



Environmental Science Graduate Program Seminar Series

Application of UAV Systems in HAB Monitoring to Increase Public Health

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Smith Laboratory, Room 3150



Abstract

Harmful algal blooms (HABs) are now occurring more often, for longer time periods, and in areas previously unaffected by blooms. HABs negatively affect the areas they occur in by harming wildlife, altering the microbial community, and destroying ecosystems. Not only do HAB events affect wildlife, but they can also negatively impact the public health of any individuals in contact with the contaminated water source. HABs negatively affect public health through the release of toxins. These toxins can increase the likelihood of certain cancers, cause neurological damage, and even result in death. With these implications on public health, it is crucial to monitor a HAB event to determine what areas will be impacted by the bloom and, if possible, estimate when another event may occur. This is difficult because HABs have variable temporal and spatial values, so it is difficult for current methods to provide accurate and timely data. UAVs can respond as needed to the temporal and spatial needs for monitoring HAB events, making them promising tools for HAB monitoring in the future.