



D26 Underwater Crime Scene Investigation: A New Frontier in Forensic Science

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After attending this presentation, attendees will become familiar with the capabilities and limitations of underwater crime scene investigations and the legalities concerning their conduct.

This presentation will impact the forensic community and/or humanity by demonstrating considerable ignorance, misinformation, and confusion which currently exists about the capabilities and limitations of crime scene examinations and the proper protocol for conducting them. Some of these misconceptions will be corrected.

The necessity for recovering evidence from underwater sites is unquestioned. Everything from plane crashes and boating accidents to the disposal of bodies, cars and weapons involved in crimes requires some sort of crime/accident scene processing. There are, however, several questions about how to recover it. These questions involve pragmatic, scientific, safety, and legal issues.

Pragmatically, can evidence of value be recovered after having been exposed to water? Not only can many types of evidence be recovered and valuable information inferred, some types of materials may actually be better preserved than if left in the open on land for the same length of time. In many cases, however, much of the evidential information is lost or destroyed by marine organisms or the water itself. Proper recovery techniques are as important for underwater evidence as for land evidence, if not more so.

Scientifically, is there any requirement for examination beyond just collecting the items of evidence? In many cases no, but in many other cases yes. Like all other potential items of evidence, an object's evidential value depends on the questions or issues in the case. In most cases, documenting the scene underwater provides the same type of information for the case investigators and the jury as does documenting a case with measurements and photographs on land. In other cases, the process of recovering an object will severely compromise its evidential value and an underwater examination is imperative before collecting it.

Safety-wise, how safe is the recovery of evidence? Again, that depends on the nature of the scene. Some are simple for investigators trained to work underwater. Others absolutely cannot be processed by a diver and if the scene is to be processed, some form of technology will be required. A variety of technology is currently being developed to aid the underwater investigator even in routine investigations.

Legally, what is required to conduct an investigation underwater? Underwater operations are sufficiently hazardous that OSHA imposes rather severe regulations to assure the safety of commercial divers. For reasons of exigency, an exemption to the regulations is provided for Public Safety Divers to conduct search and rescue operations or to locate and stabilize the scene of a crime or accident. To process the scene, including the recovery of evidence, however, requires either a commercial diver or a scientific diver. Scientific diving also has an exemption that allows for prolonged investigations and the collection of data and specimens. Additional training and administrative requirements are required to meet the criteria of this exemption. The purpose for the task, not the task itself, establishes whether it falls under the regulations for scientific diving or commercial diving. A scientific diver with proper training and equipment performs many of the same tasks in marine biology and nautical archaeology as commercial divers do in other types of work. These are essentially the same tasks required of underwater crime scene investigators, the specimens just happen to be human and the sunken ships just happen to be recently sunk.

If crime scene investigation is a science, then a crime scene investigation conducted underwater should meet the requirements of scientific diving. This means that the underwater crime scene investigator must also be a qualified forensic scientist as well as a competent diver. The emphasis, however, is on investigator and scientist, not diver. Diving is merely a means of getting to the job site.

Underwater Crime, Scientific Diving, Underwater Investigation