

Remote Sensing Software Tools for HAB Monitoring, Tool Refinement, and Improved Technical Transfer

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USACE Harmful Algal Bloom Research & Development Initiative

Delivering scalable freshwater HAB prevention, detection and management technologies through collaboration, partnership and cutting-edge science

Problem Supporting documentation, technical training, and marketing is needed for USACE water quality managers to better utilize new remote sensing software tools to assist with water quality monitoring.

Objective The objective is to better facilitate technical transfer of newly developed remote sensing software tools for HAB monitoring, as well as add functionality to the HAB Explorer web app viewer.

Approach This work has the following objectives: 1) update and add functionality to the HAB Explorer web app viewer in partnership with ESRI and subsequently make web app publicly available, and 2) produce supporting documentation, technical training, and marketing to better facilitate technical transfer (e.g., tool summary document and presentations, quick-guide tool matrix, tool maintenance updates, finalized publication of ArcGIS Pro user-guide technical report, and recorded/in-person technical tool demonstrations).

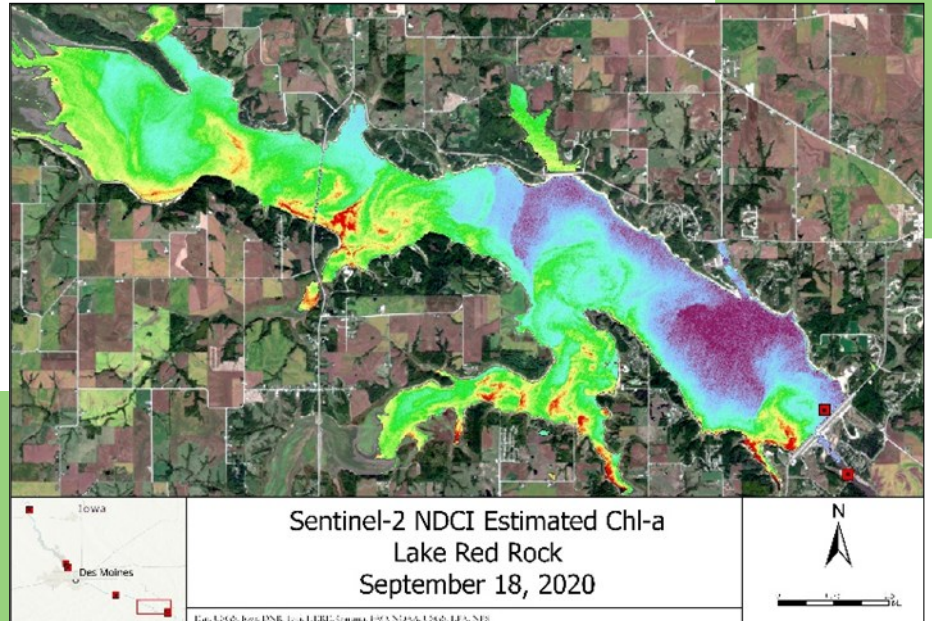


Figure 1: A map portraying HAB satellite imagery

Major Milestones

Date	Milestone
FY22, Q1-2	Submission to the 2022 CW Value to the Nation Book. High-level tool summary document and quick-guide matrix developed for the ANSRP HAB website
FY22, Q2	RS Tools summary presentations developed and provided to the NRM/Ops CoP, GIS CoP, RD22, SAM
FY22, Q2	Technical training of the ArcGIS Pro toolbox and HAB Explorer provided to the USACE district user community (recorded virtual webinars)
FY22, Q2	Phase 1 HAB Explorer feedback from district users and SOW for Phase 2 updates
FY22, Q3	Initiate Phase 2 HAB Explorer contract with ESRI (via AGC)
FY22, Q3	Intermediate visualization updates to map products in the HAB Explorer based on processing changes made by ESA to Sentinel-2 imagery
FY22, Q4	Presentation to LTG Spellmon, Monthly R&D Update to the CG & Contract awarded to ESRI for Phase 2 updates; finalize update plans with ESRI

