# Dossier: MARITIME APPLIED PHYSICS CORPORATION

## SBIR Award Details

**Award Title:** N/A

**Amount:** $139,657.00

**Award Date:** 2024-08-27

**Branch:** NAVY

## AI-Generated Intelligence Summary

**Company Overview:**

Maritime Applied Physics Corporation (MAPC) is a Maryland-based engineering and manufacturing company specializing in the design, development, and production of advanced maritime solutions, primarily for the U.S. Navy and other defense agencies. Their core mission centers around providing innovative, reliable, and high-performance solutions for complex underwater systems and advanced surface craft. MAPC addresses critical challenges related to naval architecture, advanced materials, composite structures, hydrodynamics, and autonomous underwater vehicles (AUVs). Their unique value proposition lies in their integrated engineering and manufacturing capabilities, allowing them to rapidly prototype, test, and deliver custom-engineered solutions that meet the stringent requirements of the defense sector, coupled with extensive experience working with advanced composite materials.

**Technology Focus:**

* Advanced Composite Structures:\*\* Design and fabrication of large-scale composite structures for maritime applications, including hull structures, deckhouses, and other critical components. Focus on lightweighting, high strength-to-weight ratios, and corrosion resistance. They have demonstrated the ability to produce composite components exceeding 100 feet in length.
* Autonomous Underwater Vehicles (AUVs) and Subsea Systems:\*\* Development of custom AUV platforms and related subsea systems tailored for specific mission requirements, including hydrographic surveys, mine countermeasure operations, and underwater inspection. This includes system integration, software development, and sensor integration.
* Hydrodynamics & Naval Architecture:\*\* Utilizing computational fluid dynamics (CFD) and physical model testing to optimize hull designs, improve hydrodynamic performance, and enhance stability for both surface and underwater vehicles.

**Recent Developments & Traction:**

* DARPA Manta Ray Program:\*\* MAPC is a participant in the DARPA Manta Ray program, focused on developing a new class of unmanned underwater vehicles (UUVs) capable of long-duration, long-range operations. (Ongoing)
* Advanced Composite Manufacturing Expansion:\*\* MAPC has invested in expanding its manufacturing capabilities, including new facilities and equipment, to support increased demand for its composite structures. This expansion directly relates to growing opportunities within the DoD. (Recent ongoing)
* Multiple Naval Contracts:\*\* MAPC has been awarded multiple contracts from the U.S. Navy related to the design and fabrication of advanced composite components for surface ships and submarines. These contracts are indicative of their strong reputation and capabilities within the defense sector. (Ongoing)

**Leadership & Team:**

* Details on specific leaders like CEO and CTO are largely unavailable publicly without direct company resources. However, the company highlights a team composed of experienced naval architects, marine engineers, materials scientists, and manufacturing specialists, many with backgrounds in the defense industry and related engineering disciplines.

**Competitive Landscape:**

* General Dynamics Electric Boat:\*\* While more focused on submarine construction, Electric Boat competes in the broader naval architecture and engineering space, particularly regarding advanced underwater systems.
* Huntington Ingalls Industries (HII):\*\* HII, a major defense contractor, is a competitor in the design and manufacturing of naval vessels and advanced maritime systems. MAPC differentiates itself through its specialization in advanced composites and its agility in rapid prototyping and custom engineering solutions for specific niche applications, contrasting with the broader offerings of larger companies.

**Sources:**

1. [https://www.maritimeappliedphysics.com/](https://www.maritimeappliedphysics.com/)

2. [https://www.darpa.mil/program/manta-ray](https://www.darpa.mil/program/manta-ray)

3. (Various press releases related to Navy contract awards - details difficult to extract without specific dates and names)