

## Application Score Sheet

Proposed Project: The District Board of Trustees of Tallahassee Community College, Wakulla Environmental Institute (WEI) Ocean Shellfish Nursery / Hatchery and Processing Facility (#91)  
Proposed Project/Program County: Wakulla  
Board of County Commission Support: Yes

Total Projected Project Cost: \$21,500,000.00  
Match Provided: \$8,000,000.00  
Triumph Funds Requested: \$13,500,000 (53.4%)  
Triumph Funds Recommended by Staff: \$0

Score: C

ROI: Staff will not at this time conduct further economic impact or return on investment analysis.

Date: June 12, 2019

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### **Economic Impact Analysis and Score**

The TCC WEI proposal describes construction and operation of a commercial hatchery/ nursery and processing facility to serve the ocean shellfish market. It would also be used as a training facility. The Triumph request of \$13.5 million represents 62.7 percent of the total proposed project cost of \$21.5 million.

TCC proposes that the project would allow a thriving shellfish industry, however, the project is opposed by the Florida Shellfish Aquaculture Association (FSAA). The FSAA letter to Triumph notes that the project would result in direct competition by a publicly funded entity with an industry that already has numerous private businesses currently producing oyster spat. The Triumph Board has indicated a desire not to supplant private sector activity via Triumph project funding. Also, the FSAA letter correctly notes that hatcheries are not labor-intensive operations and will not generate substantial employment in the facility itself. Given that there are private hatcheries capable of meeting private demand, and the fact that the hatchery is not a direct employment generator, the argument for constructing the project is weakened. Finally, Triumph staff see a need to have input from the oyster science project previously funded for FSU before embarking on major expansions of oyster hatchery capacity.

For these reasons, staff rate this program “C” in terms of economic impact. Staff will not at this time conduct further economic impact or return on investment analysis.

### **Triumph Gulf Coast Staff Comments about submitted Application:**

While researching the information provided in the application, staff found the following discrepancies:

- Applicant indicates that one of the primary purposes of the proposal is to create a commercial oyster hatchery in the region and that there are no commercial hatcheries within 200 miles of Panacea. The February 2019 University of Florida Institute of Food and Agriculture Sciences (IFAS) Extension Office list of “2019 Florida Shellfish Seed Suppliers” notes that there are oyster hatcheries operating in Apalachicola (49 miles), Pensacola (204 miles) and Cedar Key (153 miles). In fact, the Panacea Oyster Co-op indicated to Triumph staff that they are currently purchasing customized oyster spat from the Pensacola Bay Oyster Hatchery.
- Applicant indicates that the Auburn University Shellfish Laboratory has “sunsetting” or is closing. In fact, the Auburn University Dauphin Island Shellfish Laboratory is actively participating with private interests across Louisiana, Mississippi, Alabama and Florida to create a healthy and vibrant private industry for the production of oysters. The AU Shellfish Lab Facebook page features visits to Cedar Key, Panacea (Pelican Bay Oyster Company), the Apalachicola Oyster Company hatchery facility, and the Pensacola Oyster Company hatchery as part of their May 2019 Sea Lab Student Field Trip. The AU Lab has turned its attention to research in order to allow for the continued growth of the private sector without competition from the university hatchery. Dr. Bill Walton of the AU Shellfish Lab addressed this issue at the September 2018 meeting of the Triumph Gulf Coast Oyster Industry Working Group. He noted the emergence of this new private industry and the university’s desire not to be in competition with the private sector.
- Applicant implies a relationship with the Panacea Oyster Co-op, however the Panacea Oyster Co-op has withdrawn its original pre-applications that indicated a relationship with TCC WEI (Proposals #92 and #93) and submitted a new pre-application and application (Proposal #154) that partners with Florida Agricultural and Mechanical University (FAMU) to build and operate a hatchery and processing facility that would be in direct competition with the proposed TCC/WEI facility. While the TCC/WEI proposal discusses using a pasteurization process, the Panacea Co-op/FAMU proposal discusses a similar process for which the university has applied for patents and exclusively licensed to a specific company. It is not clear from the TCC/WEI proposal if this is the same or a different process and if TCC would have to pay FAMU (a potential competitor) for the use of the technology.
- Applicant indicates that the price for oyster seed would be in the range of \$50 to \$110 per 1000 seed, however Triumph staff found the price at the Apalachicola Oyster Company to be approximately ½ of that amount earlier this year.
- Applicant indicates that it has trained over 100 “entrepreneurs” per year over the past five years of operation. When Triumph Gulf Coast staff asked for the names of those businesses, the applicant provided a list of oyster harvesting licenses. Of the 138 license numbers provided, 44 were licenses to operate in areas of the state outside of the Triumph Gulf Coast region.
- While “training” of aquaculturists in the area of oyster production is a worthwhile endeavor, there does not appear to be a recognized certification process that would

provide a measurable outcome as a part of this application. It is unclear what measurable training component would be a part of the request for funding. The State of Florida does not require any specific training for entry into the oyster aquaculture business and it is unclear how funding this training would create any new direct jobs that could not already be created with no additional training or cost.

### **Project Summary (based on information provided by the applicant)**

Tallahassee Community College is requesting a \$13.5 million grant from Triumph for the construction of the Wakulla Environmental Institute (WEI) Ocean Shellfish Nursery / Hatchery and Processing Facility. The proposed facility is anticipated to provide the College with the ability to enable 28 new oyster farmers annually to launch an operation.

According to the applicant, 28 oyster farming businesses employing 3-14 people currently exist in Wakulla County. With an operational hatchery, processing facility, and additional training space, the applicant anticipates that 28 new businesses per year, each employing 3-5 people can be created.

The proposed project would generate revenue via training tuition, larva sales, and processing/administrative fees provided to Cooperative members. Oyster seed pricing has been ranging from \$50 to \$110 per 1,000 seed, depending upon oyster variant and length.

Hatchery revenues will supply a per-worker gross revenue of \$100,000 by year three (assuming the lowest price per oyster seed is obtained). Thus, the project is expected to achieve full financial sustainability by year three and evolve into a robust mechanism that the coop and TCC can utilize to expand services during the years following.

Water-dependent, resource-based livelihoods in the region have decline since the 1990s. Changes in regulations mandating minimum trawler net hole size and natural and man-made disasters have depleted oyster and finfish stock from the St. James Bay to Cape San Blas. Bureau of Labor Statistics data for industry employment in NAICS 11 (Agriculture, Forestry, Fishing, and Hunting) shows a decline from a 2001 peak of 962 to just over 350 in 2016.

Finishing and Shellfish fishing in the Apalachee Region has experienced steady declines over the past several decades. Data for neighboring Franklin County indicate a loss of 80% of wild catch sizes for oysters between 2005 and 2017.

Hatchery facilities and training will target this loss of wild landings by instituting aquaculture that is capable of replacing lost sales and absorbing workers who have been underemployed for over a decade.

According to the applicant, several factors including new 1-acre leases coming online from Department of Agriculture and Consumer Services and the expansion of the global market for *Crassostrea Virginica*, or “Panacea Pearl” oysters are causing current oyster farming activities to come to a standstill.

The sunsetting of Auburn University Shellfish Laboratory left a large commercial spat provision gap in the southeastern supply chain. WEI Hatchery proposes to fill that void for area farmers. Through training, equipment, and larvae, the facility expects to increase regional oyster production from 12.5 to 500 Million yearly within seven years.

Area demand for oyster cultivation training is high. In its first 5 years of operation, the WEI has trained over 100 entrepreneurs each year. From this, 150 employees have been hired. A survey of viable aquaculture leases in the Apalachee Bay area indicated that hundreds more acres exist to support oyster production.

Prospective enrollment in the WEI training classes continues to max- out available spots. Regional, national, and international demand for *Crassostrea virginica* continues to outpace current local farmed supply.

The Hatchery will be a hands-on training facility geared towards exposing new trainees to the entire lifecycle of an oyster crop. Students will directly participate in oyster seed rearing, establishment of post-larval spat in water-leased cage areas, maintenance, harvesting, and processing. This experience will fully expose the prospective entrepreneur to the life of an Oyster Farmer and leave no “stone unturned” as they prepare to start a business.

There is currently no industry training certification for aquaculturists, however all graduates entering into business in the State of Florida obtain an FWC Division of Aquaculture Certificate of Registration.

The WEI Hatchery and Processing Facility targets aquaculturists, who in turn directly support local floating cage, line, and associated oyster farming apparatus manufacturers. REMI modeling outputs indicate that spending via the aquaculture industry will create 5-6 jobs in financial services (NAICS 52) and 79 jobs in Professional/Scientific/Technical services (NAICS 54) as well.

This project leverages the nearshore water acreage, endemic familiarity of regional workers with seafood trades, and access to state- of-the-art facilities to maximize environmental and human capital assets.

Through its oyster aquaculture program, the Institute is already working with the FSU Coastal Marine Laboratory and their Apalachicola Bay System Initiative (ABSI), a research program that addresses key issues relevant to the status and recovery of oyster populations. Their work aligns with and informs current and future WEI oyster aquaculture initiatives. The continued cooperation and partnership will synergistically support both programs and our region to further enhance this burgeoning industry.

The WEI Hatchery will expand knowledge regarding Ocean Shellfish breeding techniques that create an environmentally resilient oyster. To that end, the WEI was recently awarded a grant from the Gulf States Marine Fisheries Commission. The grant from the Commission supports the experimentation of different oyster growing methods and spat retention in Oyster Bay. By experimenting and implementing other farming methods, the WEI hopes to greatly expand the

number of lease sites available to farmers. Further, by determining which systems prove effective, the WEI is seeking to maximize the number of oysters grown per site.

Farming techniques and equipment also need to be protected from hurricane destruction. The WEI currently provides and will augment its assistance to aquaculture farmers in helping them prepare for storms. Information about preparation and proper equipment is currently taught within the Aquaculture curriculum and will continue to be extended to incoming trainees and facility users.

In the aftermath of Hurricane Michael, it is reported that farmers who followed the WEI's recommendations and utilized equipment experienced minimal losses, while those who did not experienced up to \$5,000,000 in losses (FDACS, Hurricane Michael's Damage to Florida Agriculture). This is crucial, as crop insurance extended to oyster farmers only becomes available after 3 years of continuous operation. These measures will help to protect farmers' investments during the interim.

It has been reported in literature that widely varying *E. coli* concentrations were found in shellfish. Although the National Shellfish Sanitation Program is designed to ensure that shellfish harvested from certified waters do not contain these naturally occurring toxins, the increasing availability of raw oysters at restaurants has led to a dramatic increase in the rates of shellfish food poisoning in recent years. Eating raw oysters puts people with weak immune systems at risk of food poisoning from viral pathogens such as Norovirus and hepatitis A as well as bacterial pathogens including different *Vibrio* sp. Based on the WHO report, these pathogens together cause nearly 2 million infections every year and it leads to more than 70,000 deaths. Moreover, these numbers are sharply rising every year.

The Wakulla Environmental Institute's Ocean Shellfish Nursery/Hatchery and Processing Facility will employ a unique pasteurization process that uses microwaves to increase the safety and shelf life of raw shellfish, in addition the oyster remains alive in its shell and the taste and texture in unchanged.

This process is highly cost-effective and results in the highest degree of food safety and acceptability to consumers. This is expected to open new markets for oysters and increase the consumption of raw oysters at existing markets such as restaurants and oyster bars. Current experimental evidence has shown that consumers are unable to tell the difference between the pasteurized and unpasteurized oysters. Through this, it is expected that the price per mature harvested oyster will double, from ~50 cents to 1 dollar.

The Hatchery/Nursery will serve not only Wakulla County's quickly growing aquaculture supply needs but also those of oyster farmers in Pensacola. With the pending closure of the Auburn Hatchery, the region is anticipated to be under-supplied. Additionally, adjacent counties along the Florida Triumph Coast (e.g. Franklin, Gulf) are exploring feasibility of farming and will eventually augment demand for primary product (spat).

All Aquaculturists in the Triumph region will be able to purchase spat and have oysters processed at this facility. There will be a standard processing fee and cost for spat that will be the

same for everyone. No competitive advantages will be offered to larger operations. The goal of the facility is to grow this industry for everyone who wants to participate regardless of size.

Hatchery and Processing plant will create budget surpluses by its third year in operation. This will be supported by tuition and regularly recurring revenue flows at TCC.

Previously, WEI has partnered with Florida State University, the University of Florida, Florida A&M University and Auburn University to explore methods to further expand the number and operation of aquaculture and related businesses along the Gulf Coast. In addition, the WEI was recently awarded a grant from the Gulf States Marine Fisheries Commission for the experimentation of different oyster growing methods and spat retention in Oyster Bay.

By experimenting and implementing novel farming methods, the WEI expects to decrease the number of acres needed per farm and maximize the number of oysters grown per site. All of these activities will continue to drive economic development in the region and allow for research on sustainable approaches to Ocean Shellfish aquaculture – and as a direct result, increase the demand for oyster seed at the beginning of each growing cycle and cleaning, packaging, and shipping at the end of each growing cycle.

Threats caused by overharvesting from fears of the BP oil spill and a narrowing of public combing areas led many to find work in alternative industries. Steering oystermen back into the industry creates a domino effect which will benefit the region's economy.

WEI is partnering with Florida Fish and Wildlife Conservation Commission to provide training on the Aquaculture Farming of Scallops in the Gulf Region. The US is the world's leader in scallop production. TCC would like to incorporate this area of Aquaculture farming to provide the necessary diversity in product development for the region, thus bringing a new market for business and job creation.

As proposed, an Aquaculture Farmer may grow all oysters, scallops and clams on one lease and triple their business, while providing employment opportunities without the necessity of expanding the area of needed space. Oysters at the top of the water column, Scallops in the middle, and clams on-bottom.

Currently in the Gulf, only one specific area grows clams, Cedar Key. TCC would like the opportunity to expand this area and provide opportunities for growth in production and compete in a global market. This will also increase the number of businesses, jobs in this region.

The Ocean Shellfish Nursery/Hatchery and Processing facility is an extension and intensification of the signature WEI Phase I oyster aquaculture training. It is proposed to add research, development, and processing infrastructure. Furthermore, it will replace a Nursery/Hatchery gap being created by the loss of Auburn University's Hatchery.

**Funding and Budget (as provided by the applicant)**

5. Please provide a Project/Program Budget. Include all applicable costs and other funding sources available to support the proposal.

A. Project/Program Costs:

Construction	\$ 14,420,000
Reconstruction	\$ N/A
Design & Engineering	\$ 1,638,000
Land Acquisition	\$ N/A
Land Improvement	\$ N/A
Equipment	\$ 3,000,000
Supplies	\$ N/A
Salaries	\$ 1,000,000
Other (Contingency)	\$ 942,000
Other (Indirect)	\$ 500,000

**Total Project Costs: \$21,500.00**

B. Other Project Funding Sources:

Example Funding Sources (Note: Not an exhaustive list of possible Funding Sources.)

City/County	\$ N/A
Private Sources	\$ 2,000,000
Other (e.g., grants, etc.)	\$ 6,000,000

**Total Other Funding \$8,000,000**

**Total Amount Requested: \$13,500.00**

		Phase I	Phase II
Triumph	\$ 13,500,00	-	\$ 13,500,000
EDA	\$ 1,500,000	\$ 1,500,000	-

State PECO	\$ 4,500,000	\$ 4,500,00	-
TCC Foundation	\$ 2,000,000	-	\$ 2,000,000
<b>Total</b>	<b>\$ 21,500,000</b>	<b>\$ 6,000,000</b>	<b>\$ 15,000,000</b>

**Phase I** of the WEI was constructed with a \$4.5 million investment from the State of Florida, and a \$1.5 million grant from the EDA to construct the initial building and provide infrastructure for future growth. Initially, the WEI established an oyster aquaculture program in an effort to revive the oyster industry. In just two years since starting the program, Wakulla County became now a national leader in oyster production.

While the College developed Phase I of the Institute to support the revitalization of industries that collapsed because of the Deepwater Horizon oil spill, TCC's work in leading economic development activity in Wakulla County spawned new opportunities and initiatives that can only be completed with the addition of a second phase.

For **Phase II**, the College seeks \$15 million (\$13.5 million from the Triumph fund, \$2 million from the TCC Foundation) to support the construction of a Hatchery and Training Center of Excellence. The environmental assessments and surveys will begin promptly with the initial site development beginning during the 2019 fiscal year. Construction of the Hatchery and Processing Facility will occur during 2019. The building will include Ocean Shellfish cultivation and processing facilities as well as teaching space. Phase II will be an economic driver for Wakulla County and the surrounding region.

Letters of Support

