



Case Study

HyDrone™ 4.5 Generation Integrated with Teledyne's BlueView M900 Mk2 for Search & Recovery Operations

The HyDrone™ 4.5 Generation is Seafloor Systems' latest evolution in compact, remotely operated hydrographic survey vessels. Built for efficiency, reliability, and portability, the new platform extends its versatility into the domain of search and recovery operations through its seamless integration with the Teledyne BlueView M900 Mk2 imaging sonar.



Challenges

Search and recovery operations often take place in low-visibility environments with complex terrain and submerged debris. Traditional diver-based searches can be slow, labor-intensive, and hazardous, creating a need for faster, safer, and more accurate underwater imaging methods.



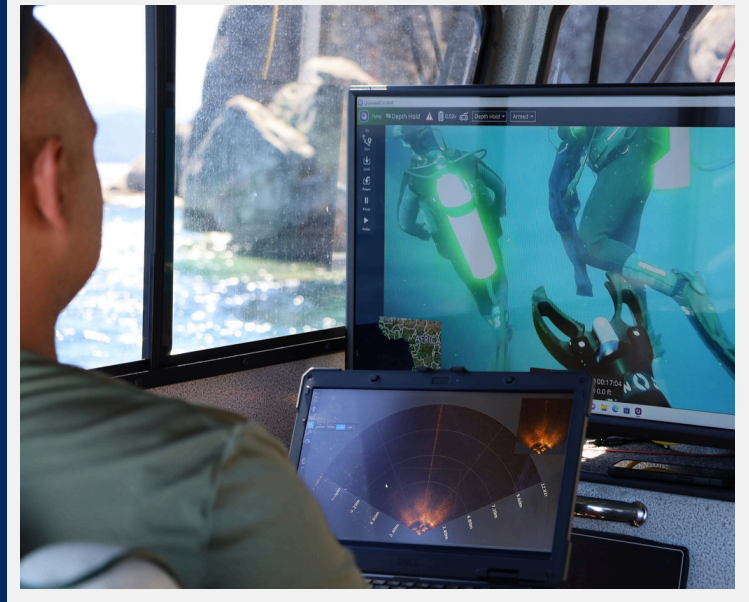
Solutions

The HyDrone 4.5 Generation, equipped with Teledyne's BlueView M900 Mk2 imaging sonar, provided real-time acoustic visuals to quickly identify underwater targets. Operated from the Sheriff's boat, the USV followed pre-planned grid patterns to map the area efficiently and safely.

Challenging Waters, Clear Results.



Search and recovery operations often take place in low-visibility environments with complex terrain and submerged debris. Seafloor Systems partnered with the El Dorado County Sheriff's Dive Team at the site of a boating incident on Lake Tahoe in June 2025. The location provided realistic conditions for testing technology designed for underwater search and recovery. Traditional diver-based searches in these environments can be slow, labor-intensive, and hazardous, highlighting the need for faster, safer, and more accurate underwater imaging methods.

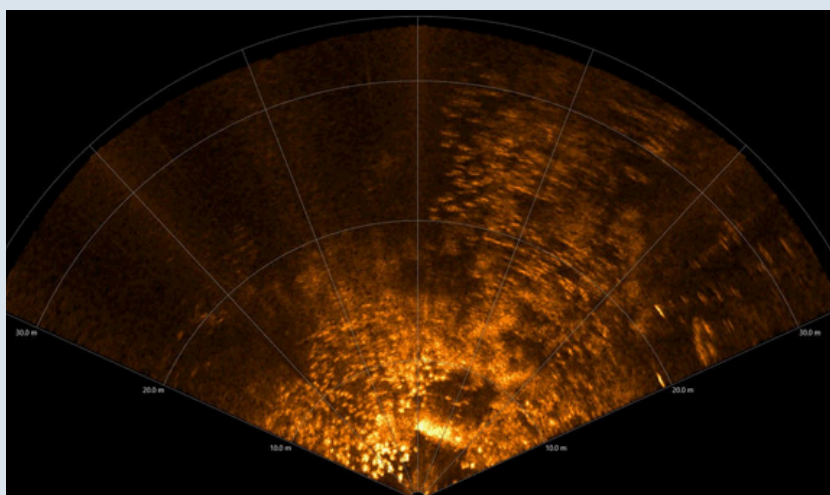


OBJECTIVES

- Evaluate the HyDrone 4.5's search and recovery performance.
- Deploy Teledyne's BlueView M900 MK2 to locate submerged objects.
- Demonstrate safe, efficient underwater surveying.

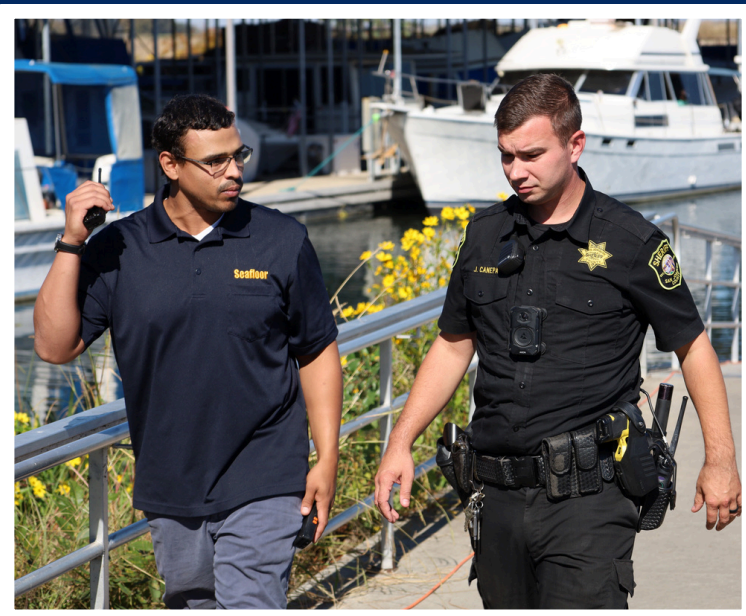
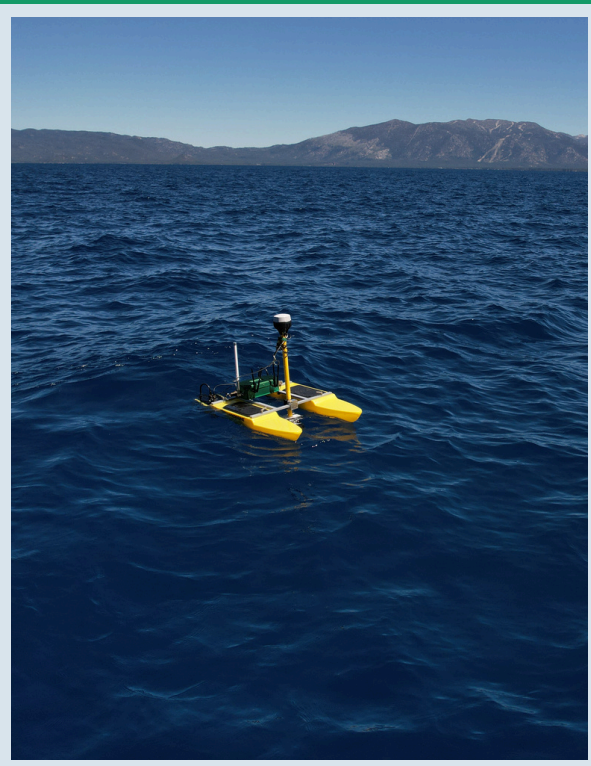
TELEDYNE'S BLUEVIEW M900 MK2

The BlueView M900 MK2 provides high-quality sonar imagery over a wide field of view, helping operators quickly locate and identify submerged objects. Its compact design and real-time imaging make it ideal for efficient and safe search and recovery operations.



Demonstrating Capabilities

The integrated system quickly produced high-resolution imagery of submerged debris and bottom features, showing how easily potential targets could be located and identified. The Sheriff's Dive Team was able to visualize objects in real time, highlighting the potential for improved efficiency and diver safety in active recovery operations.



Key Outcomes

- **Rapid area mapping**, the HyDrone 4.5 completed systematic search patterns much faster than diver-led sweeps
- **Improved situational awareness**, real-time imaging helped confirm points of interest before divers entered the water
- **Enhanced safety and efficiency**, the system reduced the need for extensive manual searching in difficult conditions

Impact of the HyDrone

The collaboration demonstrated the HyDrone 4.5 Generation's effectiveness as a tool for law enforcement, public safety, and recovery missions. By combining autonomous navigation with advanced sonar imaging, the platform offers teams a reliable and efficient way to conduct underwater searches with minimal risk and rapid results.



CONCLUSION

The HyDrone 4.5 Generation with Teledyne's BlueView M900 Mk2 provides reliable, real-time imaging for safe and efficient underwater search and recovery, enhancing operational effectiveness in public safety missions.



Benefits:

- ✓ Seamless Sonar Integration
- ✓ Real-time underwater mapping
- ✓ Safer Search & Recovery operations
- ✓ Rapid, one-person deployment

Contact Us:



(530) 677-1019



<https://www.seafloorsystems.com>



4475 Golden Foothill Pkwy, El
Dorado Hills, CA 95762