

# Milestones and Achievements 2018

*Bryan Milstead*

*1 Oct 2017 - 30 Sep 2018*

## Overall Rating:

### CE 1 - Program Planning:

- Participate in ORD, AED, and MAB meetings and planning sessions
  - Details unknown (Target Date: Q1-Q4).
    - \* **Midterm Pars: Fully Successful**
- Participate in planning and refinements for SSWR 4.01C Cyanobacterial research (Target Date: Q1-Q4).
  - Design the lakes database: work with colleagues to define what the database will include, how it will be stored, and what features it will include. (Target Date: Q1-Q4).
    - \* **Midterm Pars: ongoing and fully successful**
  - Assist in the development of a research plan for the twice-weekly monitoring of RI lakes (Target Date: Q1-Q4).
    - \* **Midterm Pars: ongoing and fully successful**

### CE 2 - Program Implementation:

- Participate in implementation of SSWR 4.01C Cyanobacterial research
  - Develop a relational database of all lakes in the coterminous United States for use in cyanobacteria monitoring and research.
    - \* Database Development: develop and populate the lakes database (Target Date: Q4).
      - **Midterm Pars: ongoing and fully successful.** Lakes database of a harmonized NLA 2007 and 2012 functional. We are currently reviewing this to see the future we will take. Temperature modeling may be the new focus\*\*
    - \* Document the Database: write draft of basic metadata for the database. (Target Date: Q4).
      - **Midterm Pars: ongoing**
  - Bloom modeling for SSWR 4.01c. Assist with the analysis of the NLA 2007 phytoplankton and cyano toxin database.
    - \* Decide whether to continue analysis and publish or move on (Target Date: Q1).
      - **Midterm Pars: complete** We are abandoning this due to problems with the data.
  - Develop an R package (goatscape) to collect landscape and census data around lakes (Target Date: Q1-Q4).
    - \* Develop the functions and code needed (Target Date: Q1-Q3).
      - **Midterm Pars: ongoing** two modules has been completed.
    - \* Assemble and publish the package (Target Date: Q3-Q4).
      - **Midterm Pars: ongoing**
  - Assist with modeling of lake photic zone temperatures
    - \* Assemble a database of lake temperatures and local weather (Target Date: Q1-Q4).
      - **Midterm Pars: ongoing**
    - \* Develop models to predict lake temperature from local weather (Target Date: Q1-Q4).
      - **Midterm Pars: not started**
  - Participate in proposed twice-weekly monitoring of cyanobacteria in Rhode Island Lakes
    - \* Field work as required (Target Date: Q1 & Q4).

- **Midterm Pars: not started but ramping up**
  - \* Help with database development and analysis (Target Date: Q2-Q4).
    - **Midterm Pars: not started**
  - \* If possible, become trained in the collection, identification, and quantification of phytoplankton (Target Date: Q1-Q4).
    - **Midterm Pars: ongoing.** We have a functioning lab with two scopes. Purchasing a digital camera, keys and other supplies.
- Provide technical assistance to the Cyanobacteria Monitoring Collaborative
  - Assist with the implementation of the “cyanoScope” project
    - \* Participate in ongoing identification of submitted photos (Target Date: Q1-Q4).
      - **Midterm Pars: ongoing**
    - \* Help with training and analysis as needed (Target Date: Q3-Q4).
      - **Midterm Pars: ongoing**
  - Attend quarterly meeting of the CMC in Chelmsford (Target Date: Q1-Q4).
  - Work with the CMC to document and archive data for 2016 & 2017 (Target Date: Q1-Q4).
    - Midterm Pars: ongoing**
  - Manage data collection for 2018 (Target Date: Q4).
    - \* **Midterm Pars: ongoing.** Still waiting on 2017 data also.
  - Assist with the analysis of data as needed (Target Date: Q1-Q4).
    - \* **Midterm Pars: not started** Ongoing but still waiting for participant data.
- Collaborate on a project to develop trophic state indices for the estuaries with the National Coastal Assessment data
  - Work with Farnaz Nojavan to adapt her lake trophic state models to coastal systems (Target Date: Q1-Q2).
    - \* **Midterm Pars: complete.**
  - Develop coastal models (Target Date: Q2-Q3).
    - \* **Midterm Pars: ongoing.** Working on a draft publication with Betty.

### CE3 - Technical and Scientific Communication:

- Draft data paper on lakes database (if complete) for cyanobacteria research (Target Date: Q4).
  - **Midterm Pars: not started**
- Draft manuscript for publication on the bloom modeling work (if we continue) (Target Date: Q3).
  - **Midterm Pars: abandoned**
- Co-author manuscript on the TSI coastal analysis (Target Date: Q4).
  - **Midterm Pars: ongoing**

### CE 4 - Resource Management:

- As needed, assist in budgeting for and procurement of equipment and services for SSWR 4.01C (Target date: Q1-Q4).
  - **Midterm Pars: ongoing**

### CE 5 - Professional Interactions and Teamwork:

Rating:

- Recruit new people to add photos and identifications for cyanoScope (Target date: Q1-Q4).
  - **Midterm Pars: ongoing**
- Forge new collaborations with URI and other academic institutions (Target date: Q1-Q4).
  - **Midterm Pars: ongoing**

- collaborate with the Betsy Hilborn (USEPA) to collate census and NLCD data around NLA lakes for cyanobacteria risk analysis (Target date: Q1-Q4).
  - **Midterm Pars: ongoing.** R package to complete this work is done. Checking with Betsy to see if she is still interested in the work.
- collaborate with the Rich Moore (USGS) and Anne Hoos (USGS) on an analysis of CMAQ scenarios with the east coast SPARROW model (Target date: Q1-Q2).
  - **Midterm Pars: Analysis done and a draft version was completed.** Unsure of status.
- Collaborate with NSF project in Chile to collate, document, and archive data from a 30 year field ecology project (Target date: Q1-Q4).
  - **Midterm Pars: ongoing and fully successful**
- Participate on the AED Awards Board: serve as an MAB member to the board. Target date: Q1-Q4).
  - **Midterm Pars: ongoing and fully successful -**