Budget Justification – Year 1

MDMR GOMESA FY25 – Increasing Oyster Seed Production Through Workforce Development

a. Personnel ($163,248)

Salary ($122,501)

Name	Salary/mo	Months	Total
Reginald Blaylock (PI)	$11,333	1.0	$11,333
Megan Gima (Co-PI)	$6,008	2.0	$12,016
Ben Dosher, Biologist III, Oysters	$3,843	9.0	$34,584
Aquaculture Technician II	$2,567	9.0	$23,104
Aquaculture Technician I	$2,333	8.0	$18,664
Interns, TCMAC Host x8, 20hr/week	$4,000	0.0	$0
Interns, Industry Host x8, 20hr/week	$4,000	0.0	$0
Graduate Students (TBD)	$1,900	12.0	$22,800

Fringe ($40,746)

Name	%	Yr 1
Reginald Blaylock (PI)	30.1028%	$3,412
Megan Gima (Co-PI)	33.7486%	$4,055
Aquaculture Biologist III, Oysters	38.1212%	$13,184
Aquaculture Technician II	44.1483%	$10,200
Aquaculture Technician I	45.9679%	$8,579
Interns, TCMAC Host x8, 20hr/week	9.0000%	$0
Interns, Industry Host x8, 20hr/week	9.0000%	$0
Graduate Students (TBD)	5.7746%	$1,317

The fringe benefit rate for full-time employees is calculated as a percentage of salary. The benefit includes health insurance $5,508/year or $459/mo), life insurance ($0.10/$1,000 per mo [$30,000 min/$100,000 max]), retirement ($305,000 maximum gross salary), FICA social security (maximum taxable earnings is $168,600) FICA medicare (1.45%; unlimited), unemployment ($85 per person per year), and worker's compensation (nonhazardous 0.7%, hazardous 5%; averages).

b. Travel ($1,750)

Travel to meeting and conference: Meeting: Airfare ($500), Hotel (3nt $600), Per Diem (4d $225), Registration ($425) (year 1: 1ppl) (year 2-3: 2ppl plus mileage for traveling to training sites)

c. Architecture & Engineering ($0)

d. Legal ($0)

e. Consulting ($0)

f. Construction ($0)

g. Site Work ($0)

h. Equipment ($361,000)

OSH Mobile Oyster Hatchery ($350,000), Nursery Upweller/Downweller ($11,000)

i. Land Acquisition ($0)

j. Indirects ($103,956)

The USM federally approved indirect charge rate is 48% and is applied to the direct cost base minus value of Equipment, Participant Costs, and Tuition [$599,965 - $383,390 * 0.48 = $103,956].

k. Other ($73,967)

1. *Commodities ($40,563)*

Commodities/Supplies include handheld meters (YSIs), water quality test strips, calibration solutions, handheld water quality testers (x4), scales (x3), microscopes (x3), office supplies for data collection, printed materials which includes posters, survey, ballots, quick reference guides, advertisement guides, and advertisement.

2. Communications ($1,014)

Shipping costs.

3. Participant Costs ($8,400)

Travel and food for classes: mileage reimbursements $60/pp for 15 people for 6 classes; food includes $15/pp (box lunches) x 20 people x 6 classes and $10/pp (refreshment breaks) x 20 people x 6 classes.

4. Contractual costs ($10,000)

GSFA (Create/ Conduct Survey; Recruitment & Facilitate informing industry of workforce development opportunities)

5. Tuition ($13,990)

TOTAL (Year 1) = $703,921

Budget Justification – Year 2

MDMR GOMESA FY25 – Increasing Oyster Seed Production Through Workforce Development

a. Personnel ($270,176)

Salary ($210,834)

Name	Salary/mo	Months	Total
Reginald Blaylock (PI)	$11,333	1.0	$11,559
Megan Gima (Co-PI)	$6,008	2.0	$12,256
Ben Dosher, Biologist III, Oysters	$3,843	9.0	$35,276
Aquaculture Technician II**	$2,567	15.0	$39,276
Aquaculture Technician I**	$2,333	14.0	$33,315
Interns, TCMAC Host x8, 20hr/week	$4,000	4.0	$16,320
Interns, Industry Host x8, 20hr/week	$4,000	4.0	$16,320
Graduate Students (TBD)**	$1,900	24.0	$46,512

***Includes two persons split evenly*

Fringe ($59,341)

Name	%	Yr 2
Reginald Blaylock (PI)	30.1028%	$3,480
Megan Gima (Co-PI)	33.7486%	$4,136
Aquaculture Biologist III, Oysters	38.1212%	$13,448
Aquaculture Technician II	44.1483%	$17,340
Aquaculture Technician I	45.9679%	$15,314
Interns, TCMAC Host x8, 20hr/week	9.0000%	$1,469
Interns, Industry Host x8, 20hr/week	9.0000%	$1,469
Graduate Students (TBD)	5.7746%	$2,686

The fringe benefit rate for full-time employees is calculated as a percentage of salary. The benefit includes health insurance $5,508/year or $459/mo), life insurance ($0.10/$1,000 per mo [$30,000 min/$100,000 max]), retirement ($305,000 maximum gross salary), FICA social security (maximum taxable earnings is $168,600) FICA medicare (1.45%; unlimited), unemployment ($85 per person per year), and worker's compensation (nonhazardous 0.7%, hazardous 5%; averages).

b. Travel ($4,500)

Travel to meeting and conference: Meeting: Airfare ($500), Hotel (3nt $600), Per Diem (4d $225), Registration ($425) (year 1: 1ppl) (year 2-3: 2ppl plus mileage for traveling to training sites)

c. Architecture & Engineering ($0)

d. Legal ($0)

e. Consulting ($0)

f. Construction ($0)

g. Site Work ($0)

h. Equipment ($0)

i. Land Acquisition ($0)

j. Indirects ($145,379)

The USM federally approved indirect charge rate is 48% and is applied to the direct cost base minus value of Participant Costs and Tuition [$341,071 - $38,199 * 0.48 = $145,379].

k. Other ($66,395)

1. *Commodities ($17,752)*

Commodities/Supplies include handheld meters (YSIs), water quality test strips, calibration solutions, handheld water quality testers (x4), scales (x3), microscopes (x3), office supplies for data collection, printed materials which includes posters, survey, ballots, quick reference guides, advertisement guides, and advertisement.

2. Communications ($444)

Shipping costs.

3. Participant Costs ($8,820)

Travel and food for classes: mileage reimbursements $60/pp for 15 people for 6 classes; food includes $15/pp (box lunches) x 20 people x 6 classes and $10/pp (refreshment breaks) x 20 people x 6 classes.

4. Contractual costs ($10,000)

GSFA (Create/ Conduct Survey; Recruitment & Facilitate informing industry of workforce development opportunities)

5. Tuition ($29,379)

TOTAL (Year 2) = $486,450

Budget Justification – Year 3

MDMR GOMESA FY25 – Increasing Oyster Seed Production Through Workforce Development

a. Personnel ($231,850)

Salary ($178,461)

Name	Salary/mo	Months	Total
Reginald Blaylock (PI)	$11,333	1.0	$11,790
Megan Gima (Co-PI)	$6,008	2.0	$12,501
Ben Dosher, Biologist III, Oysters	$3,843	9.0	$35,981
Aquaculture Technician II	$2,567	12.0	$32,049
Aquaculture Technician I	$2,333	12.0	$29,127
Interns, TCMAC Host x8, 20hr/week	$4,000	4.0	$16,646
Interns, Industry Host x8, 20hr/week	$4,000	4.0	$16,646
Graduate Students (TBD)**	$1,900	12.0	$23,721

Fringe ($53,388)

Name	%	Yr 3
Reginald Blaylock (PI)	30.1028%	$3,549
Megan Gima (Co-PI)	33.7486%	$4,219
Aquaculture Biologist III, Oysters	38.1212%	$13,716
Aquaculture Technician II	44.1483%	$14,149
Aquaculture Technician I	45.9679%	$13,389
Interns, TCMAC Host x8, 20hr/week	9.0000%	$1,498
Interns, Industry Host x8, 20hr/week	9.0000%	$1,498
Graduate Students (TBD)	5.7746%	$1,370

The fringe benefit rate for full-time employees is calculated as a percentage of salary. The benefit includes health insurance $5,508/year or $459/mo), life insurance ($0.10/$1,000 per mo [$30,000 min/$100,000 max]), retirement ($305,000 maximum gross salary), FICA social security (maximum taxable earnings is $168,600) FICA medicare (1.45%; unlimited), unemployment ($85 per person per year), and worker's compensation (nonhazardous 0.7%, hazardous 5%; averages).

b. Travel ($4,500)

Travel to meeting and conference: Meeting: Airfare ($500), Hotel (3nt $600), Per Diem (4d $225), Registration ($425) (year 1: 1ppl) (year 2-3: 2ppl plus mileage for traveling to training sites)

c. Architecture & Engineering ($0)

d. Legal ($0)

e. Consulting ($0)

f. Construction ($0)

g. Site Work ($0)

h. Equipment ($0)

i. Land Acquisition ($0)

j. Indirects ($129,587)

The USM federally approved indirect charge rate is 48% and is applied to the direct cost base minus value of Participant Costs and Tuition [$294,658 - $24,686 * 0.48 = $129,587].

k. Other ($58,309)

1. *Commodities ($23,047)*

Commodities/Supplies include handheld meters (YSIs), water quality test strips, calibration solutions, handheld water quality testers (x4), scales (x3), microscopes (x3), office supplies for data collection, printed materials which includes posters, survey, ballots, quick reference guides, advertisement guides, and advertisement.

2. Communications ($576)

Shipping costs.

3. Participant Costs ($9,261)

Travel and food for classes: mileage reimbursements $60/pp for 15 people for 6 classes; food includes $15/pp (box lunches) x 20 people x 6 classes and $10/pp (refreshment breaks) x 20 people x 6 classes.

4. Contractual costs ($10,000)

GSFA (Create/ Conduct Survey; Recruitment & Facilitate informing industry of workforce development opportunities)

5. Tuition ($15,425)

TOTAL (Year 3) = $424,245

Project Total (3 Years) = $1,614,616

PI: Megan Gima
Co-PIs: Reg Blaylock
Proposal Title: Increasing Oyster Seed Production Through Workforce Development
Agency: MSDMR GOMESA FY25
Start Date: 7/1/2025
End Date: 6/30/2028

		Year 1			Year 2			Year 3			CUMMULATIVE	
		Agency		USM	Agency		USM	Agency		USM	Agency	USM
SALARY (SALARY)	Monthly Pay Rate	# of Mos		# of Mos	# of Mos		# of Mos	# of Mos		# of Mos		
Reginald Blaylock	11,333	1	11,333	0	1	11,559	0	1	11,790	0	**34,682**	**0**
Megan Gima, Hatchery Manager	6,008	2	12,016	0	2	12,256	0	2	12,501	0	**36,773**	**0**
Ben Dosher, Biologist III Oysters (class & intern host)	3,843	9	34,584	0	9	35,276	0	9	35,981	0	**105,841**	**0**
Aquaculture Technician II (class & Trailer)	2,567	9	23,104	0	15	39,276	0	12	32,049	0	**94,429**	**0**
Aquaculture Technician I (Class & Trailer)	2,333	8	18,664	0	14	33,315	0	12	29,127	0	**81,106**	
Interns, TCMAC host: x8 ppl, 20 hr/week (total of 80hrs per person)	4,000	0	0	0	4	16,320	0	4	16,646	0	**32,966**	
Interns, Industry host: x4 ppl, 20 hr/ week (total of 160hrs per person)	4,000	0	0	0	4	16,320	0	4	16,646	0	**32,966**	
Graduate Student	1,900	12	22,800	0	24	46,512	0	12	23,721	0	**93,033**	**0**
	Subtotal		**112,502**	**0**		**210,834**	**0**		**178,461**	**0**	**501,797**	**0**
1744												
FRINGE (FRINGE)												
Reginald Blaylock	30.1028%		3,412	0		3,480	0		3,549	0	**10,441**	**0**
Megan Gima, Hatchery Manager	33.7486%		4,055	0		4,136	0		4,219	0	**12,410**	**0**
Ben Dosher, Biologist III Oysters (class & intern host)	38.1212%		13,184	0		13,448	0		13,716	0	**40,348**	**0**
Aquaculture Technician II (class & Trailer)	44.1483%		10,200	0		17,340	0		14,149	0	**41,689**	**0**
Aquaculture Technician I (Class & Trailer)	45.9679%		8,579			15,314			13,389		**37,282**	
Interns, TCMAC host: x8 ppl, 20 hr/week (total of 80hrs per person)	9.0000%		0			1,469			1,498		**2,967**	
Interns, Industry host: x4 ppl, 20 hr/ week (total of 160hrs per person)	9.0000%		0			1,469			1,498		**2,967**	
Graduate student	5.7746%		1,317	0		2,686	0		1,370	0	**5,373**	**0**
	Subtotal		**40,746**	**0**		**59,341**	**0**		**53,388**	**0**	**153,475**	**0**
TOTAL PERSONNEL			**163,248**	**0**		**270,176**	**0**		**231,850**	**0**	**665,273**	**0**
TRAVEL (TRAVEL)			**1,750**	**0**		**4,500**	**0**		**4,500**	**0**	**10,750**	**0**
Travel to meeting and conference: Meeting: Airfare ($500), Hotel (3nt $600), Per Diem (4d $225), Registration ($425) (year 1: 1ppl) (year 2-3: 2ppl plus mileage for traveling to training sites)	3500		1,750			4,500			4,500			
EQUIPMENT (EQUIP) (>$5,000)			**361,000**	**0**		**0**	**0**		**0**	**0**	**361,000**	**0**
OSH Mobile Oyster Hatchery			350,000									
Nursery upweller/downweller			11,000									
COMMODITIES (COMMOD)			**40,563**	0		**17,752**	0		**23,047**	0	**81,362**	**0**
handheld meter, YSI x2			8,000			3,000			3,200			
Test strips, reagents, calibration solutions			4,962			5,458			6,004			
handheld water quality testers x5			2,660			500			500			
scales x4			3,000			0			0			
microscope x4			6,600			0			0			
Office supplies for data collection			1,300			1,430			1,573			
printed materials: posters, survey, ballots, quick reference guides, advertisement			2,250			750			750			
larval culture (trailer)			6,500			3,900			5,000			
propane ($2.75 per gallon; estimated 2-4 gallons per day per run)	$2.75*(18*6)		891			953			1,020			
setting operations			4,400			1,760			5,000			
COMMUNICATIONS (COMCAT)			**1,014**	**0**		**444**	**0**		**576**	**0**	**2,034**	**0**
Shipping Costs			1,014			444			576			
PARTICIPANT COSTS (PARTIC)			**8,400**	**0**		**8,820**	**0**		**9,261**	**0**	**26,481**	**0**
Travel to classes for participants- mileage reimbursments $60 x15 ppl x6 classes	5400		5,400			5,670			5,954			
food for classes- $15/person (lunch) X 20 ppl x6 classes	1800		1,800			1,890			1,985			
food for classes - $10/person (refreshment breaks) X 20 ppl x6 classes	1200		1,200			1,260			1,323			
CONTRACTUAL SERVICES (OTCSVC)			**10,000**	**0**		**10,000**	**0**		**10,000**	**0**	**30,000**	**0**
GSFA (Create/ Conduct Survey; Recruitment & Facilitate informing industry of workforcedevelopment oportunities)			10,000			10,000			10,000			
TUITION (SCHOL)			**13,990**	**0**		**29,379**	**0**		**15,425**	**0**	**58,794**	**0**
(AY20-21: $10,250 (in-state) + 5% increase/yr; add $2,000 for OOS, if needed)			13,990			29,379			15,425			
TOTAL DIRECT COSTS			**599,965**	**0**		**341,071**	**0**		**294,658**	**0**	**1,235,694**	**0**
MTDC			**216,575**	**0**		**302,872**	**0**		**269,973**	**0**	**789,420**	**0**
F&A (INDIRT) **MTDC**	Rate* =	48%	**103,956**	**0**	48%	**145,379**	**0**	48%	**129,587**	**0**	**378,922**	**0**
*Adjust % as needed												
TOTAL PROJECTS COSTS			**703,921**	**0**		**486,450**	**0**		**424,245**	**0**	**1,614,616**	**0**

APPLICANT NAME: University of Southern Mississippi

Project Title: Increasing Oyster Seed Production Through Workforce Development

Point of contact information:

Megan Gima, Megan.Gima@usm.edu, 703 East Beach Drive, Ocean Springs, MS 39564

Location of Project:

Cedar Point research site, Gulf Coast Research Laboratory, The University of Southern Mississippi, Ocean Springs MS and Deer Island Oyster Aquaculture Park, Harrison County, MS.

Estimated Project Period:

July 1, 2025 to June 30, 2028

Total Requested Project Funds:

$1,613,589.00

Project Description

This program will facilitate aquaculture workforce development which will, in turn, create and sustain jobs while providing a stable supply of safe, healthy, local seafood. By leveraging the expertise, infrastructure, and relationships of the University of Southern Mississippi's Thad Cochran Marine Aquaculture Center (TCMAC) with the Mississippi Department of Marine Resources (MSDMR), and the Gulf Shellfish Farmers Association (GSFA), this program will provide up to six training classes each year (Year 1-2) with up to 15 participants in each class, up to eight internships hosted by TCMAC (Year 2-3), up to four internships hosted by industry stakeholders (Year 2-3), and up to six spawning and larval culture runs each year using the OSH Mobile Hatchery (Years 1-3). The focus will be on educating and training individuals on the skill sets needed to grow the oyster aquaculture sector in Mississippi. The industry will be surveyed to finalize the list of class topics. Anticipated topics may include: 1. water quality monitoring and data management, 2. broodstock holding and conditioning, 3. spawning, 4. larval culture: counting, measuring and assessing larval health, 5. setting pediveligers for single seed production, and/or 6. grading and counting seed. At the conclusion of the classes, Standard Operating Procedures and Quick Reference Guides will be developed and distributed to class participants. The internships will be offered to further develop skills taught in the classes and to fill the immediate needs for a skilled workforce. The OSH Mobile Hatchery will provide hands-on training, insight, and the knowledge base needed to design, implement, and execute hatchery operations to produce pediveliger larvae. The pediveligers produced by the training runs will be distributed to MS industry. At the conclusion of the classes and internships, participants will be ready for hire by oyster aquaculture companies looking to scale or implement hatchery and/or nursery operations. Increasing the skilled workforce will, in turn, position companies to succeed in the production and distribution of seed, thus increasing the availability of seed. The increase of available seed will also facilitate the expansion and growth of grow-out operations.

Project Objectives

1. Identify industry training needs by creating and administering a survey in collaboration with MDMR and GSFA to determine desirable skills and qualifications needed for hatchery and farm staff.

2. Design and plan classes/training courses and internships to suit the identified needs through collaborations with TCMAC, MSDMR, GSFA, and industry stakeholders.

4. Implement and execute classes/training courses in Years 1 and 2 (up to 6 classes per year).

5. Initiate and fill internship positions designed to further develop skill sets acquired in Years 1 and 2.

6. Produce standard operating procedures and quick reference guides for topics covered in the classes.

8. Identify industry participants for mobile hatchery training.

7. Implement and execute spawning and larval rearing training using the mobile hatchery. Year 1 (up to 3 runs), Years 2-3 (up to 6 runs).

GOMESA Act authorized project uses:

Mitigation of damage to fish, wildlife, or natural resources:

To alleviate the pressure on overexploited stocks and the pressure to overharvest stocks, aquaculture production must increase. Wild capture fisheries production has remained stagnant since the late 1980's and aquaculture has grown from supplying 10% of the demand for fisheries products to supplying over 50% today (FAO, 2018). The demand for seafood products is expected to grow more than 20% over the next 20 years (World Bank, 2013). This increased seafood demand cannot be met by increasing wild harvest as most stocks are being fished at or above the maximum sustainable yield (FAO, 2018). This project will increase the workforce that is needed to increase production of oysters.

Implementation of a federally-approved marine, coastal, or conservation management plan:

This project addresses goals outlined in the federally approved "Coast Ecosystem Restoration Council Comprehensive Plan, Restoring the Gulf Coast's Ecosystem and Economy. Declines in resources, environmental challenges and declining jobs not only impact the economy but also the cultural heritage of the maritime industry on the MS Gulf Coast. Aquaculture is a mechanism to impart resiliency and sustainability in the economy by diversifying seafood supply, creating jobs, and continuing the traditions of the maritime sector.

Project Timeline:

July 2024: Create survey to poll industry stakeholders, initiate acquiring mobile hatchery.

August 2024: Poll industry stakeholders. Order materials for classes. Create class lesson plans and quick reference guides, advertise and fill class rosters.

August - September 2024: Execute mobile hatchery training.

September-November 2024: Execute classes.

November 2024 - February 2025: Advertise and find industry stakeholders to host interns. Advertise and fill TCMAC and Industry intern positions for the 2025 Season.

April- November 2025: Execute classes

April-December 2025: Execute internships.

April-September 2025: Execute mobile hatchery training.

November 2025 - February 2026: Advertise and find industry stakeholders to host interns. Advertise and fill TCMAC and Industry intern positions for the 2026 Season.

April-September 2026: Execute mobile hatchery training.

April- December 2026: Execute internships.

January –June 2027: Demonstration of mobile hatchery, present at scientific conference.

April-June 2027: Execute mobile hatchery training.

Project Timing:

Short-term 3 year project.

Justification; Meeting Goals and Objectives of DMR:

This project directly addresses the goals and objectives identified in the MDMR Oyster Restoration and Recovery Plan by increasing the availability of seed through increasing the number of skilled hatchery and nursery workers which will increase the seed available to MS farmers and thus allow them to scale their operations and promote the involvement of new industry stakeholders in the oyster aquaculture sector. This increase of operations and number of stakeholders will increase the number of animals being grown in MS waters, which will inherently improve water quality and habitat for other species.