Montana Department of Transportation CEE-USV Acceptance Training

Recognizing than using an unmanned survey boat for river bathymetry can generate substantial manpower and cost savings, Montana Department of Transportation studied available options closely. In order to prevent potentially unnecessary expenditure by choosing the wrong product, DOT staff tested the waters with a small inexpensive drone boat that was used in combination with their existing GNSS data collectors. While the boat was unable to keep up with the river currents and its data quality did not meet the requisite standards, it did show the DOT that there was indeed potential for undertaking surveys using an in-house USV program. After a competitive tender based on technical specifications precisely focused on the DOT survey conditions, the CEE-USV™ was selected. The combination of a field-proven professional-quality rugged vehicle with adequate performance to be able to cross the rivers and streams, and an echo sounder with tangible quality control to give confidence in the sounding data meant the DOTs choice will be hard to dispute!

Working near bridges for much of the anticipated survey tasks, the USV data will also be used as an input to hydraulic modeling along with land survey data.

The specification called for the USV to use existing Trimble R8 GNSS receiver, which was incorporated into the CEE-USV's CEESCOPE LITE™ echo sounder as an external data input.

Data acquisition will be courtesy of Eye4Software Hydromagic.