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).
- 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).
  - Assist in the development of a research plan for the twice-weekly monitoring of RI lakes (Target Date: Q1-Q4).

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).
    - Document the Database: write draft of basic metadata for the database. (Target Date: Q4).
  - 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).
  - 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).
    - Assemble and publish the package (Target Date: Q3-Q4).
  - Assist with modeling of lake photic zone temperatures
    - Assemble a database of lake temperatures and local weather (Target Date: Q1-Q4).
    - Develop models to predict lake temperature from local weather (Target Date: Q1-Q4).
  - Participate in proposed twice-weekly monitoring of cyanobacteria in Rhode Island Lakes
    - Field work as required (Target Date: Q1 & Q4).
    - Help with database development and analysis (Target Date: Q2-Q4).
    - If possible, become trained in the collection, identification, and quantification of phytoplankton (Target Date: Q1-Q4).

- 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).
    - Help with training and analysis as needed (Target Date: Q3-Q4).
  - 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).
  - Manage data collection for 2018 (Target Date: Q4).
  - Assist with the analysis of data as needed (Target Date: Q1-Q4).
- 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).
  - Develop coastal models (Target Date: Q2-Q3).

CE3 - Technical and Scientific Communication:

- Draft data paper on lakes database (if complete) for cyanobacteria research (Target Date: Q4).
- Draft manuscript for publication on the bloom modeling work (if we continue) (Target Date: Q3).
- Co-author manuscript ton the TSI coastal analysis (Target Date: Q4).

CE 4 - Resource Management:

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

CE 5 - Professional Interactions and Teamwork:

Rating:

- Recruit new people to add photos and identifications for cyanoScope (Target date: Q1-Q4).
- Forge new collaborations with URI and other academic institutions (Target date: Q1-Q4).
- collaborate with the Betsy Hilborn (USEPA) to collate census and NLCD data around NLA lakes for cyanobacteria risk analysis (Target date: Q1-Q4).
- 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).
- Collaborate with NSF project in Chile to collate, document, and archive data from a 30 year field ecology project (Target date: Q1-Q4).
- Participate on the AED Awards Board: serve as an MAB member to the board. Target date: Q1-Q4).

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