



HYDRONALIX, INC.

Let's face it – Baywatch probably wouldn't have been as popular if robotic, life-saving USVs were cast out to sea in lieu of beautiful lifeguards. But for drowning victims, every second matters, and with speeds capable of up to 20 mph, these machines are fast becoming the preferred method of rescue operations worldwide. The Emergency Integrated Lifesaving Lanyard, called EMILY for short, was created by the team at Hydronalix during its Phase I SBIR work with the Navy, beginning in 2009. While originally focusing on vehicle vessels for the fleet, the Arizona-based small business had the idea to create a life-saving device for drowning victims. The result was a highly durable device designed to race to the victim, even through heavy surf. The deep, 22-degree hull is designed to track straight during wave breaching. EMILY is able to survive impact at full speed or in surf with rocks, reef, or pilings.

PHASE III SUCCESS

\$4.3 MILLION

AGENCIES

DOC (NOAA), DHS, NASA, NSF, DOE, DOD

SNAPSHOT

2015 Tibbetts Winner; recently purchased 16,000 square feet of production, office and engineering space in Sahuarita, Arizona

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With their innovation in hand, the team began working with Los Angeles County lifeguards, where they were able to demo the technology and gain valuable feedback in the process from the pros who would eventually use the system. EMILY is still in use today by Los Angeles County lifeguards. Capable of maintaining 20 miles per hour for 35 minutes, EMILY is also able to patrol at five miles per hour for over 500 minutes, making it a useful tool for them to loiter outside the surf until needed by lifeguards to dispatch to the drowning scene.

“Our original goal was to develop unmanned surface vehicles (analogous to unmanned aerial vehicles) that go into the water,” explains Robert Lautrup, Co-Inventor of EMILY and partner in Hydronalix, along with CEO and Founder Anthony Mulligan. “We have since added GPS, sophisticated guidance, and a variety of communication and sensor options, so these are actually water-born UAVs with a modular architecture.”

The company got its start in 2009, and a flurry of activity and national recognition sent Hydronalix into the spotlight. Just one year after it was founded, Hydronalix received an award from Popular Science Magazine for the “Top Technology of the Month.” Simultaneously, in 2010, TIME Magazine published its annual list of the Top 50 technologies, to which Hydronalix was also named 7th. A 2011 recognition from Condé Nast Traveler put the company on the international map, where it was a finalist for an award for Innovation and Design in London. International demand for its product suite has continued to grow and Hydronalix just recently signed a contract to deliver 65-inch USVs

to the French Government for water sample testing purposes. Other notable accolades include being named to the “Top Eleven Inventions of the Year” by Savannah Ocean Exchange, making AUVSI’s “Best Innovations of 2011” list, being named by American Scientific as a “Compelling Breakthrough of 2012,” and being honored by both Aviation Week and the Canadian Safe Boating Council as an “Innovation of the Year” finalist.

Domestically, Hydronalix is working with several government agencies, as well as pursuing opportunities in the commercial marketplace. For the Department of Homeland Security, the company is testing the unit in Oregon, where the Depoe Bay city firefighters are using EMILY to rescue individuals in dangerous terrain where they otherwise could not attempt rescues.

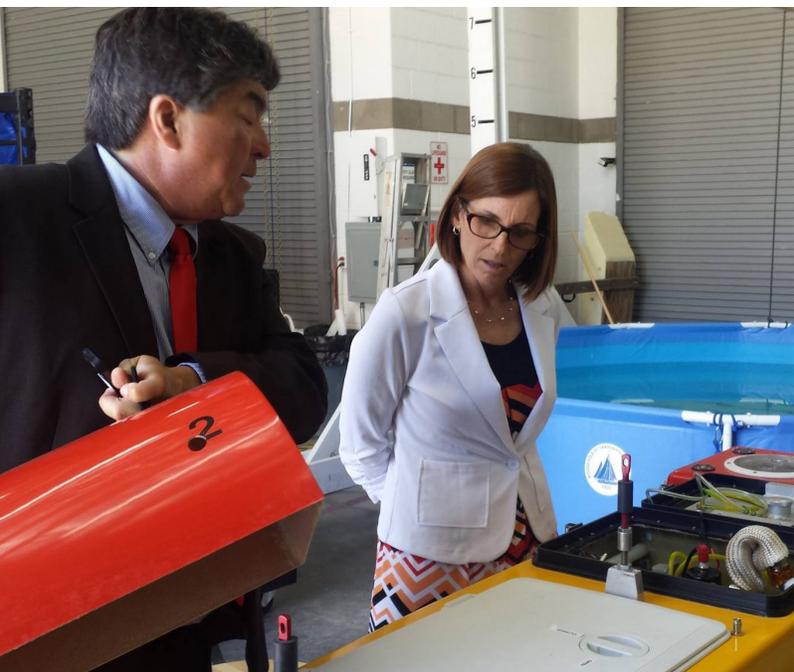
For the National Oceanic and Atmospheric Administration (NOAA), Hydronalix built and delivered 10 hurricane-tracking units, which carried all of the required sensors to be inserted in the eye of the storm and over the course of a week capture and relay critical weather data to NOAA. The sleek, 65-inch unit is outfitted with a satellite link, camera, and a reciprocating internal combustion engine. The U.S. Navy is also in businesses with the company and uses a variety of its platforms for various missions.

In the commercial sector, Hydronalix is exploring the vast potential associated with environmental monitoring. Since its technology has a modular architecture, and can be controlled from a central point by GPS, missions can be executed in any realm the user desires.

In May of 2015, U.S. Representative Martha McSally toured the Hydronalix facilities in Sahuarita, Arizona, where the company just recently leased over 16,000 square feet of production, office and engineering space. It is currently the only production facility located in the city. However, that could change soon, as Hydronalix is recruiting other high-tech companies to move to the area to form a technology cluster.

Having been in business just six years, the 2015 Tibbetts award was a honor the company is proud to accept, and acknowledges its roots as a true SBIR success story.

“The SBIR program allows the introduction of real, innovative technologies from smaller companies, into products which serve a host of users and uses,” added Lautrup. “This allows us to develop technologies that we would not otherwise be able to – EMILY is a true commercialization story which supports the objectives of the SBIR program.”



TOP ROW: The Emergency Integrated Lifesaving Lanyard (EMILY) is capable of speeds up to 20 mph

BOTTOM LEFT: Representative Martha McSally tours the Hydronalix facilities in Sahuarita, Arizona

BOTTOM RIGHT: The team at Hydronalix presents EMILY at the 2015 Navy Opportunity Forum® along with John Williams of the U.S. Small Business Administration