practices for shellfish aquaculture. My enthusiasm extends to the classroom, whether it is full of adults or children. I have plenty of experience working with children. I am the father of 3 boys, ages 7, 9, and 13, and I actively participate in coaching their youth activities through Scituate Youth Center, Scituate Recreation, Scituate Basketball Association, and Cub Scouts. I have given aquaculture presentations at the preschool, elementary, and middle school level and I am currently in discussions with middle and high school science teachers regarding future opportunities for collaboration in the classroom and in the field. It is my intention to also involve Scituate and Cohasset High School and South Shore Vocational Technical School in summer internships and employment. Scituate and Cohasset are founded on the working waterfront, and it is vital that we keep that tradition alive.

B. Use and Maintenance of Aquaculture Gear

I employ the most established and widely used off-bottom grow-out gear used by industry professionals today, but I also welcome the integration of innovative equipment and techniques. The shellfish aquaculture industry is rapidly growing and changing with the economy and the environment. Farmers must be able to adapt to these changes and willing to engineer to their farms' unique environmental influences.

The most common gear used in off-bottom grow-out of oysters in the intertidal zone are rack and bag, wire trays, wire cages that hold bags known as "condos", aquatrays, and long-line baskets. Some farms rely heavily on one type of gear over another. My experience is that each piece of equipment has its place on the farm during different stages of an oyster's life cycle and the growing season. No matter what gear is used, the same basic principle applies: equipment must be kept free of large holes so that oysters cannot fall through, and frequently cleaned of environmental "fouling" such as mud and oyster waste, so that an optimum flow of nutrient rich water on which the oyster feeds can flow through the mesh. De-fouling is achieved either by air drying and shaking off the caked debris or pressure washing. I elect to pressure wash most equipment, as I have found it to be the most efficient method with the cleanest results.

Mesh bags are versatile and easy for one farmer to manipulate, however if proper densities are not maintained, oysters tend to crowd together, impeding their health and growth. It is for this reason that smaller seed oysters originally planted in bags are eventually moved into wire trays and plastic aquatrays once they have reached at least 1 inch, a size that will not easily fall through the larger meshes of which that gear is constructed. The larger surface area and mesh aperture of trays gives the oysters more room to grow uniformly with less competition for space and food. It has been my experience that bags and aquatrays are most effective at withstanding the turbulent weather typical of New England's spring and winter seasons. PVC racks and corner posts driven into the ocean floor anchor the bags and aquatrays in place. It is my belief that wire trays and condos are also resilient if appropriately anchored, but can require more attention and labor to maintain during prolonged periods of inclement weather. It is for this reason that oysters are transferred into bags and aquatrays in late fall, stored in bags in insulated trailers on land through January and February, and then deployed on the farm in bags in early spring.

C. Working with Abutters

I consider aquaculturists to be valuable stewards of the environment. Unlike those that frequent the intertidal zone for recreation, we depend on this delicate ecosystem for our livelihood. The vast majority of farmers, including myself, who work alongside one another, take this responsibility very seriously. Whether we are reporting a violation of the law to the appropriate authorities, disposing of litter and orphaned gear, or reporting beached marine life, we are more than just farmers. We are conservationists.

This service-minded attitude has enabled me to communicate effectively with those who live adjacent to my farm in Dennis and the hundreds of people who use the area for recreation. Those who have chosen to live near Crowes Pasture and play on its beaches do so because they hold it dear. My respect for the environment and those who enjoy its beauty has earned me the respect of both abutters and beachgoers. I refrain from using noisy machinery early in the morning and on weekends during peak recreation times. I am always mindful of parking in public places in a manner that has the least impact on the flow of traffic and access to vehicles. I am especially cautious of pedestrians when driving. I address all concerns efficiently, courteously, and in person whenever possible. It should go without saying that business owners should, at a minimum, live by the Golden Rule of "treat others as you would have them treat you."

Through my involvement with the SAC, I have become intimately aware of the complexities of starting a shellfish aquaculture program in Outer Cohasset/Briggs Harbor. I have attended every SAC and BoS meeting where aquaculture was discussed. I have listened to interested parties in person and on the phone. Along with my colleagues, I have sat with stakeholders, town officials, and concerned citizens examining existing uses and absorbing the needs and wishes of all parties involved. Their input has informed our decisions and shaped the pilot program into a respectful and manageable endeavor.

It is our obligation as farmers to prove to everyone that not only can we coexist, but that we farmers have the opportunity to help protect the environment by being the eyes and ears of conservation. Civility and a mutual respect between farmers, abutters, and beachgoers is the key to a positive outcome for this pilot program. We can only form and evaluate a criterion for success with the help of all interested parties.

D. Regulatory Requirements for an Aquaculture Business

I possess a comprehensive knowledge of the regulatory requirements for running an aquaculture operation. The Division of Marine Fisheries M.G.L c. 130 §57-68 contain the laws governing municipal shellfish aquaculture, permitting, and enforcement. Pursuant to the aforementioned laws, I must submit an application to the town and request a hearing in front of the Board of Selectmen for a municipal private shellfish aquaculture license.

Upon approval, the municipality must then request certification on the issuance of the license from Marine Fisheries. Marine Fisheries will then schedule a site inspection and review the proposed operation. I am responsible for marking off the boundaries of the proposed site prior to Marine Fisheries survey. Marine Fisheries is required to certify that the municipality's issuance of the license

and operation thereunder will not have a substantial adverse impact on the natural resources of the surrounding waterbody. Marine Fisheries topics for review for aquaculture projects are outlined in 322 CMR 15. Minimum Site Requirements:

1. Operations may not materially obstruct navigable waters
2. License areas must be a minimum of 25 feet from eelgrass
3. License areas must not contain commercial numbers of shellfish.
4. Sites must not have been closed for municipal propagation within the previous two years

If Marine Fisheries certification has been issued, I should then consult with the local Conservation Commission (CC) to determine if a Notice of Intent (NOI) or Request for Determination of Applicability (RDA) is required. I can concurrently consult with the US Army Corps of Engineers (ACOE) to determine if a self-verification notification, a pre-construction notice, or an individual permit application is required.

Once I receive CC and ACOE permits or approvals, copies of the permits and the municipal private shellfish aquaculture license must be submitted to Marine Fisheries. Once submitted, I can apply for a Marine Fisheries Aquaculture Permit that allows the purchase, possession and planting of sub-legal shellfish into the waters of the Commonwealth. The permit may also be endorsed for certain culture practices such as off-site culling, over wintering and nursery grow-out of shellfish seed.

The National Shellfish Sanitation Program (NSSP) is a program under the U.S. Food and Drug Administration (FDA) to promote the sanitary control of molluscan shellfish produced, harvested and sold for human consumption. The NSSP has established a Model Ordinance (MO), which is updated on a biannual basis. The Division of Marine Fisheries manages its shellfish resources and commercial shellfish fisheries in strict conformity with the NSSP's MO. The Division has adopted the provisions of the MO in regulations at 322 CMR 16.00 to provide notice to the public of the comprehensive requirements applicable to the safe management of commercial shellfisheries and give the Division, through the Massachusetts Environmental Police, the authority to enforce against violations of 322 CMR 16.00. 322 CMR 16.00 also serves to safeguard public health, maintains consumer confidence and promotes the state's shellfish fisheries.

I have intimate knowledge of 322 CMR 16.00, which is essential to the successful operation of my existing farm. I adhere to the guidelines for the sanitary handling and transportation of shellfish to and from the licensed site. I properly tag all containers with the appropriate identifying information and document my activities in a log book that is kept onboard my vessel.

The purpose of 322 CMR 16.07 is to set forth the protocols and performance standards of the Vibrio Management Plan for shellfish harvesters and dealers to minimize the risk to consumers of pathogens, including Vibrio parahaemolyticus (Vp) associated with consumption of raw oysters. 322 CMR 16.07 applies to commercial fishermen and dealers possessing shellstock oysters. All commercial fishermen shall adequately ice oysters, as defined in 322 CMR 16.07(2), within two hours of time of harvest or exposure, or prior to leaving the point of landing, whichever occurs first. Oysters must remain adequately iced until received by a wholesale dealer.

To meet the time to icing requirements specified at 322 CMR 16.07(3)(a), commercial fishermen shall place oysters and ice into a shellfish icing container using an approved method. I have found the most efficient method is placing oysters in an ice and water mixture or "slurry". Oysters are fully submerged and the ice and water mixture must be at or below 45°F to inhibit growth and proliferation of bacteria.

Finally, I am familiar with the Town of Scituate Shellfish Aquaculture License Regulations, as I was involved in its creation as a member of the SAC.

Experience Co-Applicant: Greg Wallingford

I have spent most of my life in Cohasset. For as long as I can remember the ocean has always been a part of my life. As a kid I spent many a summer boating, fishing and swimming in and around our beaches and harbor. As an adult with a family, recreational boating and sailing in the outer harbor takes up a large portion of our free time. For the last 3 years I have served as a board member of the Cohasset Conservation Trust and am currently the steward of the Trust's Bassing Beach property in the outer harbor.

Aquaculture is something I have been interested in for several years. It wasn't until I met an oyster farmer from Scituate nearly 4 years ago, did the idea of Scituate Oyster Company begin to take shape. This was the brainchild of a Scituate and a Cohasset resident whose mission, besides building a successful business, was to create a new industry that both our towns would benefit from. Most of my adult life I have been in sales in one capacity or another, and while Jamie possesses most of the aquaculture knowledge, I will add value by developing new relationships and collaborations with local businesses in Cohasset, which will in turn open up channels to help expand our business.

I have worked with several local non-profits over the years fundraising and co-chairing charity events, raising awareness and money for causes important to me. I will take that knowledge and commit to building long lasting relationships with our schools and community-based organizations to promote the importance of aquaculture in our coastal communities.

Business Plan

In accordance with Paragraph 5(a) – (d) of the Town of Scituate Commercial Shellfish Grant Application, I, Jamie Davenport, hereby submit the attached business plan.

A. Executive Summary

Scituate Oyster Company (hereinafter "SOC"), comprised of two shareholders, Jamie Davenport of Scituate and Greg Wallingford of Cohasset, will be a leader in implementing a successful aquaculture program in Scituate. Davenport and Wallingford will draw from their experience in oyster farming and distribution to build a brand that showcases Scituate's commercial waterfront history and adapts it to meet the needs of a changing culture that supports locally grown products. In this partnership, Davenport and Wallingford seek to unite both the Scituate and Cohasset communities in support of aquaculture in Briggs Harbor.

SOC will grow Eastern Oysters predominately for raw consumption. During the period of the pilot program, oysters shall be cultivated and sold to wholesale dealers. Provided the pilot program is successful, SOC will secure a shellfish dealer permit to begin a wholesale operation and an online direct-to-consumer platform.

SOC is committed to actively engaging the community and offering opportunities for science, education, employment, and charity. Specifically, SOC seeks to engage local public schools by conducting aquaculture presentations through in-class and web-based educational platforms, and in certain circumstances, through on-site attendance. SOC will be targeting local residents of Scituate and Cohasset to work on the farm, offering between part-time and full-time employment, as business requires.

SOC's mission is to create a strong bond with our community by sponsoring and supporting local organizations such as Scituate Education Foundation (SEF), Scituate FACTS Coalition, South Shore Peer Recovery, C.O.R.S.E, Scituate Recreation, Scituate Youth Center, and Scituate Little League. Support for our farm will grow organically through the level of involvement in our neighbors' lives.

B. Company Ownership

Jamie Davenport – Scituate resident; Owner/Operator of Davenport Oyster Company
Greg Wallingford – Cohasset resident; Utz Distribution

C. Management Summary

Jamie Davenport – Farm Manager
Greg Wallingford – Distribution Manager

D. Personnel

In the first year, and in consideration of all start-up costs for the operation, Davenport and Wallingford will carry out all farm duties. As labor requires, part-time employees shall be employed on a contract basis. In the second year, retention of one part-time employee, working alongside with Davenport and Wallingford, is anticipated. Production is expected to increase and see returns (if not sooner) the following year, enabling SOC two full-time employees. Finally, in the fourth year, an

employee will be promoted to Farm Manager, and a third full-time employee will be hired. Part-time contract help will be hired as needed during busy times, which may include harvest time, as well as when gear is hauled in and out for the season.

E. Objectives

- Build a profitable farm that consistently supplies oysters year-round
- Create a wholesale shellfish dealership in Scituate
    - Keep local supply chain from having to pass through Boston
    - Develop strong relationships with chefs all over the South Shore
    - Direct-to-consumer sales to drive agritourism and promote oysters as a superfood
    - Provide even more jobs for our local aquaculture industry
- Implement a creative and informative agritourism program
    - Begin by offering individual and group tours of the farm
    - Expand by hosting tasting events involving partnerships with local chefs
- Offer raw bar catering for local restaurants and events
- Engage state and local educational organizations
    - Work closely with the Center for Student Coastal Research in Cohasset, Scituate and Cohasset public schools, NSRWA, NOAA, and any universities and institutions who wish to carry out research on a working farm
    - Provide access to our farm for scientific research
    - Recruit youth for internships, apprenticeships, and employment
- Create a shellfish growers association
    - Local farmers, their employees, and interested citizens meet regularly to discuss industry issues and analyze the successes and failures of our aquaculture program
    - Increase buying power through bulk purchasing of seed, gear, and supplies
    - Share resources and ideas
    - Organize public outreach
- Implement a seed nursery program in Scituate Harbor or the North River
- Create a fall seafood festival celebrating our heritage and the collective efforts of fishermen, lobstermen, shellfishermen, and the marinas, markets, and restaurants that support them
- Support local schools, businesses, and organizations
    - Offer charitable donations such as oysters for silent auctions
    - Sponsor local events and youth sports programs
    - Collaborate with local restaurants and breweries

F. Marketing Strategy

With business relationships with 5 wholesalers that sell locally and across the country, and with some having a national reputation, Davenport is poised to create a new local market from Scituate via SOC.

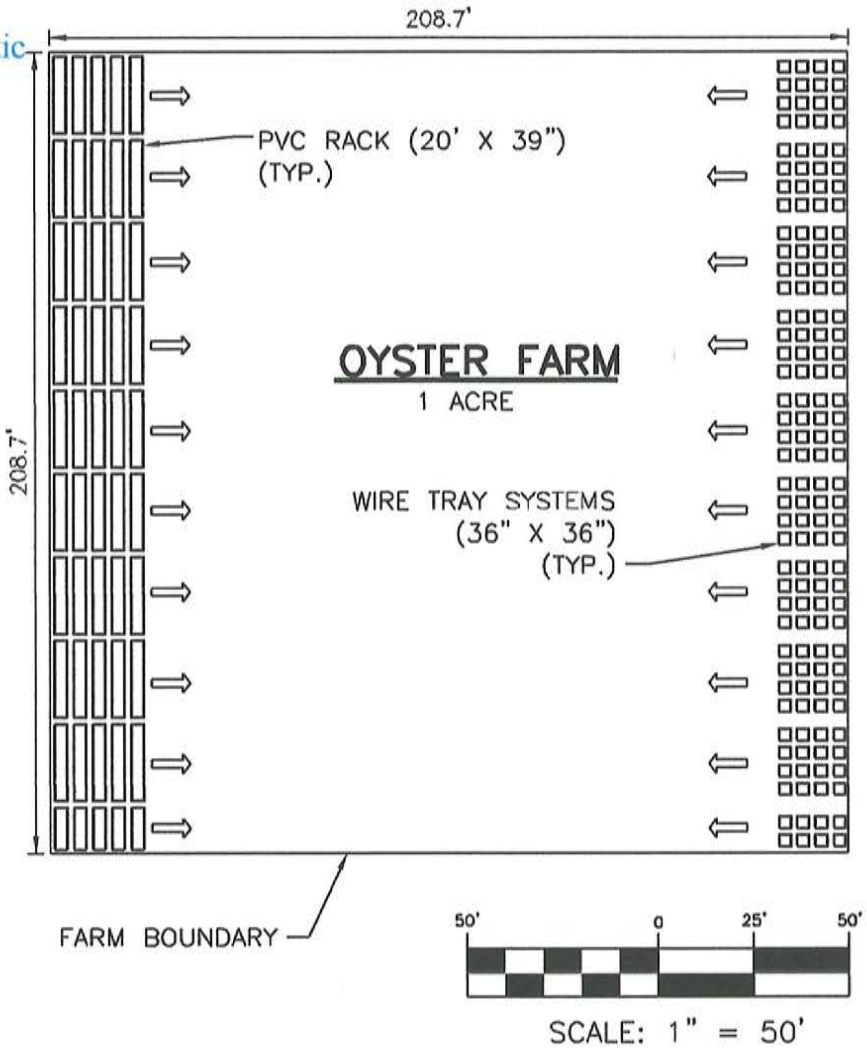
SOC will establish close relationships with South Shore restaurants and retail seafood markets. It will submit its distinct flavor profile of the oyster, growing technique, and journey from the conception of aquaculture in Scituate to the birth of the farm. SOC will introduce itself to chefs and general managers and, when able, provide samples of the product. If needed, SOC will acquaint chefs with existing wholesale dealers.

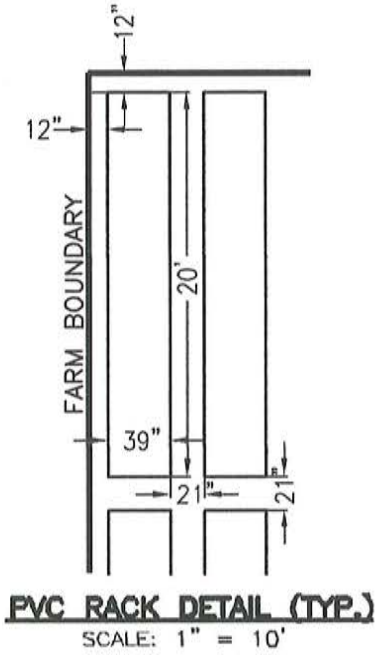
Simultaneously, SOC will generate a demand for oysters by building a strong social media presence. SOC is currently working with a Scituate designer to create a recognizable brand of which the communities of Scituate and Cohasset can be proud.

Through social media, SOC will introduce itself to and educate the ultimate consumer. In particular, weekly, if not daily pictures and videos from the farm will be posted. The creation of a farm is an exciting time, and fascinating to see as it takes shape. SOC will offer tips on selecting and shucking oysters, and convey the environmental and nutritional benefits of oyster propagation. Our online platforms will also be a destination for industry news and educational opportunities. Pop-ups with local breweries, concerts, and community events such as Heritage Days and the yet-to-be-created Fall Seafood Festival will be promoted.

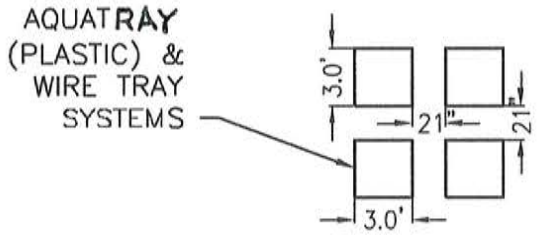
SOC will spearhead the creation of a local shellfish growers' association. This nonprofit group would promote shellfish aquaculture and educate the community. The association would be comprised of local farmers, their employees, and anyone with a passion for shellfish. The BOS and SAC have clearly stated their goal of creating a cohesive community of farmers, capable of working together and being exemplary social and environmental stewards. Meetings would be used to monitor the success of the pilot program, and ensure individual farmers are adhering to its regulations. The association would also share and implement strategies for marketing oysters on the South Shore and exploring opportunities for community engagement. This would be the perfect group to organize an annual seafood festival. An example of an existing association is Wellfleet's Shellfish Promotion and Tasting, Inc. (SPAT). They are responsible for Wellfleet's annual Oyster Fest, which draws 20,000 visitors annually, as well as numerous college scholarships, community grant awards, and shell recycling programs.

E. Oyster Farm Schematic





PVC RACK DETAIL (TYP.)
SCALE: 1" = 10'



SCALE: 1" = 10'

OYSTER FARM SCHEMATIC

DATE: 3/23/2020

5B. Market Analysis

A. Quantitative Analysis

A dramatic upward trend in the production of oysters over the past ten (10) years has occurred according to the annual reports of the Massachusetts Department of Marine Fisheries (DMF). This trend reflects an industry which is both economically sustainable and good for the environment.[1] It also demonstrates an exploding industry, evidenced by the consistent increase of approved sites, landings and market value of oysters over the past decade.

DMF annual reporting reveals that the oyster industry was a $3 million industry beginning in 2007. As of 2020, the industry is now closing in on becoming a $30 million industry. Starting in 2011, 3,484,420 pounds in landed oysters[2] were reported which, at market value, totaled approximately $9,069,805. Oysters were then ranked the seventh highest landed species with value greater than $1 million.

In the following years, landings and overall market value significantly increased. In 2012, landings and corresponding market value elevated such that that oysters constituted 87% of landed shellfish, reflecting a 22% increase in landings from six years prior. In addition, 15 additional aquaculture sites were approved, totaling 26.6 additional acres for aquaculture.

From 2013 – 2015, landings of oysters demonstrated an average increase of approximately 2 million oysters each year. Within this time, market value of oysters nearly doubled, with $10,841,745 reflected in 2013 and $22,735,092 by 2015. Clearly, the demand for oysters had escalated, entering the top five highest grossing shellfish in 2014. Not surprisingly, the following year, oysters became the third most landed shellfish in the Commonwealth.

Since 2015, oysters have remained the third highest grossing shellfish, only behind lobsters and scallops. They have demonstrated the fastest growth rate for sales of any shellfish species in Massachusetts. Demand in the market is high, both locally and nationwide, evidenced by the fact that numerous wholesalers sell to markets outside the Commonwealth of Massachusetts. Thus, it is clear that the market for oysters is strong, which the Department of Marine Fisheries, in approving sites year after year, recognizes the same. The most recent aquaculture landings and their value from the 2018 DMF Annual Report can be found on page 19.

B. Consumer Behavior

Decades ago, few restaurants had raw bars. To an extent, there was a degree of stigma in consuming raw shellfish. Consumers were not informed about the work that went behind cultivating the oyster: the aquaculture farming techniques, the farmers, or the region from where

[1] As the scope of this business plan concerns economic sustainability, the environmental benefits, such as extensive water purification, will not be discussed.

[2] Landings of oysters were measured by live weight.

the oyster came from. Today, more information is available to consumers, resulting in an increased demand for oysters. The internet, social media, and other means of educational access, have enabled consumers to have a clearer, realistic understanding of consuming raw shellfish and the industry behind it. As a result, raw bars are much less of a novelty and have become more mainstream among reputable restaurants. It has also spawned other enterprise endeavors, such as agritourism.

Today's consumer is drawn to the unique, local flavor of the oyster. Similar to how wine is a product of its *terroir*, oysters take on the characteristics of their natural environment, known as *merroir*. The *merroir* of an oyster may reflect certain environmental characteristics such as salinity, tidal flow, and aquatic life. It is the *merroir* of oysters that will result in distinct flavors, ranging from sweet to salty. As part of educating consumers about the *merroir*, introducing the consumer to the person(s) who cultivated the oyster, is an integral component. Indeed, a consumer wants to know the story behind the oyster, and in developing this "connection" with the farmer, the consumer is likely to purchase the farmer's product again in the future.

C. Barriers to Entry and Regulation

Startup costs are generally contemplated as barriers to entry. With regard to my business enterprise, entry into the market will not be cost prohibitive. As explained, a substantial amount of equipment has already been purchased by my aquaculture farm in Dennis, Massachusetts. For example, I already have a boat (with engine), hundreds of cages, thousands of grow out bags, harvest bags, marker buoys, and cooler for winterization. The cost of purchasing this gear, which will be necessary for any aquaculturists who must incur these startup costs, could easily exceed $40,000. In this regard, my startup costs will not be prohibitive, as it easily could be for other applicants.

Other barriers to entry concern access to wholesalers and regulations concerning diseased oysters. I address both in my Risk Analysis Section. Notwithstanding, other regulations that exist that make entry into the market easier. Specifically, 322 Code of Massachusetts Regulation 6.20, aquaculturists may now sell "petite" oysters, which are oysters between 2.5 – 3 inches. By being able to sell oysters at a size smaller than the 3-inch market size, aquaculturists may sell more of their product sooner, even a season earlier, which can reduce the potential risk of mortality by having to winterize oysters an extra season.

Aquaculture Landings

Aquaculture landings and value are presented in Table 14. Confidentiality of an individual or corporation's data is protected by only displaying summarized values and quantities that could not be used to identify data attributed to a single permitted entity. Units for quantity are converted for reporting purposes using standardized conversion factors developed by the Fisheries Statistics Program. Value is calculated from the unit prices reported by dealers with the average unit price used to fill in missing data.

Table 14. 2018 Aquaculture Landings and Value. (Source: SAFIS Dealer Reports on May 1, 2019 and staff edits)

American Oyster		
Town or Region	Pieces	Reported Value
Barnstable	10,685,995	$5,970,081
Bourne/Falmouth	775,741	$441,710
Brewster	391,200	$223,380
Dennis	2,200,411	$1,248,374
Duxbury	12,038,250	$6,677,261
Eastham/ Orleans	1,839,710	$1,037,434
Edgartown	2,620,151	$1,629,713
Islands	720,399	$599,019
Kingston	308,440	$173,186
Marion	70,087	$33,296
Mashpee	182,400	$105,585
Outer Cape	789,094	$463,992
Plymouth	2,029,250	$1,072,383
South Coast	1,739,420	$934,544
Wareham	1,550,900	$896,489
Wellfleet	10,742,506	$5,756,181
Yarmouth	677,777	$370,350
Total	49,361,732	$27,632,978

Quahog		
Town or Region	Pieces	Reported Value
Barnstable	948,731	$252,810
Eastham/Orleans	50,913	$12,116
Other areas	66,432	$15,608
Wellfleet	2,704,270	$681,433
Total	3,770,347	$961,966

Total Aquaculture Landings Value	$28,594,944

5C. Description of Gear and Approach

SOC will grow Eastern Oysters (Crassostrea virginica) for raw consumption. Seed purchased from multiple hatcheries in the Northeast will be placed in grow-out equipment that is deployed on an acre of intertidal land in Outer Cohasset Harbor/Briggs Harbor.

SOC will employ the off-bottom grow-out method of farming oysters, where oysters are suspended off the ocean floor in containers. After a thorough study of the area, and with over a decade of experience in various farming methods, we have determined this to be the most efficient and safest method. The information that we collect during the pilot program will ultimately inform us of the most effective gear. Our initial studies have demonstrated that rack and bag, aquatrays, and wire trays are most suitable for the intertidal waters of Outer Cohasset Harbor/Briggs Harbor. SOC will also experiment with the use of cages that contain bags, and long line baskets.

A. Proposed Gear

1. Rack and Bag: Bag Density of 1000-2000 seed, 300-800 juvenile oysters, and 100-250 adult oysters
    a. 10' lengths of 1½" diameter schedule 40 PVC pipe connected by elbows and tees, secured with 30-40" PVC lengths of 1½" diameter PVC driven +/- 24" into the ocean floor will be arranged in parallel runs of 20-30'; See attached Site Plan
    b. Racks typically sit at a height of 8-12" above the ocean floor
    c. High density polyethylene (HDPE) plastic mesh bags with oysters in optimum densities will be fastened to the PVC racks using 14" 120 lb. test cable ties
    d. Bags are stiffened to lay on racks without sagging by inserting and fastening 30" lengths of ½" diameter PVC pipe inside the bag, spanning the 28" distance between the horizontal runs of pipe

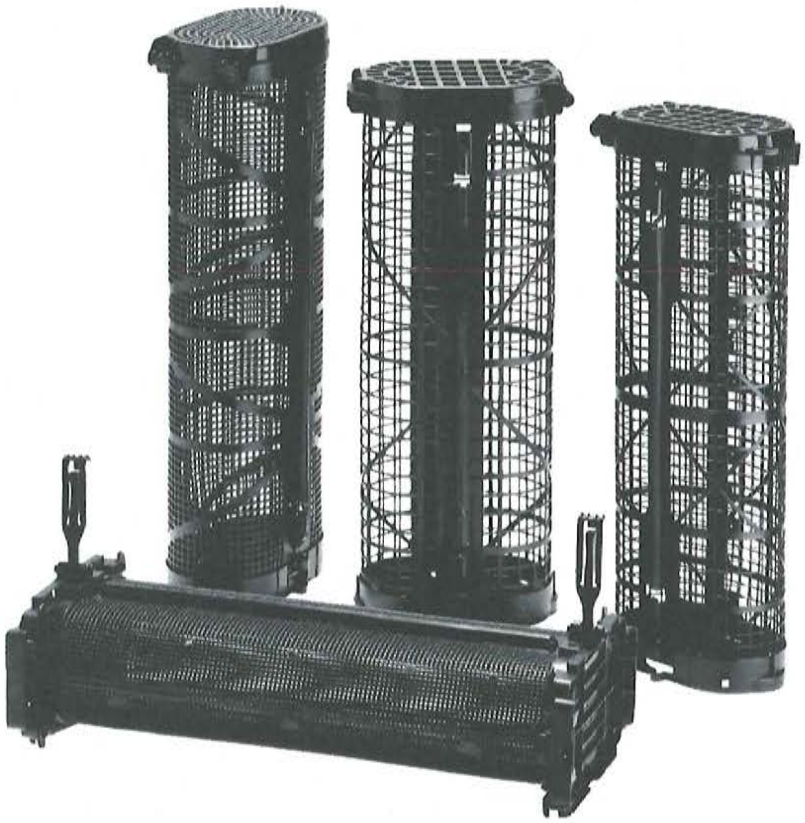
e. Racks remain in place from season to season, but bags and oysters are removed and overwintered on land in insulated trailers

2. Aquatrays: Density of 100-200 juvenile to adult oysters
   a. 36"x36"x4" polypropylene plastic trays suspended by 1" PVC legs at all 4 corners driven +/- 30" into the ocean floor
   b. Trays can be triple stacked, and bags can be tied down on top of Aquatrays to increase farm density

3. Wire Trays: Density of 400-800 juvenile to adult oysters
    a. 14 Gauge galvanized steel wire mesh coated in PVC; ¾" and 1" aperture squares
    b. Trays measure 3'x3'x4 ½" and 3'x4'x4½" deep with 4" mesh feet and can be double stacked

4. Cages or "Condos": Density correlates with number of bags in condos
    a. 12 Gauge mesh; Hold bags inside and are 2-3 cells high and 2-3 cells wide
    b. Cells are 4" tall and 24" wide; feet measure 6" tall; No configuration would exceed 18" above the ocean floor (the maximum regulation for gear)

5. Baskets: Density of 150-400 juvenile to adult oysters
    a. Polypropylene mesh baskets originally meant for long line grow-out, but have proven to be versatile in unconventional ways
    b. 8"x12"x36" and 48"



B. Proposed Densities

With the exception of racks, the following numbers do not reflect the amount of gear deployed on the farm all at one time. Gear is used as needed depending on the season's overall shell growth. The table represents the total number of assets at the end of each year. These numbers may change depending on the most successful method of grow-out.

Gear	Year 1 Total	Year 2 Total	Year 3 Total	Year 4 Total	Year 5 Total
Racks	50	150	300	300	300
Bags	400	1400	3400	4400	4600
Aquatrays	75	150	250	250	250
Wire Trays	0	50	100	150	200
Cages	1?	1?	1?	1?	1?
Baskets	0	0	50	100	100

C. Approach

Farming oysters is a way of life. One has to be prepared to eat, sleep, and breathe oysters. It can be pretty salty, but we have dedicated our lives to the advancement of the oyster.

The creation of the farm begins before taking possession of oyster seed. We began by carefully selecting a location on land for our headquarters within 5 miles of Cohasset Harbor. It is there that we will store our boat(s), overwinter our oysters in trailers, pressure wash fouled gear, tumble and sort oysters, store surplus gear, and eventually expand and build a wholesale facility.

We will gather the materials that we need to construct PVC racks and aquatray supports at our shop. We will familiarize ourselves with the natural layout of our farm and pay special attention to any features we can use to our advantage, like areas where water remains even at low tide. This is a perfect place to start seed. Using our site plan as a guide, we will install enough racks and aquatrays to support the first season's seed bags. We will orient racks in a uniform direction while being mindful of future expansion. We will evaluate how the racks and trays respond to elemental stimulus and adjust their placement and orientation if necessary.

After shipping arrangements for seed have been made with the hatchery, seed bags are selected with the most appropriate mesh size, typically 4, 6, or 9mm. Seed should be deployed in mesh with an aperture 2-3mm smaller than the seed. This ensures a minimal loss of seed through the mesh, while promoting an ideal flow of nutrient rich water. Bags are prepared and arranged for efficiency at our land-based facility. Seed is shipped or picked up, then carefully measured and distributed into bags in optimum densities to ensure maximum growth rates. Bags are loaded onto boats, transported to the farm during the next low tide, and secured to racks and aquatrays.

Once our first crop has been planted, our main objective is to maintain an efficient flow of the phytoplankton that oysters feed on. This requires splitting bags and trays as the oysters take calcium carbonate from the water and grow exponentially during their initial growth stages. Gear must be exchanged for clean gear as it is "fouled" by environmental influences and the oysters' own waste. Fouled gear is pressure washed at our facility and cycled back into rotation as needed.

Just as important as clean gear and optimum densities in maintaining proper flow is the "culling" of oysters into containers with like sizes. Oysters feed by extracting algae and other food particles from the water that they are almost constantly drawing over their gills. The ability of a smaller oyster to pump water when placed next to a larger oyster is impeded, resulting in slowed growth, and in some cases, resulting in mortality from lack of nutrients. It is therefore imperative that oysters are sorted and placed in containers according to size.

SOC will cull by hand, and through a tube sorter that tumbles and sorts oysters according to size into separate containers. Mechanical tumbling has another benefit apart from sorting. One disadvantage of growing oysters off-bottom in bags and cages, is that they often grow longer rather deeper when left undisturbed for long periods of time. Without the natural stimulus of being tossed around on a beach, the oyster has no reason to strengthen its shell. The result is a brittle shell that

can be difficult to shuck, and less plump meats. Tumbling mimics this natural process and delivers an oyster with a deeper cup, uniform shape, and meat that fills the shell.

The following is a month by month description of how SOC will operate the farm:

January and February

Previous season farm operations shut down and hibernating oysters are stored out of the water in insulated trailers at our shop.

- Trailers are monitored for proper temperature and humidity
- Job site is cleaned and any remaining fouled gear is pressure washed

March

Farm operations resume when the extended weather forecast provides optimum conditions. Historically this takes place in the first or second week of March, but has been pushed to April in the past.

- Bags of oysters are taken from trailers, loaded in boats and deployed on the farm
- Bags are examined for mortality resulting from storage while tying down on racks
- Wholesale accounts are contacted to arrange a start date for oyster sales
- After a minimum of one week, bags of oysters are selected to cull harvest size from undersize oysters for distribution to market
- Market oysters are counted into bags, tagged, iced, and transported to wholesale distributors several times per week upon request
- Culling takes place daily from March until December
- Harvesting takes place several times per week from March until January, when supply runs out, although eventually the SOC will have enough supply to harvest year-round

April and May

- Aquatrays and wire trays are deployed on the farm after the last spring barnacle set, typically in May, as bags are easier to remove barnacles from than trays
- Hatcheries are contacted for updates on the health and ETA of the current season's seed
- More racks are installed as needed to accommodate the growth of the farm
- More bags are purchased and modified to fit our system as needed
- Damaged gear is repaired and replaced as needed
- As water temperature approaches 48° Fahrenheit, the oysters begin feeding

June

- 3-4 weeks after the first oyster shell growth hardens, oysters are mechanically tumbled and split into more bags to improve flow of food and produce a high-quality shell

- Arrangements are made to pick up seed from hatcheries at the end of the June or the beginning of July
- 6mm seed bags are gathered at the shop and inspected for damage
- A plan is formed with employees to ensure the smooth deployment of seed in the weeks ahead
    - Weather forecasts are carefully monitored
    - Tide tables are studied and a schedule is formed around the low tide

July and August

- 8-15mm seed is picked up or delivered as it is made available by hatcheries
    - Seed is purchased from multiple hatcheries to reduce risk of any one supply being compromised
    - Date and time of delivery is often short notice and the farm must be prepared
    - Seed deliveries are typically spread out from late June into August
- Seed is divided into 6mm grow-out bags in proper densities
- Seed bags are secured on racks and aquatrays on the farm
    - Seed bags are left to feed for approximately 60 days
    - Seed bags are inspected and manipulated by hand several times per week to ensure proper growth and flow and that no bags have been lost, damaged, or compromised

September and October

- After 60 days, 6mm seed bags are split into 9mm bags with densities cut in half
    - Seed bags are left to feed for 60-90 days
    - Seed bags are inspected and manipulated by hand several times per week to ensure proper growth and flow and that no bags have been lost, damaged, or compromised
- Contents of baskets are transferred into bags as baskets don't perform well in more volatile winter weather

November

- If seed is exhibiting fast growth, 9mm seed bag densities are cut in half again
- Shop and trailer(s) are prepared for upcoming winter storage

December

- Contents of wire trays and aquatrays are transferred into bags in preparation for overwintering in trailers, as bags take up less space and are easier to transport and store
- Late December, all oyster bags are removed from the farm and stored in trailer(s)
    - Temperature and humidity are carefully monitored and maintained to minimize mortality
    - Ice is added to trailers as needed

D. Nursery Culture

8mm minimum seed has proven for us to be the optimal size for direct planting on an intertidal farm, with a good balance of price and relatively low mortality. Smaller seed should be grown in a controlled nursery environment, or will suffer from a higher mortality rate. If the pilot program is successful, the SOC will help implement a nursery program in Scituate Harbor, of which there are many benefits.

- Smaller seed can be purchased at a much lower price
- A Floating Upweller System (FLUPSY) in Scituate Harbor increases the visibility of the aquaculture program, as fewer people can witness firsthand the daily operations as the farms are located in Outer Cohasset Harbor
- Helps engage the community and promotes the aquaculture industry
- Gives students and scientists more data to study, which is crucial in understanding the effects of climate change on shellfish
- Provides more opportunities to employ local youth on the waterfront
- State and federal grant funding likely available

5D. Risk Analysis

Our financial risk is conservative inasmuch as we initially invest the minimum expense for seed and insurance, per Town of Scituate aquaculture regulations. Other initial expenses correlate to the amount of seed that we have purchased in that year. Also, much of the necessary equipment that we have is already owned, e.g.: Carolina skiff, pickup truck, cooler for winterization, et. al. It is only in subsequent years that we moderately increase expenses in order to increase production, and those expenses are strictly related to seed purchases. As I already manage a farm, I am familiar with these risks, and in my opinion, the risk of investment is minimal.

Our risk of not getting the oysters to market is also relatively minor. As indicated, we have the equipment to get to the worksite, transport oysters on land, winterize them, and to cultivate them. Thus, we have all the means of harvesting oysters at low cost.

One market risk is diseased oysters. It is believed that ocean waters have warmed somewhat in the Northeast, resulting in an increased risk of disease to shellfish, including oysters. In recent years, the aquaculture industry has brought awareness to Vibrio parahaemolyticus ("Vibrio"), which is associated with the consumption of raw or undercooked oysters in the summer months. In the spring of 2012, the United States Department of Food and Drug Administration instructed states, including Massachusetts, to implement and require a Vibrio Control Plan (the "Plan"). The Plan was and remains implemented between late spring through early fall, requiring both harvesters and wholesalers to enhance refrigeration efforts in an effort to avoid the growth of Vibrio. The plan requires harvesters to ice oysters within 2 hours of harvest, and dealers to ice oysters within 10 hours of harvest. Icing may be performed by submerging oysters within ice cubes, and alternatively, submerged in a "slurry," which consists of both ice and water. The goal of icing is to ensure oysters are brought to a temperature of 50 degrees Fahrenheit or lower.

With regard to this risk, I already own a commercial ice machine, which generates ice cubes that are placed into a vat, and then placed on to our boat. When oysters are harvested, bagged, and tagged, we will place them into the vat on our boat for immediate refrigeration. We will then transport product by boat to a pickup truck, which will contain a second vat that also contains ice, and will serve as the container for transport to the dealer, if the dealer is not present at the boat ramp and travel is required.[3]

Extreme weather presents another risk to our business. Concern has been raised at Shellfish Advisory Committee meetings regarding Outer Cohasset Harbor/Briggs Harbor and whether an aquaculture farm could survive the harsh winds and storm surges typical of New England winters. Our method of farming and grow-out gear are informed by years of experience learning from Mother Nature and respecting her power. Our rack and bag method and aquatrays are remarkably resilient, staying in place even during multi-day Nor'easters. We continuously monitor weather patterns and extended forecasts, and we have procedures to deal with the most common regional weather events. Most importantly, removing our oysters from the farm during the most volatile months of January and February safeguard us against a substantial amount of risk.

[3] Some wholesalers schedule stops during the week at various locations and therefore do not require me to transport them beyond the boat ramp.

Another known risk is mortality occurring in connection with the winter months. Because the proposed site is intertidal, as are many sites in the Commonwealth, oysters are subject to getting iced over. Accordingly, oysters are subject to mortality by virtue of "icing over" at an extended low tide period. In order to combat this risk, we plan to winterize our oysters by transporting them into an insulated trailer on land. As oysters generally "hibernate" or go dormant when waters reach approximately 40 degrees Fahrenheit, we will time our extraction of the oysters when this condition occurs. Once in the cooler, we will make best efforts to control both temperature and humidity, two conditions which could affect mortality. We will leave a bucket of salt water or burlap bags in the cooler to keep humidity between 95% - 100%, an ideal condition for winterizing oysters, and we will place ice when needed in order to keep temperatures below 40 degrees Fahrenheit. Anticipated mortality even under these circumstances may range between 10% - 20%.

At a macro-level, the industry faces increased competition in the fall months because oysters tend to reach market size at this time for the majority of farmers. As a consequence, lower sales price of oysters can occur. My pre-existing relationships with wholesalers who ship my oysters throughout the Commonwealth and around the country, avoid the market "glut" and enable me to continue with sales of my product. Moving forward, we plan to preserve those relationships and develop new ones, so that we may expand our business reach, as well as expand our product's reach throughout the United States.

5E. Funding

A. Summary

Funding will be provided by the applicants and without need for loans. In addition, capital contributions are expected from Davenport Oyster Company, which has earmarked the anticipated sale of oysters from Dennis, Massachusetts. A conservative estimate of the capital contribution from Davenport Oyster Company, which is to be made in Year 1, is approximately $81,000.

Attached is a 6-year budget, a breakdown of gear and labor costs, as well as a list of assets belonging to Scituate Oyster Company.

B. 6 Year Budget

Item	Key Assumptions
Average Market Price	$0.58
Oyster Mortality Rate	30%
% of Total Oysters Harvested in Year 1	0%
% of Total Oysters Harvested in Year 2	20% of Year 1
% of Total Oysters Harvested in Year 3	80% Year 1 + 20% Year 2

Revenues	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Seed Oysters	250,000	500,000	1,000,000	1,500,000	1,500,000	1,500,000
Total Oysters after mortality (70%)	175,000	350,000	700,000	1,050,000	1,050,000	1,500,000
Oysters to market	0	35,000	210,000	420,000	770,000	1,050,000
Total Revenue	**$0**	**$20,300**	**$121,800**	**$243,600**	**$446,600**	**$609,000**
Expenses						
Oyster Seed @ $40/1,000	$10,000	$20,000	$40,000	$60,000	$60,000	$60,000
Licenses and Permits	$565	$1,265	$1,265	$1,265	$1,265	$1,265
Labor	$0	$15,000	$30,000	$60,000	$90,000	$90,000
Grow-out Equipment	$9,175	$18,875	$24,000	$10,500	$4,100	$1,000
Supplies	$1,000	$2,000	$4,000	$6,000	$6,000	$6,000
Coolers		$750	$750			
Ice Machine and Maintenance		$2,000	$200	$200	$200	$200
Pressure Washer and Maintenance	$1,000		$150	$150	$150	$150
Oyster Sorter and Maintenance			$13,000			
Storage Trailers	$2,500		$2,500			
Office/Shop Rent and Utilities		$5,000	$5,000	$5,000	$5,000	$5,000
Transportation	$2,000	$2,000	$3,000	$4,000	$4,000	$4,000
Marketing	$1,000	$1,000	$2,000	$2,000	$2,000	$2,000
Legal	$500	$500	$500	$1,000	$1,000	$1,000
Total Expenses	**$27,740**	**$67,640**	**$126,365**	**$150,115**	**$173,715**	**$170,615**
Net Revenue	**-$27,740**	**-$47,340**	**-$4,565**	**$93,485**	**$272,885**	**$438,385**

C. Gear and Labor

Gear	Cost/Unit	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Racks	$50	50	100	150			
Total		$2,500	$5,000				
Bags	$8	400	1,000	2,000	1,000	200	
Total		$3,200	$8,000	$16,000	$8,000	$1,600	
Aqua Trays	$45	75	75	100			
Total		$3,375	$3,375	$4,500			
Wire Trays	$50		50	50	50	50	
Total			$2,500	$2,500	$2,500	$2,500	
Baskets	$20			50	50		
Total				$1,000	$1,000		
Cages	$100	1					
Total		$100					
Gear Total		**$9,175**	**$18,875**	**$24,000**	**$10,500**	**$4,100**	**$0**
Labor Hrs.		0	1000	2000	4000	6000	6000
		$15	$15	$15	$15	$15	$15
Labor Total		**$0**	**$15,000**	**$30,000**	**$60,000**	**$90,000**	**$90,000**
Total		**$9,175**	**$33,875**	**$54,000**	**$70,500**	**$94,100**	**$90,000**

D. Existing Assets

Existing Assets	Cost
75 Aquatrays with lids	$3,375
100 6mm bags with closers	$700
Ice Machine	$2,000
Pressure Washer	$1,200
15' Boston Whaler with 75 HP motor and trailer	$12,000
17' Carolina Skiff with 90HP motor and trailer	$13,000
2018 Toyota Tundra	$30,000
2008 Box Truck	$10,000
Total	**$72,275**

SECTION 6

References: Jamie Davenport

TOWN OF BOURNE

Department of Natural Resources
24 Perry Avenue - Room 102
Buzzards Bay, MA 02532-3496
www.townofbourne.com

Shellfish Constable, Marinas, Herring Agent, Harbor Master, Fish & Game Enforcement, Conservation Enforcement & More

CHRISTOPHER SOUTHWOOD
DIRECTOR

OFFICE: (508) 759-0621
POLICE: (508) 759-4451
MARINAS: (508) 759-3105
FAX: (508) 759-8026

Attention: Board of Selectmen/Shellfish Advisory Committee – Scituate, MA
March 4, 2020

I am writing this letter of support for Mr. Jamie Davenport of Davenport Oyster Company, LLC. I had the opportunity to work with Mr. Davenport during my previous position as the Town of Dennis Shellfish Constable. One of my essential duties required overseeing and enforcing state and local laws and regulations relating to the aquaculture development area at Crowes Pasture where Mr. Davenport's family possessed multiple aquaculture licenses from the Town of Dennis. From approximately 2012 through 2018, I was able to develop a professional relationship with Mr. Davenport. Mr. Davenport's experience and expertise had been a valuable asset in the commercial aquaculture industry for the Town of Dennis.

Mr. Davenport had provided a wide variety of assistance regarding all aspects of the town's commercial aquaculture program which include the following:

- Assisting with updating the town's shellfish aquaculture licensing procedures and other pertinent issues pertaining to the aquaculture development area (ADA) during multiple Dennis Shellfish Committee meetings.
- Sharing experience and techniques pertaining to the aquaculture grow-out process.
- Providing exceptional cooperation and extensive knowledge when dealing with aquaculture related issues.

Mr. Davenport always displayed a high standard of work ethics with total professionalism while always maintaining a friendly and positive attitude. Mr. Davenport is a highly motivated individual whose priorities include best management practices and the safety of the public's health regarding the harvesting of shellfish. Mr. Davenport exemplifies a true aquaculturist.

Sincerely,

Chris Southwood
Town of Bourne Natural Resources Director

To whom it may concern,

I am writing in regard to a potential shellfish grant opportunity for Jamie Davenport of 16 Booth Hill Rd in Scituate, MA 02066. My relationship with Jamie is current and dates back to 2015 as a buyer of his oysters from Davenport Shellfish in Dennis, MA. As a shellfish wholesale company in Boston, we have built relationships with numerous local and national oyster growers. Jamie ranks among the top of the list of professionals that we work with. His morals and ethics within the business are unparalleled as not only a regulations follower, but a leader as well.

Jamie's oyster farm in Dennis has been used, on numerous occasions, as an example of how to create proper paper trails for tracebacks with the Department of Public Health. He has also demonstrated a passion for the environment by using equipment that is not destructive to his marine ecosystem or surroundings. Further, Jamie has always taken any necessary precaution to protect other wild habitats that he may share with his oyster farm. Most notably, would be the piping plovers that nest on the shores of the Dennis, MA beaches where he adheres to any and all conservation laws presented. As oyster growers/sellers, we market sustainability, quality and awareness as our top priorities and Jamie has consistently demonstrated all three virtues throughout our relationship.

Our professional work relationship with Jamie has been stellar as well. Whether busy or slow, Jamie has always been communicative, flexible and accessible. He has always been mindful of his own inventory as not to over-extend his own product and has always been mindful of our needs at the same time. It would be an understatement to say that not all suppliers possess this attribute. Further, Jamie is one of the few growers I know that researches and implements different methods of growing to minimize impacts to his surrounding environment and maximize the quality of his products.

In conclusion, Pangea Shellfish Company would love to see Jamie have access to this new endeavor knowing that a responsible, innovative and smart person is behind it all. We look forward to supporting all that Scituate has to offer.

Sincerely,
Dan Light
Vice President
Pangea Shellfish and Seafood Co Inc.
Dan@pangeashellfish.com

The Big Rock Oyster Co.
501 Depot St Harwich MA 02645
(774) 408-7951
Bigrockoyster@gmail.com

Aaron Brochu
President/Owner
(508)728-2925

Graham Ferrari
General Manager
(508)737-0605

To whom it may concern,

We are writing this letter in regards to the proposed aquaculture leases/grants in Scituate MA, specifically the application of one Jamie Davenport. We are The Big Rock Oyster Co in Harwich & Dennis MA. Big Rock Oyster started much like the proposed Scituate project, at the grass roots level of aquaculture here in Dennis. We built a company and eventually a wholesale dealership out of what started as a very small oyster farm. We are raising millions of oysters year-round on our 3 acres of bottom in East Dennis. We purchase oysters from over 100 farms in MA and procure numerous species of shellfish from upwards of 150 local fishermen throughout the year. We ship product to every state in the country 6 days a week, 12 months a year. Over the years we have been involved in contributing to regulation at the local, state, and federal levels. We feel we know our industry from bottom to top.

We came to know Jamie and his family when they joined the aquaculture community here in Dennis. Like most, they started small. Getting to know the industry, science, and cycles of growing oysters. Jamie quickly put forth full-time effort and created an impressive farm for his family and our community. Jamie has always been one to follow the guidance of those before him but never afraid to try new things and create more efficient ways to use, purchase, and fabricate equipment. All while staying true to the ever-growing regulatory agencies that govern every aspect our industry. Jamie takes pride in being diligent and ensuring he is doing everything he can to keep his operation and all those around him as successful as possible. Our industry needs people like Jaime and the town of Scituate would benefit greatly by having him involved in starting an aquaculture community.

Aquaculture is a very delicate business. Economically, Environmentally, Legally and Politically there is not much wiggle room nor allowance for failure. One small miscue and entire businesses can crumble. We'd like to site a specific instance of this fragility as well as Jamie's ability to navigate such circumstances. It was just last year when we, Jamie and another farmer received our yearly oyster seed as we always do from a specific hatchery. We deployed the animals into our systems thinking nothing was out of sort. It was a week or so later that Jamie brought it to our attention that he and his crew were seeing much higher than normal mortality rates in the seed. This is not something that even seasoned growers would necessarily notice. It takes extra steps and real due diligence to remain abreast of these small nuances that can affect one's business. Upon getting counts and calculating volumetrically, we collectively determined that the mortality rates were upwards of 50%. Upon notifying the hatchery, they acknowledged the potential for an internal issue they were having with one of their grow-out sites and gave us replacement seed to make up for the losses. Over the course of the next 3 to 4 years, this corrective action will save these three farms upwards of half a million dollars. There are not enough margins for local farms like us to withstand losses like that. It took initiative, grit, and team work to get this corrected. Those are not mutual qualities we see in the fishing industry. Especially amongst fellow fishermen and/or growers. Industry and local communities need people like Jamie who are diligent, inclusive and take an all-in approach to aquaculture.

Scituate will certainly experience the growing pains and difficulties of entering into the aquaculture industry. Probably already has. By having people actively participating in the water with money and integrity to lose, Scituate will lessen these difficulties. By having people in the

water who have learned the lessons of starting new, Scituate will lessen these difficulties. By having people in the water that understand all that goes into this industry, Scituate will lessen these difficulties.

We can say in confidence as a purchaser and dealer of his products that he has a strong understanding of aquaculture as a whole and the implications of representing the industry on a national level. He is an asset to the aquaculture industry in Massachusetts and represents Cape Cod and East Dennis well. We are proud to have him in our community and as a part of our Oyster Program at Big Rock. Scituate would be no less grateful if given the opportunity to bring the Town into the local, state, and national market.

References: Co-Applicant Greg Wallingford

Letters of recommendation available upon request

Raymond Jacques
President
New England Schooner, Inc.
3 Centennial Drive Suite #3
Peabody, MA
(978) 977-4757
rjacques@neschooner.com

Rick Doane
Executive Director
Interfaith Social Services
105 Adams Street
Quincy, MA
(617) 773-6203
rdoane@interfaithsocialservices.org

Patrick Donnelly
Senior Enterprise Account Executive
Sales Force
227 Main Street
Hingham, MA
(857) 452-6349
pdonnelly@salesforce.com

Applicant Resumés

Applicant: Jamie Davenport

EMPLOYMENT HISTORY:

Oyster Farmer 04/2008 – Present (Crowe's Pasture, Dennis, Massachusetts)

- Owner/Operator of the Davenport Oyster Company, Dennis, Massachusetts
- Cultivate 1.3 million oysters per year
- Manage 2 full time employees and 2-3 part time employees
    - Experienced in position advertising, candidate screening, interviewing, and hiring qualified employees
    - Developed an employee compensation program that promotes loyalty and longevity
- Increased productivity from 200,000 to over 1,000,000 oysters
- Manage and determine winterization methods
- Comprehensive knowledge of MA state and municipal aquaculture regulations
- Participated in community outreach concerning Massachusetts Vibrio Control Plan
- Relationships with seven (7) hatcheries in order to enable diversification of product
- Relationships with five (5) wholesalers who purchase oysters year around
- Sales exceeding six figures for nine (9) consecutive years
- Relationships with industry leaders, including but not limited to:
    - Joseph Norton – Mullaney's Seafood Market
    - Chris Schillaci - NOAA Regional Aquaculture Coordinator, former DMF Aquaculture Program Leader and Vibrio Management Program Coordinator
    - Dale Leavitt, Ph.D. - Professor of Biology at Roger Williams University
    - Gabe Lundgren - DMF Assistant Shellfish Biologist
    - Steve Malinowski - Owner of Fisher's Island Oyster Farm
    - Scott Soares - Boston Bay Consulting, Mass Aquaculture Association
    - Robert Rheault – President East Coast Shellfish Growers' Association
- Positive relationships with other farmers, residential abutters, and the general public
- Over a decade of experience with the use, maintenance, and repair of all off-bottom grow-out gear used in shellfish aquaculture
- Proficient in boat safety, navigation, and operation
- Experienced swimmer, free diver, snorkeler, and spearfisherman
- Experienced fisherman
- Intimate knowledge of shellfish market trends and seasonal challenges
- Experience in branding and marketing, with emphasis on logos, t-shirts, and decals

Master Carpenter 5/2000 – 9/2010 (List of companies available upon request)

Restaurant Industry/Line Cook 6/1993 – 1/2000 (List of companies available upon request)

RELEVANT EDUCATIONAL BACKGROUND

- Studied Best Management Practices for Aquaculture, Roger Williams University
- Annual attendance at Massachusetts Aquaculture Association
- January 2018 - Attended "The Effects of Ocean Acidification on Shells of Crassostrea virginica (Eastern Oyster)" - presented by Isabel Gutowski at Center for Coastal Research (CSCR) in Cohasset, MA
- January 2019 - Attended Northeast Aquaculture Conference & Exposition (NACE), Boston
- May 2019 - Attended the Massachusetts Shellfish Initiative (MSI) Meeting in Hanover, MA
- Participated in Benefits of Shellfisheries Anthropology study - Adrianne Michaelis, University of Maryland
- December 2018-December 2019 - Scituate Shellfish Advisory Committee Member, Scituate, MA
    - Gained insight and experience navigating federal, state, and municipal agencies, as well as communicating with residential abutters and interested parties, while helping to institute an aquaculture program in Scituate
    - Presented to several boards and served as an expert liaison from the aquaculture industry
- Taught preschool (Brown Bear Children's Center), elementary (Hatherly) and middle school (Gates) children about shellfish biology and aquaculture

EDUCATION

- Nauset Regional High School, Eastham, MA – High School Diploma, 1995
- Vancouver Film School, Vancouver, BC Canada – Graduation Certificate, 2006

ASSOCIATIONS

- Member of Massachusetts Aquaculture Association
- Member of Massachusetts Farm Bureau

CIVIC INVOLVEMENT

- December 2018-December 2019 - Scituate Shellfish Advisory Committee Member, Scituate, MA
- Town of Scituate Youth Coach - Soccer, baseball, flag football, and basketball
- 2015-Present – Cub Scout Pack 7 Den leader

Co-Applicant: Gregory Wallingford

EMPLOYMENT HISTORY

WALLINGFORD DISTRIBUTION/UTZ QUALITY FOODS; Cohasset, MA 2018-Present
Owner / Independent Operator (March 2018-Present)

- Responsible for sales and service to wholesale customers within a defined territory
- Engage store decision makers and offer recommendations to increase ROI by displaying a full line of products
- Assess on-site product inventory and determine sales/ purchase quantities and varieties necessary to maintain adequate product presence
- Upsell and introduce new products to new and current customers
- Built professional and lasting relationships with key store management / increased sales by 25% since acquiring the territory

NEW ENGLAND SCHOONER, INC., Peabody, MA 2009-2018
Financial Advisor (July 2009 – March 2018)

- Responsible for bringing in new qualified plan business with a focus on the small & micro markets
- Developed cross selling opportunities by integrating the services of local payroll administration, property and casualty, worker's compensation and HR consulting companies.
- Conduct annual plan reviews, and retirement plan educational meetings as needed for existing clients
- Design financial plans to help individual clients with their retirement, life insurance, and college savings needs

CONTEMPORARY PENSIONS, INC., Walnut Creek, CA ~ Hingham MA, 2004 – 2009
Financial Consultant (March 2004 – July 2009)

- Qualified plan administration sales and service
- Created a comprehensive retirement plan analysis used in sales presentations
- Helped develop, market, and sell a fully integrated retirement and payroll plan administration platform
- Prepare and conduct due diligence reporting
- Conduct enrollment meetings for Plan Sponsors

eNEIGHBORHOODS, INC., Boca Raton, FL 2003-2004
Regional Sales Manager (March 2003-March 2004)

- Managed regional division of national real estate software company
- Conducted 25-30 sales and training presentations monthly to realtors throughout Northern California. Often exceeded sales quotas in a competitive realty market.
- Identified potential new clients and markets within territory through existing contacts, cold calling, professional publications, associations, referrals and trade shows.

PROFESSIONAL BENEFIT SERVICES, Fort Wayne, Indiana 2002-2004

Retirement Education Consultant (November 2002-March 2004)

- Conducted Defined Contribution Plan enrollment meetings for large and small groups of employees
- Familiarized new plan participants with the basic concepts of investing, tax advantages, importance of diversification, as well as a brief explanation of the investment options offered on the Lincoln Financial Group 401(k) platform
- Consistently helped plan sponsors boost participation in their retirement plans by 8%-10%

CITISTREET LLC, Quincy, Massachusetts 1999 – 2002

Team Leader- Alcon Laboratories 401(k) Plan (September 2001-June 2002)

- Prepared and presented quarterly service reviews to the Plan Sponsor using PowerPoint.
- Implemented plan design changes and enhancements.
- Administered a Defined Contribution Plan with over $900 million in assets and several thousand participants.
- Recruited, hired, trained, and evaluated professional accounting staff.
- Consulted with participants at Client Benefit Fairs throughout the U.S.

Senior Associate (August 1999-August 2001)

- Functioned as key contact for client human resource departments, involving priority research requests and adjustments.
- Coordinated weekly client calls, building strong relationships to ensure success.
- Produced and monitored the quality of quarterly participant statements.
- Wrote calculators for customized client reports at both participant and plan levels.
- Prepared annual nondiscrimination tests.

PUTNAM INVESTMENTS, Braintree Massachusetts 1996 – 1999

Plan Administrator - Minolta 401(k), Deferred Compensation, and ESOP Plans (October 1996-July 1999)

- Served as a liaison between internal compliance department and client for all nondiscrimination testing.
- Managed contributions and loan re-payments for the Minolta plan with assets exceeding $500 million.
- Participated in weekly client meetings.
- Monitored quality control and oversaw internal activity on all processing procedures and issue resolutions.
- Reconciled any discrepancies for participant 1099R production.
- Trained new technical administrators and oversaw daily processing activities.

Technical Administrator (March 1996-October 1996)

- Processed financial transactions, reconciled plan assets, posted dividends, and completed trust activities.
- Performed administrative enhancements to participant accounts.

- Served as key contact for Putnam Phone Representatives, completing daily participant research requests.

STATE STREET BANK AND TRUST, Quincy, Massachusetts 1995 – 1996

Participant Accountant –Baxter International 401(k) Plan (February 1995-March 1996)

- Approved and processed Hardship withdrawals and participant demographic updates.
- Oversaw all disbursement and confirmation mailings.
- Conversion of Large Market Defined Contribution Plans, including VRU testing and trust asset reconciliation.

EDUCATION

THE UNIVERSITY OF GEORGIA, Athens, Georgia
Bachelor of Arts and Science in Economics, 1994

CIVIC INVOLVEMENT

COHASSET CONSERVATION TRUST, Cohasset, MA
Board of Trustees, 2017-Present

ST. STEPHENS EPISCOPAL CHURCH, Cohasset, MA
Vestry Member, 2015-2017 (3-year term)

INTERFAITH SOCIAL SERVICES, Quincy, MA
Feed the Hungry Gala Co-Chair, 2013-2017