# Navy SBIR/STTR Success

## Maritime Critical Infrastructure Protection and Security Unmanned Surface Vessel

Hydronalix's Unmanned Surface Vessel (USV) technology provides an innovative solution for Explosive Ordinance Disposal (EOD), Intelligence Surveillance and Reconnaissance (ISR), and Port Security Awareness.

**Hydronalix**
Founded 2009
Developer of small expendable maritime robotic technologies
POC: Anthony Mulligan
(520) 203-8351
Green Valley, AZ 85614
www.hydronalix.com

**TOPIC NUMBER:**
**N102-182**

**SBIR INVESTMENT:**
**$1,245,896**

**PHASE III REV:**
**$5,100,000**

## THE TECHNOLOGY

Hydronalix's SBIR Phase III program has successfully integrated multiple sonar systems, X-Band radar, a weather station, stabilized Electrical Optical and Infrared Cameras into an intermediate size USV. The USV platform and sensors passed demonstrations in robust ocean environments. The USV robotic platform is less than 100 pounds with up to 24 hour duration, and can be operated via satellite control.

## THE CHALLENGE

Navy Explosive Ordnance Disposal (EOD) forces require a communications bridge between the Mark 18 unmanned underwater vehicle and mission headquarters while executing in stride Mine Countermeasure (MCM) operations. This desirable capability reduces or eliminates time for boat teams being in harm's way.

## THE NAVAL BENEFIT

The benefit to the warfighter includes the ability to do remote monitoring for persistent, around-the-clock operations--revolutionizing functionality and reduc-ing deployment dangers currently required for mine countermeasure missions. The integrated technologies are expected to increase safety to our warfighter by 50% and increase mission success by 1.5 times. This will be done by providing warfighters with situational awareness outside the area of concern--eliminating the need for warfighters to enter anticipated danger areas for the duration of their mission.

## THE TRANSITION

The U.S. Navy looks to incorporate this mobile communications bridge and situational awareness technology into the UUV Program reducing required manpower in harm's way. Navy Expeditionary Combat Command (NECC) Riverine Forces and Navy Search and Rescue applications are additional transition opportunities being pursued. The first two systems are scheduled for fleet demonstration trials in 2017.

## THE FUTURE

Upon successful fleet trials, requirements will be refined and second generation platforms will be developed for continued fleet trials and eventual acquisition. Non U.S. Navy Phase III sales include systems to Allies and are expected to grow significantly. SONAR sensor sales on smaller USV platform have already started for use in search and recovery missions both domestically and internationally. Phase III export sales in 2016 are at $400,000 and expected to double over 2017. Small unmanned robotic maritime vehicles developed by Hydronalix have use beyond maritime port security such as search and rescue operations with first responders, and Coast Guard and persistent ISR for NOAA mammal monitoring.

***"This program has been instrumental in launching the company with the first revenues coming from its single phase I and subsequent phases and now the company has booked over $9 million in sales"*** – Anthony Mulligan, CEO, Hydronalix

***"The Navy is looking forward to the efficient and successful completion of this SBIR program to better support and protect our sailors in harm's way"***
– Tony Brescia, Program Manager, Naval Air Warfare Center



NAVAIR Public Release 2017-313.
Distribution Statement A – Approved for public release; distribution is unlimited.