Milestones and Achievements 2018

Bryan Milstead

1 Oct 2017 - 30 Sep 2018

### Overall Rating

* Self-rating: **Fully Successful**

### CE 1 - Program Planning

* Self-rating: **Fully Successful**
* Participate in ORD, AED, and MAB meetings and planning sessions
  + Details unknown (Target Date: Q1-Q4).
    - Midterm Pars: **ongoing**.
    - Final Pars: **completed**.
* 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**.
    - Final Pars: **completed**. We have moved to a temperature database which is complete for NLA2007 & NLA2012.
  + Assist in the development of a research plan for the twice-weekly monitoring of RI lakes (Target Date: Q1-Q4).
    - Midterm Pars: **ongoing**.
    - Final Pars: **completed**.

### CE 2 - Program Implementation

* Self-rating: **Fully Successful**
* 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**. Database of harmonized NLA 2007 and 2012 data functional. We are currently reviewing this to see the future we will take. Temperature modeling may be the new focus.
      * Final Pars: **completed**. NLA2007 and NLA2012 temperature database ready and in use.
    - Document the Database: write draft of basic metadata for the database. (Target Date: Q4).
      * Midterm Pars: **ongoing**.
      * Final Pars: **ongoing**. Will probably be documented in a publication.
  + 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: **completed**. We are abandoning this due to problems with the data.
      * Final Pars: **abandoned**.
  + 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.
      * Final Pars: **completed**.
    - Assemble and publish the package (Target Date: Q3-Q4).
      * Midterm Pars: **ongoing**.
      * Final 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**.
      * Final Pars: **completed**.
    - Develop models to predict lake temperature from local weather (Target Date: Q1-Q4).
      * Midterm Pars: **not started**.
      * Final Pars: **ongoing**.
  + Participate in proposed twice-weekly monitoring of cyanobacteria in Rhode Island Lakes
    - Field work as required (Target Date: Q1 & Q4).
      * Midterm Pars: **not started**.
      * Final Pars: **ongoing**.
    - Help with database development and analysis (Target Date: Q2-Q4).
      * Midterm Pars: **not started**
      * Final Pars: **Stephen Shivers is taking the lead on this.**
    - 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.
      * Final Pars: **ongoing**. Participated in a week long workshop and have been processing samples over the summer.
* Provide technical assistance to the Cyanobacteria Monitoring Collaborative
  + Assist with the implementation of the “cyanoScope” project
    - Paricipate in ongoing identification of sumitted photos (Target Date: Q1-Q4).
      * Midterm Pars: **ongoing**.
      * Final Pars: **ongoing**.
    - Help with training and analysis as needed (Target Date: Q3-Q4).
      * **Midterm Pars: ongoing**
      * **Final Pars: ongoing**
  + Attend quarterly meeting of the CMC in Chelmsford (Target Date: Q1-Q4).
    - Midterm Pars: **ongoing**.
    - Final Pars: **ongoing**.
  + Work with the CMC to document and archive data for 2016 & 2017 (Target Date: Q1-Q4).
    - Midterm Pars: **ongoing**.
    - Final Pars: **ongoing**.
  + Manage data collection for 2018 (Target Date: Q4).
    - Midterm Pars: **ongoing**. Still waiting on 2017 data.
    - Final Pars: **ongoing**. Template data entry forms provided; data have not been returned yet.
  + Assist with the analysis of data as needed (Target Date: Q1-Q4).
    - Midterm Pars: **not started**. Ongoing but still waiting for participant data.
    - Final 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 Assessement data
  + Work with Farnaz Nojavan to adapt her lake trophic state models to coastal systems (Target Date: Q1-Q2).
    - Midterm Pars: **complete**.
    - Final Pars: **complete**.
  + Develop coastal models (Target Date: Q2-Q3).
    - Midterm Pars: **ongoing**. Working on a draft publication with Betty.
    - Final Pars: **complete**. Not publishable quality.

### CE3 - Technical and Scientific Communication

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

### CE 4 - Resource Management

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

### CE 5 - Professional Interactions and Teamwork

* Self-rating: **Fully Successful**
* Recruit new people to add photos and identifications for cyanoScope (Target date: Q1-Q4).
  + Midterm Pars: **ongoing**.
  + Final Pars: **ongoing**.
* Forge new collaborations with URI and other academic institutions (Target date: Q1-Q4).
  + Midterm Pars: **ongoing**.
  + Final 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. Final Pars: **not needed**.
* 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: **completed**.
  + Final Pars: **completed**. A draft was submitted, status unknown.
* 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**.
  + Final Pars: **ongoing**.
* Participate on the AED Awards Board: serve as an MAB member to the board. Target date: Q1-Q4).
  + Midterm Pars: **ongoing**.
  + Final Pars: **ongoing**. -