



THE UNIVERSITY OF  
**SOUTHERN**  
**MISSISSIPPI**®

# Blue Tech Entrepreneurship Program (BTEP)

## Background and Strategic Partners & Organizations

Background: Mississippi's Ocean Task Force and Comprehensive Economic Development Master Plan for Blue Tech Sectors

Background: Federal, State, and Local Legislative Actions, Laws, Executive Orders, Policy Reports, and Resolutions

Strategic Partnerships: State and Local-level Leadership Support, Nonprofits, Stakeholders in Education and Workforce Development, Business and Industry, Utilities, and Federal

# Background: Mississippi's Ocean Task Force and Comprehensive Economic Development Master Plan for Blue Tech Sectors

The University of Southern Mississippi (USM) and its Blue Tech Entrepreneurship Program (BTEP) represent the efforts and significant partnerships USM has developed over the years. In 2017, the State of Mississippi established an Ocean Task Force to provide expertise for the creation of a comprehensive economic development Master Plan for blue tech sectors in the State.

The members of the original Task Force, led by USM, included federal and state agencies, local governments, industry, education providers and workforce development, nonprofits, utilities, and ports as follows:

## Ocean Task Force Chair

- Dr. Monty Graham, Director, School of Ocean Science and Engineering, USM

## Focus Group Leads:

- Education and Workforce: Dr. Mary Graham, President of Mississippi Gulf Coast Community College
- Engineering Capacity: RDML Ken Barbor, Director of Hydrographic Research Center, USM
- Advanced Development and Testing: Dr. John Dane III, Chairman, United States Marine, Inc.
- Applications: Robbie Ingram, CEO MS Enterprise for Technology and USM Accelerator Manager
- Economic Development: Brian Useforge, Economic Development Director, MS Power Company
- Policy and Ethics: Hon. Steven Palazzo, United States House of Representatives

## Members

- Dr. Scott Alsobrooks, Vice President for Economic and Community Development, PRCC
- David Brannon, Executive Director, National Oceans Applied Research Center
- Dr. Gordon Cannon, Vice President for Research, USM
- Bill Cork, CEO, Hancock County Port and Harbor Commission
- Jonathan Daniels, CEO, Mississippi State Port Authority
- Colonel Paul Drake, Commander, Combat Readiness Training Center – Air National Guard
- George Freeland, Executive Director, Jackson Economic Development Foundation
- Dr. Josh Gladden, Interim Vice Chancellor for Research, University of Mississippi
- Bill Hessel, Executive Director, Harrison County Development Commission
- Guy Johnson, Vice President, Coast Electric Power Association
- Mark McAndrews, Port Director, Port of Pascagoula
- Glenn McCullough, Executive Director, Mississippi Development Authority
- Jim McIngvale, Director, Communications and Public Affairs, Ingalls Ship Building
- Colonel Greg Michel (Ret.), Mississippi National Guard
- Jamie Miller, Executive Director, Mississippi Department of Marine Resources
- Dr. David Shaw, Vice President for Research & Economic Development, Mississippi State University

In November of 2017, Mississippi released its Master Plan, *Charting the Future of Mississippi's Ocean Technology Economy*<sup>1</sup>. USM's BTEP is a direct result of the recommendations contained in this Master Plan and a vital part of USM's larger blue economy initiative. The Master Plan now serves as the foundation document with goals and objectives actively being implemented as part of USM's blue economy initiative. These strategic, long-range goals are provided below and includes a status of each:

Long-Range Goals	Status
1. Develop marketing and branding plan	Kicked off in July 2020 with consulting firm, Mad Genius.
2. Capital resources program supporting innovation, commercialization, and business development	<b><i>EDA proposals under development for B2S and Public Works and Economic Adjustment Assistance Programs,</i></b>
3. Unique unmanned maritime systems (UMS) operational range in Gulf of Mexico for shallow and deep-water testing, prototyping, and development of new products	Test range in Gulf of Mexico was completed in 2018, and it is now in use and in high demand from federal partners and private-sector companies.
4. UMS warehouse and depot facilities	Partially underway, with needs being defined and updated as volume of activity increases.
5. Maritime systems innovation and commercialization center	Negotiations underway to lease historic Gulf & Ship Island Building to provide office and meeting space near Marine Research Center (which houses testing and prototyping labs).  <b><i>Submitted GOMESA proposal designed to help meet this goal.</i></b>
6. Federally-supported regional engineering and development center	Investments in two new buildings located on ocean-front property at Port of Gulfport: <ul style="list-style-type: none"> <li>• Marine Research Center opened in 2018.</li> <li>• Second facility, Ocean Enterprise Facility, under construction and scheduled to open 2023.</li> </ul>
7. High-performance and cloud computing facilities	Multi-year contract negotiations underway between NOAA's National Center for Environmental Information and USM to locate a data software and analytics team in Gulf & Ship Island Building for new end-user and commercial applications of unmanned maritime systems data.
8. Pipeline of talent for success and retention of Mississippi students	Building an educational pathway of new talent is underway from multiple fronts, including a high school student pilot program conducted for unmanned maritime systems in Spring 2020.
9. National resource for understanding existing laws and regulations	Underway and hosted by a SEA Grant partnership with University of Mississippi' School of Law

<sup>1</sup> *Charting the Future of Mississippi's Ocean Technology Economy* - Governor's Ocean Task Force, November 2017: [https://www.mset.org/wp-content/resources/2010/09/Governor-Bryants-Ocean-Task-Force\\_Official-Copy.pdf](https://www.mset.org/wp-content/resources/2010/09/Governor-Bryants-Ocean-Task-Force_Official-Copy.pdf)

## Background: Federal, State, and Local Legislative Actions, Laws, Executive Orders, Policy Reports, and Resolutions

Underlying USM's BTEP strategic partnerships are a series of federal, state, and local legislative actions, laws, executive orders, policy reports, and resolutions that inform and serve as the foundation of these partnerships. They are as follows:

### Federal

***Commercial Engagement through Ocean Technology (CENOTE) Act – Public Law No. 115-394 (12/21/2018):*** Directs the National Oceanic and Atmospheric Administration (NOAA) to coordinate with the private and academic sectors and the Department of the Navy on evaluating the at-sea data collection capabilities of unmanned maritime system technology and to integrate such technology into NOAA's observation suite. The Executive Order established a high-level interagency Ocean Policy Committee (OPC) and directed it, in part, to engage and collaborate with the ocean community to identify priority ocean research and technology needs, and leverage resources and expertise to maximize the effectiveness of Federal investments in ocean research.

***Ocean Policy to Advance the Economic, Security, and Environmental Interests of the United States – Executive Order 13840 (6/19/2018):*** This order maintains and enhances these and other benefits to the Nation through improved public access to marine data and information, efficient interagency coordination on ocean-related matters, and engagement with marine industries, the science and technology community, and other ocean stakeholders. To advance these national interests, this order recognizes and supports Federal participation in regional ocean partnerships, to the extent appropriate and consistent with national security interests and statutory authorities.

***Promoting American Seafood Competitiveness and Economic Growth – Executive Order 13921 (5/7/2020):*** Calls for the expansion of sustainable U.S. seafood production through: 1) More efficient and predictable aquaculture permitting, 2) Cutting-edge research and development, 3) Regulatory reform to maximize commercial fishing, and 4) Enforcement of common-sense restrictions on seafood imports that do not meet American standards. The *National Law Review* notes, **“the Order shows a commitment from the President and the National Oceanic and Atmospheric Administration (NOAA) that expansion of sustainable domestic aquaculture is a high priority, particularly given the impact to the industry from the COVID-19 pandemic.”**<sup>2</sup>

***Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska – Presidential Memorandum (11/19/2019):*** Directs Federal agencies to develop a national strategy to map the United States Exclusive Economic Zone (EEZ) and a strategy to map the Alaskan coastline to advance our understanding of our oceans and coastlines and to promote efficient permitting related to ocean exploration activities. The Memorandum will drive innovation, transforming cross-sector partnerships between philanthropy, the private sector, academia, and the Federal government to advance marine science, promote new technologies and explore the unknown ocean.

***Science and Technology for America's Oceans: A Decadal Vision – National Science and Technology Council under the White House Office of Science and Technology Policy (10/2018):*** The report identified five goals to advance U.S. ocean S&T in the coming decade, including: 1) understand the ocean in the earth system, 2)

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<sup>2</sup> COVID-19: Trump Administration Takes Actions to Assist U.S. Aquaculture, *National Law Review*, Saturday, May 16, 2020: <https://www.natlawreview.com/article/covid-19-trump-administration-takes-actions-to-assist-us-aquaculture>

promote economic prosperity, 3) ensure maritime security, 4) safeguard human health, and 5) develop resilient coastal communities. The Decadal Vision also described areas of immediate ocean research and technology opportunities, including 1) fully integrating Big Data approaches in Earth system science; 2) advancing monitoring and predictive modeling capabilities; 3) improving data integration in decision-support tools; 4) supporting ocean exploration and characterization; and 5) supporting ongoing research and technology partnerships.

***Gulf of Mexico Energy Security Act (GOMESA) of 2006 – Public Law No. 109-432 (12/20/2006)***: Created a revenue-sharing model for oil and gas producing Gulf States. Under the act, Alabama, Louisiana, Mississippi and Texas receive a portion of the revenue generated from oil and gas production offshore in the Gulf of Mexico. Allowable uses for the funds include: 1) Projects and activities for the purposes of coastal protection, including conservation, coastal restoration, hurricane protection and infrastructure directly affected by coastal wetland losses; 2) Mitigation of damage to fish, wildlife or natural resources; 3) Implementation of a federally-approved marine, coastal or conservation management plan; 4) Mitigation of the impact of activities through funding of onshore infrastructure projects; and 5) Planning assistance and the administrative costs of complying with this section. The BTEP supports entrepreneurship, tech transfer and commercialization of innovations addressing GOMESA's aims.

***Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE Act) – Public Law 112-141 (7/6/2012)***: The Act established the Gulf Coast Restoration Trust Fund in the U.S. Treasury Department funded by the civil penalties paid in connection with the Deepwater Horizon oil spill. Under the Act, amounts in the Trust Fund are available for programs, projects, and activities that restore and protect the environment and economy of the Gulf Coast region. Through the Mississippi Department of Environmental Quality (MDEQ), RESTORE Act funds in the amount of \$1.7 million were awarded to USM in support of the University of Southern Mississippi Marine Research Center (MRC). This funding will support USM's development of a proof of concept center (POCC) within the MRC supporting the BTEP's clients and partners with prototyping and testing, technical training, and research. This funding under the RESTORE Act is provided as a match to the requested EDA funding.

## **State**

***Mississippi Governor's Ocean Task Force (GOTF) – Executive Order 1401 (6/1/2017)***: The GOTF was established to provide expertise for the creation of a comprehensive economic development master plan for maritime technology sectors in the state. The GOTF aims to leverage the State's resources to better support the goals of the U.S. Navy Task Force Ocean established in March 2017 to advance Navy relevant ocean science through strengthened partnerships with academia and the private sector.

***An Act Making An Appropriation For The Support And Maintenance Of The Department Of Marine Resources For The Fiscal Year 2021 – SB 2977 State Law (8/10/20)***: The State Legislature selected and provided funding from the Gulf Coast Restoration Fund for the following blue economy projects to be supported by the BTEP:

- To assist the University of Southern Mississippi with the Roger F. Wicker Ocean Enterprise Facility (OEF) Phase 1 construction: \$7,000,000.00 per year until completed. \$32 million request.
- To assist the Pascagoula Redevelopment Authority with construction of the Singing River Innovation Hub (SRIH): \$1,000,000.00 per year until completed. \$2.8 million request.

**GoCoast 2020 – Executive Order 1298 (8/21/2012):** The Governor created GoCoast 2020 to serve as an advisory body to the Governor for the allocation of funds received by Mississippi under the RESTORE Act (Public Law 112-141). GoCoast 2020 is comprised of more than one-hundred business and community leaders and elected officials from across the Mississippi Gulf Coast. The GoCoast 2020 Report<sup>3</sup> was published in January 2013, and includes recommendations and ideas accessible to policymakers and citizens. GoCoast 2020 was reconvened in July 2016 to evaluate the current status of restoration in Mississippi, as well as to update the RESTORE Act Direct Component Multiyear Implementation Plan (MIP) narrative submitted by the Mississippi Department of Environmental Quality (MDEQ) to the U.S. Department of the Treasury. The GoCoast 2020 report made recommendations to the Governor for initiatives and projects in eight key areas 1) eco-restoration, 2) economic development, 3) small business, 4) seafood, 5) tourism, 6) education, 7) infrastructure, and 8) workforce development. MDEQ amended<sup>4</sup> on June 19, 2019 Mississippi’s MIP under the Direct Component of the RESTORE Act to include the University of Southern Mississippi Ocean Enterprise Entrepreneurship Program (Activity #33). This provides \$1 million to support USM’s development of a combined degree program in both Ocean Engineering and Business to encourage entrepreneurship in ocean engineering and technology development. The program will train students in advanced concepts in both disciplines. This formal degree program working in association with the BTEP supports USM and the State’s overall GoCoast 2020 vision to grow the Blue Economy and establish the Mississippi Gulf Coast as a national leader in ocean science and technology development.

## Local

**Resolution establishing a Blue Economy Innovation District, and for related purposes. – Adopted and approved by the Mayor and Members of the City Council of the City of Gulfport (8/18/2020):** The City of Gulfport, in conjunction with USM, tasked SeaAhead, Inc., with the creation of a narrative for a new Blue Economy cluster on the Mississippi Gulf Coast, with special emphasis being placed on Gulfport’s role in the development of that economic sector; ... be it resolved: That the areas contained within the Downtown Urban Renewal Improvement District, the Greater Downtown Urban Renewal Improvement District and **The Quarters Historic Minority Business District and Empowerment Zone** shall, collectively, comprise the BLUE ECONOMY INNOVATION DISTRICT (BIED) within the City of Gulfport. The City of Gulfport shall, through appropriate and statutorily authorized means, establish incentive programs encouraging development within the BLUE ECONOMY INNOVATION DISTRICT by commercial enterprises, industries, businesses and other appropriate entities in support of the burgeoning BLUE ECONOMY in the City of Gulfport.<sup>5</sup>

**Letter of Support for the University of Southern Mississippi’s Ocean Enterprise – Approved by the Jackson County Board of Supervisors (3/2/2020) –** The Jackson County Board of Supervisors approved a motion to authorize the Board President to execute a letter of support endorsing USM’s Ocean Enterprise.

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<sup>3</sup> *GoCoast 2020 Report*, January 2013: <https://www.mdeq.ms.gov/wp-content/uploads/2017/10/GoCoast-2020-Final-Report.pdf>

<sup>4</sup> *RESTOREACT Direct Component Multiyear Plan Narrative Amendment #4*, Mississippi Department of Environmental Quality, June 19, 2019: <https://www.mdeq.ms.gov/wp-content/uploads/2019/11/Mississippi-Multiyear-Implementation-Plan-Amendment-4-2019.pdf>

<sup>5</sup> A RESOLUTION OF THE GULFPORT CITY COUNCIL TO ESTABLISH A BLUE ECONOMY INNOVATION DISTRICT, AND FOR RELATED PURPOSES, City of Gulfport, 8/18/2020: <https://gulfportms.civicclerk.com/Web/GenFile.aspx?ad=28009>

## Strategic Partnerships: State and Local-level Leadership Support, Nonprofits, Stakeholders in Education and Workforce Development, Business and Industry, Utilities, and Federal

Strategic partners with a variety of organizations are integral to fulfillment of the State's Master Plan, and these partners have been instrumental in implementing the goals which led to the identification of the need for the BTEP. These partners are paving the way for a solid foundation through which the BTEP will function. The BTEP is considered a vital next step of this comprehensive strategy, and these partners are listed in order to describe the comprehensive nature of this long-term strategy:

### State-level and Local-level Leadership Support:



**Mississippi Development Authority (MDA)** – is fully engaged and ranked USM's proposal request for state funding as #1 of 119 Gulf Coast Restoration Grant proposals submitted in 2019. MDA is the state of Mississippi's lead economic and community development agency, engaged in providing services to businesses, communities and workers throughout Mississippi. The agency works to recruit new business to the state, and retain and expand existing Mississippi industry and business. MDA also provides technical assistance to the state's entrepreneurs and small businesses and oversees programs that support Mississippi's minority and women-owned businesses. MDA oversees the Mississippi Gulf Coast Restoration Fund (GCRF) established with economic damage funds from the Deepwater Horizon Oil Spill to support programs and projects that have the potential to generate increased economic activity in the Gulf Coast region. In July 2020, USM was awarded \$7 million for infrastructure and construction support from the GCRF of the \$32 million *Roger F. Wicker Ocean Enterprise Facility* (OEF) being built in the Port of Gulfport. The OEF will bring together federal (NOAA and the Navy), academia (USM and other university partners), and industry and will serve as a hub for ocean research and blue tech economic development. The BTEP will support and leverage these activities and OEF's capabilities. [Glenn McCullough, Executive Director, Mississippi Development Authority served as a Task Force member for Mississippi's economic development Master Plan, \*Charting the Future of Mississippi's Ocean Technology Economy\*.](#)



**Mississippi Department of Marine Resources (DMR)** – is fully engaged and provides financial support to USM, and these funds will be used as the match to this EDA proposal. The state agency's mission is to enhance, protect and conserve the state's marine interests. DMR oversees funding the state receives from the Gulf of Mexico Energy Securities Act (GOMESA) and awarded USM \$5 million this year to solve the challenging problems of national and homeland defense, infrastructure security, environmental monitoring, and disaster response, offshore aquaculture and natural resource and habitat characterization. The BTEP will support partnerships with startups, small/medium enterprises (SMEs), industry, and state and federal organizations and others to develop and commercialize innovations addressing these challenging problems. [Jamie Miller, Executive Director, Mississippi Department of Marine Resources served as a Task Force member for Mississippi's economic development Master Plan, \*Charting the Future of Mississippi's Ocean Technology Economy\*.](#)



**Mississippi Department of Environmental Quality (MDEQ)** – is the state agency that oversees environmental quality of the air, land, and water in the state. MDEQ’s Office of Restoration leads the state’s restoration efforts resulting from the Deepwater Horizon oil spill in 2010. The office uses a comprehensive approach to restoration integrating projects and leveraging funding sources to implement restoration projects that will restore and enhance the Gulf Coast’s natural resources. The office implements and manages projects from three main funding sources—the Natural Resource Damage Assessment (NRDA), the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act (RESTORE), and the National Fish and Wildlife Foundation’s (NFWF) Gulf Environmental Benefit Fund. In November of 2019 MDEQ announced the awarding of \$1 million to USM in support of the University of Southern Mississippi Ocean Enterprise Entrepreneurship Program. This funding will support USM’s development of a combined degree program in both Ocean Engineering and Business as a component of the BTEP to encourage entrepreneurship in ocean engineering and technology development. The program will blend engineering and business classes to train students in advanced concepts in both disciplines. This formal degree program in connection with the BTEP will support USM and State of Mississippi’s overall vision to grow the Blue Economy and establish the Mississippi Gulf Coast as a national leader in ocean science and technology development. In November 2017, MDEQ announced a RESTORE award of \$1.7 million to USM in support of the development of the USM Marine Research Center for the necessary technology and equipment to support a prototyping lab (proof of concept center). A portion of this funding under the RESTORE Act is provided as a match to the requested EDA funding.

On August 12th, 2020, MDEQ announced approval of a RESTORE Act grant award of \$7.62 million to USM for the construction of the Oyster Hatchery and Research Center to be part of the USM Thad Cochran Marine Aquaculture Center (TCMAC). The BTEP will support partnerships and startups working with the TCMAC to commercialize marine aquaculture innovation. This RESTORE Act award and the BTEP are in alignment with the President’s Executive Order 13921 – *Promoting American Seafood Competitiveness and Economic Growth*.



**Mississippi State Port Authority** – is an Enterprise Agency of the State of Mississippi and is responsible for the daily operations of the Port of Gulfport. Commissioners of the Port Authority authorized construction of the \$10 million Marine Research Center (completed in 2018), which USM leases from the Port and serves as the marine operations and research facility for USM’s School of Ocean Science and Engineering. The Port also constructed a nearby dock, which serves as the homeport of USM’s 126’ research vessel, the R/V Point Sur. On November 8, 2019, the Port celebrated the groundbreaking of the \$32 million Roger F. Wicker Center for Ocean Enterprise facility (OEF) located at the Port of Gulfport. The facility will serve as the centerpiece of research and development in the Gulf, further establishing the initiatives of the Governor’s Ocean Task Force and creating a unique maritime technology environment on the Mississippi Gulf Coast. Adjacent to the OEF will be the homeport of the 200’ National Science Foundation R/V Gilbert Mason which will be operated by USM as the lead of a consortium. The OEF when completed in 2023 will be leased by USM and will include as tenants NOAA, the Navy, and private industry partners working with USM. The BTEP will support these industry and small business partnerships. [Jonathan Daniels, CEO, Mississippi State Port Authority](#) served as a Task Force member for Mississippi’s economic development Master Plan, *Charting the Future of Mississippi’s Ocean Technology Economy*.



**Jackson County Board of Supervisors** – is the governing body for Jackson County, one of Mississippi’s three coastal counties. It officially endorsed USM’s Ocean Enterprise on March 2, 2020. The endorsement letter described Ocean Enterprise as ‘transformative for the Mississippi Gulf Coast’. The letter applauded USM’s commitment to producing a more economically competitive and innovative MS Gulf Coast, and it offered support from the county. Technology-based, small business startups are spinning out of USM’s Gulf Coast Research Labs and Thad Cochran Marine Aquaculture Center located in Ocean Springs in Jackson County. The BTEP will assist these startups and others to be located in the Singing River Innovation Hub in Pascagoula, MS when completed.



**Pascagoula Redevelopment Authority (PRA)** – PRA is an urban renewal agency established by the City of Pascagoula pursuant to and acting under the authority of Section 43-35-1 et seq. of the Mississippi Code. It is actively engaged in a downtown urban renewal project known as the Riverfront Project. This area of the city is located on the east bank of the Pascagoula River near its mouth opening into the Gulf of Mexico and is located in a *federally qualified opportunity zone (QOZ #28059042900)*. As part of the Riverfront Project, the PRA is developing a tech-based incubator called the Singing River Innovation Hub (SRIH), which has received a \$1 million donation from Chevron Refinery Pascagoula and has been awarded \$1 million by the State from the Gulf Coast Restoration Fund. The PRA is actively working with the Mississippi Enterprise for Technology, (MSET) Inc. 501 c3, USM, and SeaAhead on an operational plan for the SRIH. It is anticipated that the BTEP will be expanded to include the SRIH when completed.



**City of Gulfport** – is the second-largest city in Mississippi after the state capital, Jackson. Along with Biloxi, Gulfport is the other county seat of Harrison County and the larger of the two principal cities of the Gulfport-Biloxi, Mississippi Metropolitan Statistical Area which is included in the Gulfport-Biloxi-Pascagoula, Mississippi Combined Statistical Area. The City has been engaged with USM in efforts to develop and grow the blue tech sector in the City’s downtown area. These efforts include USM in hiring SeaAhead to conduct a study in the summer of 2019. SeaAhead is a Benefit Corporation with the mission of supporting blue tech new venture development. USM engaged SeaAhead to focus on the blue tech programming gap on the Gulf Coast. In January 2020, SeaAhead with USM published, *ACTING FROM STRENGTH AND POSITIONING FOR THE FUTURE: A Narrative for The University of Southern Mississippi’s Role in the Mississippi Gulf Coast’s New Blue Economy*. This study outlines USM’s opportunity to, “create the world’s first accelerator focused on ‘smart’ seawater prototyping... to draw in outside startups and Small Medium Enterprises (SME) that are ready to ocean prototype, test and who are also seeking expertise and potential customers.” On August 18, 2020, the City formally established the Blue Economy Innovation District (BEID), which is composed of the Downtown Urban Renewal Improvement District, the Greater Downtown Urban Renewal Improvement, and The Quarters Historic Minority Business District and Empowerment Zone. The BEID lies fully in two adjacent *federally qualified opportunity zones (QOZ #28047003800 and QOZ #28047001400)* which also include the Port of Gulfport.

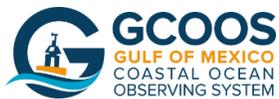
## Nonprofit Organizations:



**The University of Southern Mississippi Research Foundation (USMRF)** – is a Mississippi non-profit corporation, organized under the laws of the State of Mississippi and incorporated in 1998 and recognized as tax exempt under Section 501(c)(3) of the Internal Revenue Code. In accordance with its Articles of Incorporation, the Research Foundation is administered and operated exclusively for the benefit of the University. The USM Research Foundation has an agreement with USM to manage and promote its intellectual property and to provide support for industrial contracts to the University. The Foundation also provides support to USM in negotiating corporate and private research contracts. USMRF is in the process of completing negotiations of a lease with Mississippi Power Company for its Gulf and Ship Island (GSI) building in downtown Gulfport in the heart of the City’s Blue Economy Innovation District (BEID). The USMRF will manage the GSI which will include the offices of USM’s BTEP and provide space for startups and SMEs working with USM and the BTEP.



**Cooperative Institute for Ocean Exploration (OECI)**—In May 2019, NOAA selected University of Rhode Island to host its OECI in partnership with The University of Southern Mississippi and Woods Hole Oceanographic Institute and the non-profit Ocean Exploration Trust. The OECI will work with NOAA's Office of Ocean Exploration and Research (OER) to survey an estimated 3 billion acres of submerged U.S. Exclusive Economic Zone territory. This partnership is advancing NOAA’s mission in delivering high-quality data and information. It is providing funding for joint projects of which USM’s role is focused on novel oceanic research in the Gulf of Mexico. The collaborative partnership with NOAA and the four other institutions as well as the associated funding (\$94 million total with \$11.25 million over five years to USM) will allow USM to drive its research in developing advanced underwater technologies, which the BTEP will assist in the tech transfer and commercialization. This is in support of the Presidential Memorandum for *Ocean Mapping of the United States Exclusive Economic Zone and the Shoreline and Nearshore of Alaska*.



**Gulf of Mexico Coastal Ocean Observing System (GCOOS)** – is a 501(c)3 nonprofit organization governed by a 17-member volunteer Board of Directors from industry, government, NGOs and academia. USM is an academic member on the Board of Directors. GCOOS is dedicated to providing data, information and products to the Gulf of Mexico stakeholder community that includes the private sector, governmental agencies at all levels, academia and researchers, non-governmental organizations and the public. Private sector Board of Directors include representatives from Shell Exploration & Production Company, Fugro, and Ocean Sierra, LLC. GCOOS is part of NOAA’s US Integrated Ocean Observing System (US IOOS) program, a national-regional partnership working to provide new tools and forecasts to improve safety, enhance the economy, and protect the environment. GCOOS has established an Underwater Glider User Group(UG2) community that facilitates sharing and cooperation in the areas related to glider and sensor technology, data collection including quality control, formats, and distribution, and approaches to logistical and operational challenges. Working with GCOOS will provide excellent networking and support opportunities for BTEP clients.



**Jackson County Economic Development Foundation, Inc. (JCEDF)** – is a private 501(c)(3)

development corporation, established to address the economic development needs of Jackson County, MS. The JCEDF allows for a more effective approach to business and industrial growth through a unique public sector/private sector partnership. USM’s Mississippi Defense Initiative (MDI), in June of 2020 received a Phase 3 grant from the Department of Defense Office of Economic Adjustment (DoD OEA). The award will be used by MDI to implement Phase 3 of MDI’s mission to promote and diversify the state’s defense economy through three main industry sectors: **blue economy**, aerospace, and national security. Under the grant, MDI is assisting the JCEDF in developing a strategic innovation plan for the county that will allow it to take an inventory of existing assets in the industrial sector (includes blue tech), research and development facilities, and quality of life in order to continue to diversify its economy. *George Freeland, Executive Director, Jackson Economic Development Foundation served as a Task Force member for Mississippi’s economic development Master Plan, Charting the Future of Mississippi’s Ocean Technology Economy.*



**Gulf Coast Business Council (GCBC)** – is a 501 c3, private sector-led, collaborative group of

top-level business, economic and policy thought leaders from across the three coastal counties of the Mississippi Gulf Coast region. The GCBC provides leadership in areas of public policy including governmental and legislative affairs, military and defense related industry, economic development, infrastructure, education, and workforce development. Its Board of Directors includes top leaders from the entire business spectrum. USM is a member. A 2019 study, *Coastal Mississippi Investment Opportunity Analysis*, commissioned by the GCBC and the Gulf Coast Community Foundation serves in part as a base for USM’s proposal to EDA. The study identifies as one of three priority investment areas, the innovation economy and in particular the blue economy.



**Mississippi Aquarium** – is a 501 c3 and a premier institution in the heart of the City of

Gulfport’s Blue Economy Innovation District delivering an awe-inspiring educational experience that supports animal research and conservation. USM is an aquarium partner involved in saltwater research and education. The BTEP anticipate the Aquarium to provide a venue and opportunities for blue tech innovation demonstrations and events by the BTEP’s clients and partners.

## Stakeholders in Education and Workforce Development:



**South MS Planning and Development District**– provides administrative oversight of the Twin Districts Local Workforce Development Board and worked with local employers and education providers to develop, prioritize, and maintain the Workforce Development Area Strategic Plan<sup>6</sup>. Shipbuilding and Maritime

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<sup>6</sup> *Twin Districts Local Workforce Development Board 2016-2020 Strategic Plan Update*, Southern Mississippi Planning and development District; [http://smpdd.com/wp-content/uploads/2019/06/Twin\\_Districts\\_Local\\_Area\\_Plan\\_-\\_May\\_2018\\_1\\_.pdf](http://smpdd.com/wp-content/uploads/2019/06/Twin_Districts_Local_Area_Plan_-_May_2018_1_.pdf)

are identified as key target industries. USM serves as a partner, provides research expertise, and contributes to the strategic plan's implementation. SMPDD also participates in the EDA Revolving Loan Fund (RLF) program and provides small business loans that will become a potential future source of business startup funding once the BTEP program is operational.



**Mississippi Gulf Coast Community College (MGCCC)** – is part of Mississippi's nationally recognized community college system and provides workforce education programs, onsite and online, to south Mississippi residents and employers. MGCCC's offerings in technical programs like Maritime Multi-Craft Technology Certificate and Unmanned Maritime Systems Technology are feeder programs into USM's Bachelor of Science degrees. They fuel the workforce by producing academically and technically prepared citizens entering the workforce through stackable, credentialed two-year programs of study that prepares the graduates to work in wide range of unmanned maritime systems occupations. [Dr. Mary Graham, President of MGCCC, served as the Workforce Development and Education Sub-Committee Group Leader for \*Charting the Future of Mississippi's Ocean Technology Economy\*.](#)



**U.S. Department of Labor, Job Corp Program** – is the federal agency working to foster, promote, and develop the welfare of the wage earners, job seekers, and retirees of the United States; improve working conditions; advance opportunities for profitable employment; and assure work-related benefits and rights. Job Corps is a no-cost education and vocational training program administered by the Department of Labor that helps young people ages 16-24 improve the quality of their lives by empowering them to get great jobs and become independent. Located in the City of Gulfport's The Quarters Historic Minority Business District and Empowerment Zone, within the Blue Economy Innovation District (BEID), the Department of Labor Employment and Training Administration (ETA) is undertaking a \$30 million Gulfport Job Corps Center redevelopment project. It is expected that blue tech companies engaging in light manufacturing within or near the BEID, as well as indirect jobs produced as a result, will present employment opportunities for Job Corp graduates.

## Business and Industry:

The following does not represent all of USM's strategic business and industry partners but represent several of the key partners.



**Chevron Pascagoula Refinery (large industry)** – is one of the top ten refineries in the US, located in Pascagoula, Mississippi. The refinery is owned by Chevron USA and operated by the company's global refining division. The plant operates 24/7 and has 1,500 permanent employees. It has provided a \$1 million grant to the Pascagoula Redevelopment Authority (PRA) for supporting construction of the PRA's Singing River Innovation Hub (SRIH), which is to be a tech based business incubator when open. The PRA is working with USM, SeaAhead, and the Mississippi Enterprise for Technology, Inc. on development of the SRIH's operation business plan. The BTEP is expected to offer programs and services to the SRIH and its client startups when open.



**Huntington Ingalls Ship Building (large industry)** – is the largest manufacturing employer in the state and a major contributor to the economic growth of Mississippi. Ingalls is the builder-of-record for the U.S. Navy’s Aegis DDG 51 class guided missile destroyers, LHA 6 class large deck amphibious ships, National Security Cutters for the U.S. Coast Guard and the sole builder of the Navy’s fleet of San Antonio (LPD 17) class amphibious assault ships. This year Huntington Ingalls Industries made a major move into the unmanned underwater vehicle business in buying UUV-maker Hydroid. Hydroid specializes in medium and small UUVs for defense and commercial work. The UUVs include the Remus 600, which serves as the basis for the Navy’s MK 18 mine countermeasures system. USM regularly engages with Ingalls SBIR Integration Office and the NAVSEA SBIR Program Office in hosting a node site of NAVSEA’s annual Navy SBIR/STTR Topics Workshop. These efforts and event will be integrated into the BTEP. [Jim McIngvale, Director, Communications and Public Affairs, Ingalls Ship Building](#) served as a Task Force member for Mississippi’s economic development Master Plan, *Charting the Future of Mississippi’s Ocean Technology Economy*.



**Shell Ventures (large industry)** – is the corporate venture capital group of Shell. Established in 1996 as one of the first corporate venture funds in the oil and gas industry and acts as an investor and a partner to help commercialize innovative businesses. It invests in companies that reduce costs, lower emissions, electrify their energy system and helps Shell gain data-based insights. Companies in oil and gas, renewable energy, new fuels for transport, connected mobility and freight, or digital are of interest. USM has been working with Shell’s Chief Oceanographer, Dr Ruth Perry on the “Stones Metocean Monitoring Project”, a long-term study expected to span decades. Shell Ventures has expressed interest in engaging with USM’s BTEP which may include participating in BTEP accelerator cohort sessions and reviewing BTEP clients for potential investment candidates.



**Leidos (large industry) and United States Marine, Inc. (small business)**

– Leidos, is a U.S. Defense contractor that provides scientific, engineering, systems integration, and technical services. Leidos’ Long Beach, MS office is responsible for design and development of the Sea Hunter, an advance autonomous unmanned surface vehicle (USV) as part of the DARPA Anti-Submarine Warfare Continuous Trail Unmanned Vessel (ACTUV) program. United States Marine, Inc., a small business located in Gulfport serves as a subcontractor to Leidos for building the Sea Hunter II. United States Marine, Inc. engages in designing, building, and testing composite boats for military, patrol, special warfare, and other agency use. In addition to the Sea Hunter II, the Company offers naval special warfare rigid inflatable boats, avenger patrol crafts, special operations crafts, and slender vessels. [Dr. John Dane III, Chairman, United States Marine, Inc.](#) served as the [Advanced Development and Testing Focus Group Lead](#) for Mississippi’s economic development Master Plan, *Charting the Future of Mississippi’s Ocean Technology Economy*.



**Ai Control Technologies (technology-based, small business startup)**—specializes and invents new buoyancy technologies for scuba diving and other applications using advanced computing technologies. The company participated with USM in a Department of Energy funded ARPA-E project for development and testing of an *Adjustable Depth Seaweed Growth System*. These same technologies and concepts are now being placed in aquaculture environments for monitoring and tending to oyster reefs through a partnership with USM. This startup company is another example of a technology-based enterprise which will benefit from the BTEP Program and has expressed interest in it.



**Polymergent LLC (technology-based, small business startup)**—is actively engaged with USM and is a new business startup from new technologies spinning out of USM’s public-private partnerships focused on the convergence of polymer science and ocean science. New classes of dyes, pigments and functional materials are being developed to conduct electricity using electromagnetic energy. This company is a prime example of why BTEP Program is being developed.



**SeaAhead (small business subcontractor)** – is a benefit corporation with the mission of supporting new venture development at the intersection of innovation, sustainability, and the oceans. SeaAhead works with bluetech startups at every stage to accelerate growth through their network of mentors, service providers and investors. In collaboration with the New England Aquarium, SeaAhead established the BlueSwell Incubator Program to support marine tech startups as they begin their commercialization journey. SeaAhead operates the Bluetech Innovation Hub at Cambridge Innovation Center (CIC) in Boston, MA which serves as a central landing place for companies large and small. SeaAhead has partnered with CIC to provide flexible workspace and act as a link between ocean entrepreneurs and the tech and venture ecosystem. USM engaged SeaAhead in working with the City of Gulfport in developing the plan for its Blue Economy Innovation District (BEID) and the bench marking study used to help determine the feasibility of the BTEP’s accelerator program. As a subcontractor, SeaAhead will be responsible for the design and implementation of the BTEP accelerator program and assisting with the development of the blue tech investment ecosystem in the Gulf Coast Region.



**New Frontier Innovation, Inc. (small business subcontractor)** – is an organization focused on networking leaders in industrials and the investment community in identifying future trends. Hank Torbert, Kirk Coburn and Tim DeSilva founded The Frontier. Hank is an executive and private investor focused on identifying and supporting emerging technologies for industrials. Hank is a member of the Small Business Capital Formation Advisory Committee to the U.S. Securities and Exchange Commission. Kirk is a serial entrepreneur, active investor, and Investment Director of Shell's corporate venture capital fund at Shell Ventures, focused on investing in "new energies" in both traditional oil-and-gas technologies and future (clean/green tech) markets, as well as IT and mobile technologies that support them. Tim DeSilva is a brand architect and creative strategist, a co-founder of Culture Pilot, and helps co-curate human-centered event experiences such as TEDxHouston and Visualized NYC. As a subcontractor, The Frontier will be responsible for networking and community engagement for development of the blue tech investment ecosystem in the Gulf Coast Region, assisting with the BTEP accelerator program, and in mentoring BTEP clients.

## Utilities:



**Mississippi Power Company** – is an electric utility and a wholly owned subsidiary of Atlanta-based Southern Company. The University of Southern Mississippi Research Foundation is in the process of completing negotiations of a lease with Mississippi Power Company for its Gulf and Ship Island (GSI) building in downtown Gulfport in the heart of the City’s Blue Economy Innovation District (BEID). The GSI will serve as the headquarter operation of the BTEP and will provide office space for startups, SMEs, and federal agencies working with USM and the BTEP. [Brian Useforge, Economic Development Director, MS Power Company served as the Economic Development Focus Group Lead for Mississippi’s economic development Master Plan, \*Charting the Future of Mississippi’s Ocean Technology Economy.\*](#)



**C Spire** – is the seventh-largest wireless carrier in the United States and the largest privately held mobile communications company. C Spire operates more than 1,200 cell sites with 9,000 route miles of buried fiber optic cable. C Spire has recently completed a major technology upgrade of the state’s science and technology research and development arm known as the Mississippi Optical Network (MissiON). The upgrade will triple capacity, cut overall costs and expand the size of the consortium. The MissiON extends into the City of Gulfport’s BEID and provides fiber optic services to the GSI building, out of which the BTEP will operate. C Spire is turning up the enhanced connections for the research arms at Ole Miss, the University of Mississippi Medical Center, Mississippi State, Jackson State, the University of Southern Mississippi, Stennis Space Center, the U.S. Army Corp of Engineers’ Engineering Research and Development Center and the national Internet 2 consortium. C Spire has committed to special pricing incentives for businesses opening in The Quarters Historic Minority Business District within the BEID.



**AT&T**

**AT&T Communications, LLC** – is a subsidiary of AT&T that focuses on wireline, wireless, digital, fixed line telephone, mobile phone, broadband, and fiber optic services. AT&T has fiber optic installed in the BEID and has committed to special pricing incentives for businesses opening in The Quarters Historic Minority Business District within the BEID.

## Federal:



**National Oceanic and Atmospheric Administration (NOAA)** – is the federal scientific agency within the United States Department of Commerce that focuses on the conditions of the oceans, major waterways, and the atmosphere. USM has a long history of working with NOAA’s operations at the NASA John C. Stennis Space Center (SSC) in Hancock Co., MS and its Southeast Fisheries Science Center in Pascagoula, MS. The SSC operations include the NOAA National Data Buoy Center (NDBC) and the National Centers for Environmental Information (NCEI) Oceanographic Data Center. Recently, NOAA announced that its unmanned maritime system division, part of NOAA’s new Unmanned Systems Operations Program, will be located in Gulfport, MS.<sup>7</sup> It will be co-located in the Gulf and Ship Island (GSI) building until completion in 2023 of the nearby Roger F. Wicker Ocean Enterprise, when it will move. The co-location in the GSI of this NOAA operation with the BTEP and its client startups and SMEs will significantly facilitate the successful launch of the BTEP and the City of Gulfport’s Blue Economy Innovation District.

Additionally related to NOAA’s new Unmanned Systems Operations Program, NOAA and the U.S. Navy have signed a new agreement to expand jointly the development and operations of unmanned maritime systems in the nation’s coastal and world’s ocean waters<sup>8</sup>. This will enable NOAA to leverage the Navy’s expertise, infrastructure, best practices and training to accelerate its science, service and stewardship mission. This agreement formalizes the Commercial Engagement Through Ocean Technology Act of 2018 (CENOTE), that directs NOAA to coordinate with the Navy on a wide range of functions including research of emerging unmanned technologies, protocols for acquisition of these systems, and sharing facilities for testing and evaluation. CENOTE aims to advance NOAA’s use of unmanned maritime systems, encourage private sector research and development, and ensure that marine data is readily available for use by academic, national security, and commercial interests. The BTEP will help facilitate meeting these aims.



**U.S. Navy** – is the naval warfare service branch of the United States Armed Forces. As with NOAA, USM has a long history of working with the Navy’s operations at the NASA John C. Stennis Space Center (SSC) in Hancock Co., MS. These operations include a branch of the US Naval Research Laboratory (NRL), the Naval Meteorology and Oceanography Command (CNMOC - serves as the operational arm of the Naval Oceanography Program), the Naval Oceanographic Office (NAVOCEANO - responsible for providing oceanographic products and services to all elements within the Department of Defense), and the Navy Special Boat Team 22 and NAVSCIATTS (Naval Small Craft Instruction and Technical Training School). Working with the Navy, USM offers the first in the nation certificate program in Unmanned Maritime Systems. USM annually helps host at the Marine Research Center in the Port of Gulfport, the Navy’s Advanced Naval Technology Exercise (ANTX) Gulf of Mexico demonstration showcase. ANTX provides a lower risk environment where scientists and engineers can evaluate their technological innovations at the R&D level before their technology has to become militarized and interface

<sup>7</sup> New NOAA program to support and expand agency’s use of unmanned systems, NOAA News & Features, March 31, 2020: <https://www.noaa.gov/media-release/new-noaa-program-to-support-and-expand-agency-s-use-of-unmanned-systems>

<sup>8</sup> NOAA, U.S. Navy will increase nation’s unmanned maritime systems operation, NOAA News & Features, August 4, 2020: <https://www.noaa.gov/media-release/noaa-us-navy-will-increase-nation-s-unmanned-maritime-systems-operations>

at the operational level of the Navy — informing both the requirements community and the Navy’s internal investment decisions. ANTX represents a significant opportunity for the BTEP clients to interface with the Navy.



**National Science Foundation (NSF)** – is an independent federal agency created by Congress in 1950 "to promote the progress of science; to advance the national health, prosperity, and welfare; to secure the national defense. The NSF supports ocean research, infrastructure and education to advance the understanding of oceans and ocean basins and their interactions with people and the planet. As part of these efforts NSF’s Division of Ocean Sciences (OCE) selected the University of Southern Mississippi (as lead of the Gulf-Caribbean Oceanographic Consortium) to serve as the Operating Institution (OI) for the third ship in its new Regional Class Research Vessels (R/V). The \$100 million 200’ R/V Gilbert R. Mason<sup>9</sup> – now under construction – when completed in 2023 will operate from its homeport in the Port of Gulfport adjacent to USM’s \$32 million Roger F. Wicker Ocean Enterprise Facility (OEF). Science systems include advanced over-the-side handling equipment, acoustic multibeam bottom mapping and other SONAR systems, a unique piston coring launch and recovery apparatus, and onboard telecommunications and networking instrumentation allowing the collection, processing and sharing of a multitude of data with shore-based researchers and educators in real-time. The Mason represents a major research asset the BTEP can leverage in support of its clients.



**U.S. Army Corp of Engineers Research and Development Center (ERDC)** – is an integral component of the Office of the Assistant Secretary of Defense for Research and Engineering and helps solve our Nation’s most challenging problems in civil and military engineering, geospatial sciences, water resources, and environmental sciences for the Army, Department of Defense, civilian agencies, and the nation. The ERDC is headquarter in Vicksburg, MS. The Corp of Engineers is the lead federal agency overseeing civil engineering project along the Gulf Coast as well as restoration projects approved by the RESTORE Council under the RESTORE Act. USM is participating in a new partnership established this year to support the commercialization of advanced technologies invented at the ERDC. This is in addition to USM’s partnerships with ERDC supporting research and education. These relationships represents significant opportunities for the BTEP clients to interface with the Corp of Engineers.



U.S. Small Business  
Administration

**U.S. Small Business Administration (SBA)** – is a United States government agency that provides support to entrepreneurs and small businesses. USM has a long history of working with and receiving support from the SBA. The USM Small Business Development Center (SBDC) is a partnership program with the SBA that provides services in the form of small business one-on-one no charge confidential counseling and college-level business development workshops as well as connections to SBA’s financial and technical assistance programs.

Since 2001, USM has been a regular recipient of support from SBA via the SBA’s Federal and State Technology (FAST) program for providing assistance to tech-based small businesses competing in the federal Small Business

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<sup>9</sup> *NSF Oceanographic Research Ship to be Named for Gulf Coast Civil Rights Icon*, USM News, 11/27/2019: <https://www.usm.edu/news/2019/release/nsf-oceanographic-research-ship-civil-rights-icon.php>

Innovation Research (SBIR) programs. USM serves, as the technical lead for the state's MS-FAST program for providing this SBIR assistance. The federal SBIR program is referred to as America's Seed Fund for supporting technical innovations developed by small businesses. BTEP clients will benefit from this experience in working with the SBIR programs in seeking early stage applied R&D funding.

USM, serving as the lead in partnership with the Mississippi Enterprise for Technology (MSET), Inc. and Innovate Mississippi (both state chartered 501 c3s), and the Louisiana State University (LSU) Louisiana Business and Technology Center (LBTC), established in 2014 the Marine Industries Science & Technology (MIST) Cluster program ([www.mistcluster.org](http://www.mistcluster.org)). The MIST Cluster is funded in part by an SBA Regional Innovation Clusters (RIC) contract. At the end of October 2020, USM and its partners will have completed the 5<sup>th</sup> year of this five-year contract. The MIST Cluster program supports the development of, and services to, the regional cluster of blue tech small business located from Louisiana, along the Mississippi and Alabama Gulf Coast, into the western panhandle of Florida. The MIST Cluster program has over 120 formal small business members – 48 of which are located in Mississippi – and 9 large business industry members. It has established an extensive network of blue tech cluster members to include not only small business and industry but also federal agencies, other academic institutions, financial organizations, and nonprofits. The BTEP will leverage and build upon this network.