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Poster Presentation: Cyanobacteria Assessment Network (CyAN)

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Cyanobacteria Assessment Network (CyAN)

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Abstract: The Cyanobacteria Assessment Network (CyAN) is a multi-agency (NASA, USGS, NOAA, and EPA) project and its mission supports the environmental management and public use of U.S. lakes and reservoirs by providing a capability of detecting and quantifying algal blooms using satellite data records and disseminating this information through CyAN, a mobile application developed and hosted by EPA. The app provides water quality managers with a user-friendly platform that reduces the complexities associated with accessing satellite data to allow fast, efficient, initial assessments across lakes and reservoirs. Data from the European Space Agency Copernicus Sentinel-3 satellite Ocean and Land Colour Instruments (OLCI) are used in near real-time to make initial water quality assessments and quickly alert managers to potential problems and emerging threats related to cyanobacteria. Users can track cyanobacteria biomass in their waterbodies of interest by marking the waterbodies with thumb pins. The app currently hosts 2017 and 2018 OLCI-derived cyano imagery and is available to US state environmental and health agencies through Android-based mobile devices. The cyano data covers the continental U.S. at 300m resolution and represents the weekly maximum value cyanobacteria response of over 2,370 resolvable lakes and reservoirs. The imagery is updated on a weekly schedule (previous week's data are available mid-current week) to provide a near real-time view of cyano water quality at user-selected areas of interest.

Keywords: Satellite cyanobacteria detection; water quality; environmental management; mobile application; HABs