FAQs – Uncrewed Surface Vehicles for Nearshore Mapping

Last updated September 10, 2025

Is a complete solution desired, including the platform and sensors, or just the platform? Does ERDC have desired acoustic (MBES, FLS, SBES, SSS) sensors that are preferred?

ERDC is interested in both. If a performer has a total package, ERDC would love to learn more. At a minimum, ERDC is looking for platforms. If some vendors have some surf zone specific payloads (SSS, MBES, FLS, SBES, etc.) ERDC would be interested in those as well.

For the referenced white paper, are you looking at uncontested civil applications, contested expeditionary applications, or clandestine operations?

ERDC is looking at uncontested civil applications and contested expeditionary applications. It envisions a lot of the technology will cross those mission spaces.

Would an AUV LIDAR system integrated to the USV be acceptable in the near shore characterization?

If AUV refers to an aerial vehicle, then no, ERDC is not interested in airborne sensors or platforms. ERDC is interested in underwater lidar if it has applicability in the surf zone and breaking wave conditions.

Would the vessel being demonstrated have to be a full prototype of the eventual solution, or could it be a representative system that would be further improved prior to delivery?

It does not have to be a full prototype but can be a representative system.

Cost/Schedule is part of the evaluation criteria; however, it is not part of the White Paper template. At what phase do we submit our cost/schedule information? Will a ROM or Firm proposal be required?

You can provide a rough order of magnitude (ROM) estimate in your white paper. A more detailed breakdown may be required if your proposal progresses to the full proposal stage.

Is there a requirement for the max weight for the vehicle system?

No, but launch and recovery by 1-2 people is preferred.

Is the USV system required to supply the agglomeration of the mapping data or is that handled at a base station?

Base station is acceptable.

Is the USV required to have a minimum range?

Minimum range is 5km, preferred >10 km.

Is the USV required to handle a beaching incident? Be able to unbeach itself?

Structurally, yes—it is required to handle a beaching incident. However, in regard to logic to unbeach itself—no, not at this time.

Does the USV have max tolerated dimensions?

No, but see launch and recovery where 1-2 people are preferred.

Is there a requirement for USV launch method? Man portable/ crane launched?

Preferred launch and recovery is by one person, but two people are acceptable.

Is there a required propulsion style? Electrical, gas, JP-8?

There is no preferred propulsion style, and we are open to all styles.

What are the data collection expectations at both threshold and objective operating depths? Which types of sensors are expected to operate at these depths? If data collection is not required at full operating depth, are there defined minimum data collection depths or threshold/objective values?

Our focus for this RFI is primarily focused on the platform. To that end, the data collection capability is an objective not a threshold capability. Target operating depths are between 0 and 10 m depth, and we are interested in data at all of those depths.

For each sensing payload listed in the objective requirements, is there a specified data density standard or expectation?

No. We expect this to be a function of cost point and swappable with a reasonable amount of effort. Finally, we are interested to see what currently exists on the COTS market.

Regarding the objective requirements, how far beyond the wave-breaking zone should data be collected? Are there defined minimum or maximum distances from shore or depths?

Target region is 0 to 10m of depth. Cross-shore position of the 10 m isobath is variable dependent on location of the beach in the world.