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## LOGISTICAL LESSONS FOR UNDERWATER ANALOGS FROM A FIVE-DAY AQUANAUTIC EXPEDITION

## Abstract

Underwater habitats are excellent analogs for human spaceflight research due to their isolated, confined, and extreme (ICE) nature. The unique environment they present carries logistical considerations that affect a variety of mission aspects, including crew selection, experiment design, and timeline planning. The NEPTUNE (Nautical Experiments in Physiology, Technology and UNderwater Exploration) mission, a five day, five person expedition to an underwater habitat in Key Largo, Florida in October 2019, provided an excellent opportunity to learn and reinforce valuable logistical insights. We present a summary of recommended practices in several categories, including pre-mission preparation, crew sizing, equipment selection, staging, and maintenance, biological sample preservation, timeline management, food preparation, and data management. Furthermore, the mission yielded observations about in-mission crew hygiene practices, comfort, and morale due to the unique thermal, sound, and humidity environment that may be beneficial in planning future aquanautic expeditions or analogs.