

# Using small unmanned aerial systems (sUAS) for environmental mapping and monitoring

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## Abstract:

Aerial imaging from satellites and manned aircraft has a long history of applications for environmental mapping and monitoring. However, given the requirements for many environmental applications, synchronization of orbital or pilot scheduling, acceptable weather conditions and costs limit the utility of these approaches. In the fall of 2016, the Federal Aviation Administration finalized regulations for the professional use of small unmanned aerial systems, (sUAS) opening the way to their use in the collection of high-quality, on-demand aerial imagery at the site level. Coupled with photogrammetric and image methods sUAS offers new opportunities to efficiently and effectively support site-level mapping and monitoring with a range of different sensors types. This presentation addresses emerging opportunities to use of sUAS systems for environmental monitoring and mapping in context of surface waters and the adjacent built and natural environments.