

# SUBSEASAIL LLC

## REVOLUTIONARY UNMANNED SEMI-SUBMERSIBLE SAILING VESSEL (USSV)



A race between two USSV vessels



Genó sailing off Puerto Rico Feb 2020



Easy to assemble & launch from boat or dock

### OUR STORY

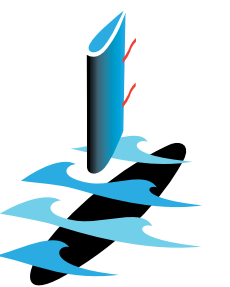
SubSeaSail designs and manufactures disruptively-economical autonomous maritime systems that are engineered for simplicity and protected with key patents that make them unique to the unmanned surface vehicle market. SubSeaSail's new category of sailing vessel, an "Unmanned Semi-Submersible Sailing Vessel" (USSV), has the hull and keel submerged underwater propelled by a wind-catching wingsail assembly above water (patented), and a passive wingsail control mechanism (patented) that enables automatic wing control without the use of complicated, expensive or vulnerable electronics, pulleys, or lines. Only one electro-mechanical component is required for the system to sail with a total electrical load of less than one watt.

The submerged hull significantly improves sailing efficiency by reducing drag – no wave-making drag is associated, only skin friction. The entire system is capable of submerging underwater through a ballasting system to hide from bad actors and to escape rough weather. The passive wingsail control mechanism removes complexity which greatly increases endurance, and can furthermore be scaled to multiple form factors and to be used in the commercial sailing industry.

This design results in a remarkably simple yet robust, affordable system that is scalable and variable, and has an incredibly low visual and infrared signature. SubSeaSail's first customer was the U.S. Army Corp of Engineers to perform passive chemical detection over unexploded ordnance ranges, as well as turbidity at dredge sites. The vessel has a multitude of commercial, defense and scientific applications which include but are not limited to (in alpha order):

- AUV launch and landing platform
- Cargo delivery and pre-positioning of goods (technology scalable to carry large cargo)
- Communications gateway that links subsea assets with real-time reporting
- Defense and military, such as anti-submarine warfare
- Monitor sensitive and controlled areas for detection and identification of illegal fishing vessels and unauthorized traffic
- Sensor platform to collect data as a single unit or in swarms, such as monitoring acoustic signatures, currents, marine life, sensor packages, weather, etc.
- UUV delivery and charging station

The growing demand for autonomous maritime systems to reduce costs and risks associated with missions in the ocean calls for technology that is affordable and reliable. With its unique, patented technologies and disruptively economical price, SubSeaSail's technology answers this need and is focused to achieve its goal of becoming a leading manufacturer and provider of USSVs.



**SubSeaSail**

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