

OHIO DEPARTMENT OF HIGHER EDUCATION (ODHE)
HARMFUL ALGAL BLOOM RESEARCH INITIATIVE (HABRI) PROJECT

**Developing fast responding solutions for removing
cyanobacteria, cyanotoxins, and nutrients with
coagulation/flocculation/sedimentation by characterizing
site-specific bloom-related environmental factors**

September 9, 2021

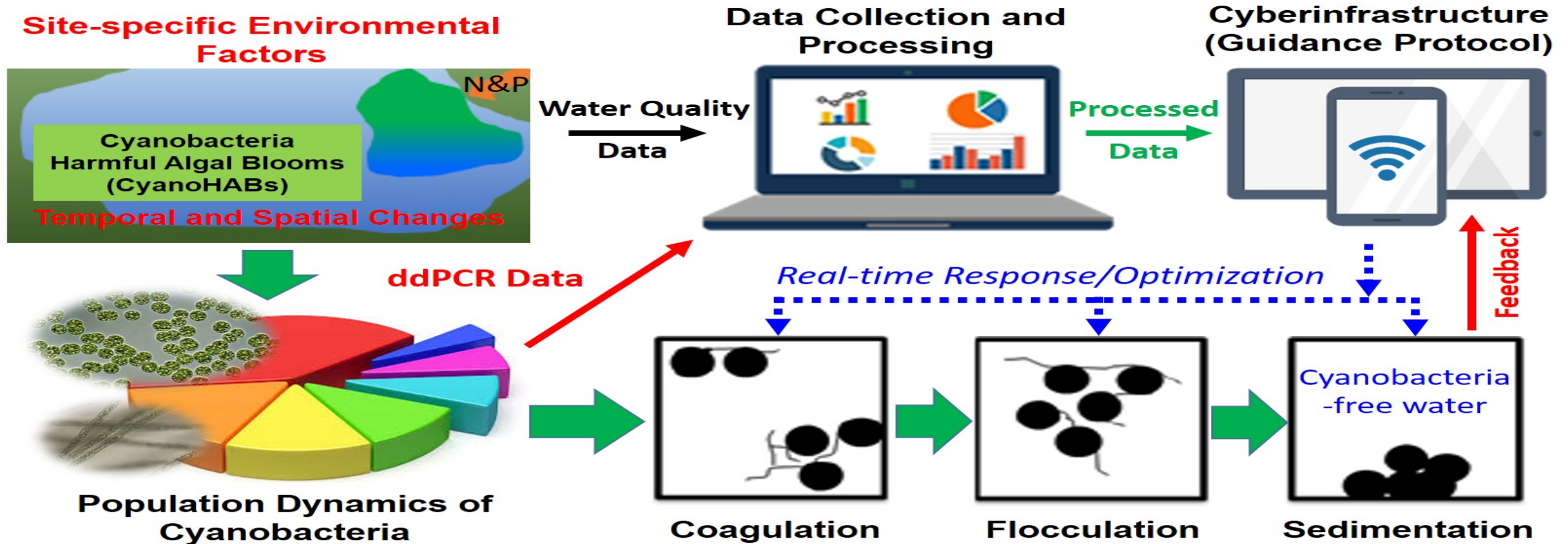
Kick-off meeting

Project Members



Project Overview

Project Period: July 2021 – December 2023



Project Tasks (July 2021 – December 2023)

Task 0. Planning and student training (September – December 2021)

Task 1. Quantification of population dynamics of cyanoHABs in Ohio's freshwater with site-specific cyanoHAB-related environmental characteristics ([Lee](#))

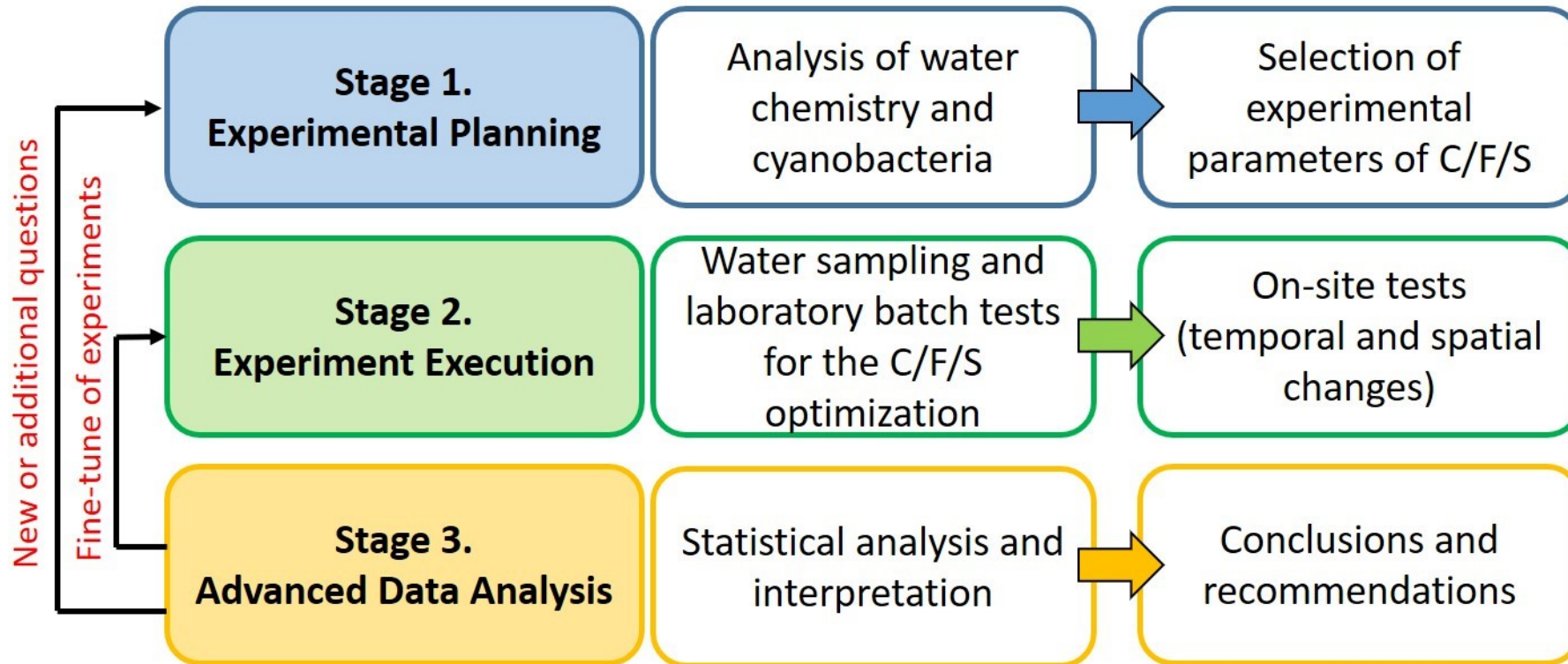
Task 2. Optimization of a continuous-flow C/F/S for the enhanced removal of cyanobacteria, cyanotoxins, and nutrients ([Chae](#), [Dionysiou](#), and [Lee](#))

Task 3. Development of a cyberinfrastructure-based user guidance protocol of C/F/S for cyanoHABs ([Helmicki](#), [Hunt](#), [Chae](#), and [Lee](#))

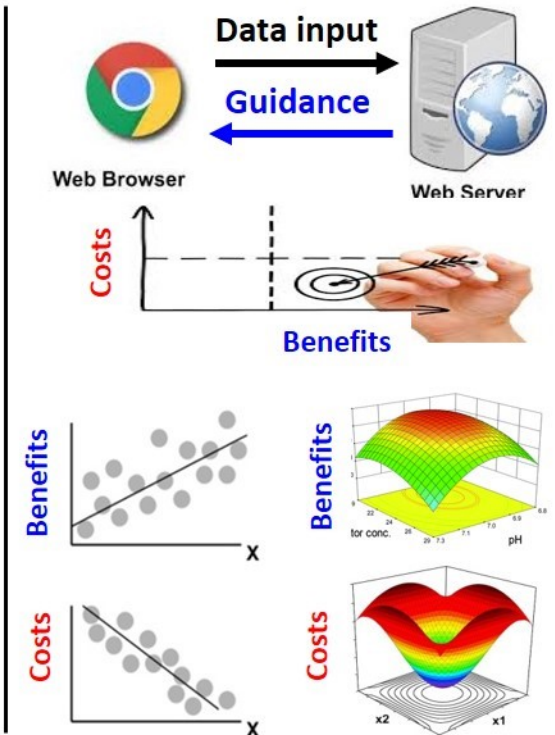
Specific task	Year 1	Year 2
1. Quantification of population dynamics of cyanobacteria and toxins in Ohio's freshwater	X	X
2.1 Optimization of C/F/S for the removal of cyanobacteria, toxins, and nutrients	X	
2.2 Fate and transport of cyanobacteria, cyanotoxins, and other constituents through C/F/S	X	
2.3 On-site testing of the C/F/S mobile system at various lakes, reservoirs, and rivers		X
3. Development of a cyberinfrastructure-based guidance protocol of C/F/S for cyanoHABs		X

User Guidance Protocol

A. Main structure of the guidance protocol



B. Cyberinfrastructure



Discussion Points

1. Water sampling plan:

Temporal effect	Spatial effect		
	Lake	Reservoir/Pond	River
Spring (May-Jun) Summer (July-Aug.), and Fall (Sep.-Oct.)	Western Lake Erie, Great Lakes St. Mary (GLSM)	East Fork Lake	Ohio River

- We will do practice run in October using the Western Lake Erie water

2. Regular meeting?

- Once a month from October or November (You will receive a Doodle pool)

3. Any other things?

- Extra bonus: mapping of cyanobacteria using drone with camera