

**ANNUAL REPORT: June 1, 2015 – May 31, 2016**  
**(i.e., Summer 2015, AY 2015-2016)**  
**DEPARTMENT OF ENVIRONMENTAL AND FOREST BIOLOGY**  
**SUNY-ESF**

**NAME:** Kimberly L. Schulz

**I. INSTRUCTIONAL ACTIVITIES**

1. Regular Course Offerings

| Course No.                                   | Title                                 | Credit Hrs. | No. Students | No. of Lab. Sections |
|--|---------------------------------------|-------------|--------------|----------------------|
| SUMMER: none                                 |                                       |             |              |                      |
| <b>FALL: Classes:</b>                        |                                       |             |              |                      |
| EFB 424                                      | Limnology: Study Inland Waters (UG)   | 3           | 58           | N/A                  |
| EFB 624                                      | Limnology: Study Inland Waters (Grad) | 3           | 8            | N/A                  |
| EFB 525                                      | Limnology Practicum                   | 2           | 20           | 1                    |
| <b>Individual instruction and mentoring:</b> |                                       |             |              |                      |
| EFB 495                                      | Undergrad Exp/Coll Teach              | 1           | 5            | N/A                  |
| EFB 798                                      | Research Prob/Env&For Bio             | 1           | 1            | N/A                  |
| <b>SPRING: Classes:</b>                      |                                       |             |              |                      |
| EFB 423                                      | Marine Ecology (UG)                   | 4           | 89           | 6                    |
| EFB 623                                      | Marine Ecology (Grad)                 | 5           | 1            | 1                    |
| EFB 497                                      | Advanced Topics in Marine Ecology     | 1           | 2            | 1                    |
| <b>Individual instruction and mentoring:</b> |                                       |             |              |                      |
| EFB 495                                      | Undergrad Exp/Coll Teach              | 1           | 7            | N/A                  |

**NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT.** For examples of service-learning in courses, see: <http://www.esf.edu/students/service/courses.htm>. Service-learning is a form of structured experiential education in which students engage with the community to be active learners, to enrich their sense of civic responsibility, and to explore practical application for course content. Faculty oversight, reflective thinking, and reciprocity are key components of service-learning.

For the sixth consecutive year, EFB 525, Limnology Practicum, had a significant service learning component. Students could choose to work with two allied local lake associations (Song Lake Association and COFOKLA – Cortland Onondaga Federation of Kettle Lake Associations) to develop their independent projects on topics that were both scientifically relevant and of interest to the homeowners. About half of student time in the course was devoted to developing and performing these independent projects, in co-operation with homeowners (when applicable) or sometimes with managers and practitioners in other areas.

The independent projects culminated in a scientific poster session and reception in 12 Illick Hall during finals week (17 December 2015) that was open to the public and attended by other undergraduate and graduate students not in the Practicum, faculty, members of the Song Lake Association and COFOKLA, as well as the general community. The projects continue to expand a database of water quality and species presence data that will be useful to the homeowners in lake management decisions. Among student final posters were:

- The Effects of Land Cover on the Water Quality of Upper Little York Lake

- A Historical Examination of Macrophyte Percent Coverage on Little York Lake
- An Assessment of Phosphorus Sources & Sinks in the West Branch of the Tioughnioga River
- Does Light Climate Influence Macrophyte Chlorophyll Content?
- What Makes Roads Accessible, Makes Streams Inaccessible: The Effects of Road-Stream Crossings on Aquatic Connectivity of Eastern Trout Species within the Housatonic River Watershed
- Our Ties to the Water: Is There a Relationship Between Socio-Economic Conditions and Water Quality Parameters?
- Analyzing the Effects of Climate Change on Temperature in Different Lake Mixing Types in Upstate New York
- Using a 3-D Bathymetric Model to Re-calculate Methyl-Mercury in Onondaga Lake, Syracuse, New York
- Effects of Wastewater Treatment Plant Inputs on Water Quality and Macroinvertebrate Assemblages Along the Chenango River, NY.
- How Does the Age of Restored Wetlands Affect their Species Richness?

Four of the posters related to the kettle lake district were presented to a meeting of COFOKLA on 18 April 2016, and were very well-received, with students talking for over an hour, including after the poster session, with members of the public and the DEC.

Three of the poster projects were used as final capstone projects in Environmental Science or Environmental Studies, another one was presented by students at the New York meeting of the American Fisheries Society; two students (one graduate student and one undergraduate) are following up on their project with me during the spring semester and continuing this summer to do additional research and writing to produce a paper for publication (planned submission to Limnology and Oceanography Methods before fall 2016).

2. Non-Scheduled Course Offerings (e.g., 496, 899, 999)

|         | <u>Course No.</u> | <u>Title</u>                | <u>Credit Hrs.</u> | <u>No. Students</u> |
|---------|-------------------|-----------------------------|--------------------|---------------------|
| FALL:   | EFB 899           | Masters Thesis Research     | 2                  | 2                   |
|         | EFB 999           | Doctoral Thesis Research    | 1                  | 1                   |
| SPRING: | EFB 498           | Independent research in EFB | 1                  | 1                   |
|         | EFB 899           | Masters Thesis Research     | 2                  | 2                   |
|         | EFB 999           | Doctoral Thesis Research    | 1                  | 1                   |

3. Continuing Education and Extension (short courses, workshops, etc.)

- ESF Graduate Colloquium – “Facing the Challenge: Where the Rubber Meets the Road, 27 August 2015 panel participant

4. Guest Lecture Activities

| <u>Course No.</u> | <u>Title</u>   | <u>No. of Lectures</u> |               |
|-------------------|--|------------------------|---------------|
| CIE 457/657       | Biogeochemistry (Stoichiometry)                                  | 1                      | (18 Nov 2015) |
| ENS 132           | Orientation Seminar: Environmental Science (Research and CIRTAS) | 1                      | (2 Dec 2015)  |
| FOR 442           | Watershed Ecology (Invasive species)                             | 1                      | (3 Dec 2015)  |
| EFB 211           | Diversity of Life (3 Protists and 3 Invertebrates)               | 6                      | (Spring 2016) |
| EFB 492           | Senior Synthesis in Aquatic & Fisheries Sci.                     | 1 (panel)              | (6 May 2016)  |

## II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student's official advisor 21 and unofficial advisor 6

**Reader for honors projects** completed in 2015-2016 academic year:

- Jessica Vacarre, "The forms and sources of nitrogen used by phytoplankton in Guinea Creek, DE";  
Primary advisor: Mark Teece, Environmental Chemistry

**Senior project advisees:**

- Jordan Bodway, "An assessment of phosphorus concentrations and subsequent riparian land-cover delineation in the West Branch of the Tioughnioga River Watershed" (Environmental Science)
- Nicholas DiNardo, "Land use, its correlation to bacterial pollution in the Medomak Valley, ME and its effects on the shellfish industry." (Environmental Science)

**Additional student mentoring (out of the ordinary)**

- Provided advice to Ozan Atalan (SU MFA Candidate) on choosing aquatic plants and species for his exhibition
- Provided advice to Daniel Tinklepaugh (LA) on class final project

B. Graduate Students: (list name, degree sought, starting date, month & year; if a degree was completed, please give date and full citation for the thesis or dissertation).

### MAJOR PROFESSOR

1. Andrew Brainard, Ph.D. candidate, January 2010-current
2. Alex Looi, M.S., August 2012-current
3. Zachary Lafaver, MPS student, August 2014-December 2015 (graduated December 2015)

### CO-MAJOR PROFESSOR

1. Ceili Bachman, M.S. August 2011-present (co-major professor, M. Mitchell)

### MEMBER, STEERING COMMITTEE (other than those listed above)

1. James Arrigoni (Ph.D., EFB Conservation Biology; James Gibbs former major professor); reapplied to program; full committee and roles not yet established.
2. Ericka Augustyn (M.S. EFB, John Farrell major professor)
3. Michael Connerton (Ph.D., EFB Fish & Wildlife Biology and Mgt; Neil Ringler, major professor); on leave/inactive
4. Eric Diefenbacher (Ph.D., EFB Conservation Biology, James Gibbs, major professor)
5. Alison Halpern (Ph.D., EFB Ecology; John Farrell and Don Leopold, co-major professors); defended 20 April 2016.
6. Joie Matillano (Ph.D., EFB Fish & Wildlife Biology and Mgt; Don Stewart, major professor)
7. Rebecca Meissner (MPS, Environmental Engineering; Steve Shaw, major professor); capstone 27 April 2016.

8. Margaret Pavlac (Ph.D.; FCH Environmental Chemistry; Greg Boyer, major professor)
9. Katherine Perri (Ph.D.; FCH Environmental Chemistry; Greg Boyer, major professor)
10. Jeremy Sullivan (M.S., Biochemistry; Greg Boyer, major professor)
11. Samantha Weber (M.S., Environmental Chemistry, Greg Boyer, major professor)

#### CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Chairman: Hanchi Chen, Paper Science (Shijie Liu, major professor); Chair for candidacy exam (exam underway spring-summer 2016).

### **III. RESEARCH COMPLETED OR UNDERWAY**

#### A. Departmental Research (unsupported, boot-legged; title - % time spent)

- Urban pond research as a follow up to a graduate seminar and a Limnology Practicum project. Being pursued with Steve Balough and Andrew Brainard. 2% of time; unsupported.
- Work with Matt Cowen and Jessica Vacarre to run lab simulations and complete lake bathymetry methods manuscript. 1% of time; unsupported.
- Complete some analyses with students and former students (Greg Kronisch) on vernal pool work. 1% of time; unsupported.
- Completion of minor lab work and analyses for dissertations and manuscripts with Bachman, Brainard, Looi and others. 10% of time; unsupported.

#### B. 1. Grant-supported Research (source, subject, amount - total award and current year, award period starting and ending dates; list graduate research assistants supported by each grant)

- *Source:* Research Foundation of SUNY ESF, SUNY Passport  
*Title:* Interactive Effects of Climate Change and Invasive Invertebrates on the Great Lakes  
*PI:* Schulz, K.L.  
*Amount:* \$4,500  
*Dates:* 5/15/2015-8/31/2015  
*Undergraduate from SUNY Buffalo working with Schulz and Brainard supported with this grant*
- *Source:* Great Lakes Research Consortium  
*Title:* Analysis of a Large Multi-Lake Dataset to Advance Understanding and Management of Harmful Algal Blooms in New York State Lakes  
*coPIs:* Matthews, D.A., Schulz, K.L., S.A. Kishbaugh, and N.J. Mueller  
*Amount:* \$14,838 (\$5,000 to KLS)  
*Dates:* 3/31/2016-3/31/2017  
*No graduate students supported on this grant*
- *Source:* Owasco Lake Enhanced Watershed Restoration Action Plan (DEC, Cayuga Community College)  
*Title:* Development of Monitoring Buoys to Provide Real-Time Surveillance of Harmful Algal Blooms in Owasco Lake (Schulz subcomponent: Food web monitoring program)  
*coPIs:* Schulz, K.L. and Upstate Freshwater Institute  
*Amount:* \$22,000 to KLS, \$47,320 to UFI  
*Dates:* summer 2016-summer 2018 (final dates awaiting various DEC, permitting and QAPP approvals at several levels)

*Student summer salary and an undergraduate intern will be supported on this grant.*

- *Source:* New York State Aquatic Invasive Species Spread Prevention Program  
coPIs: C-OFOKLA (Cortland-Onondaga Federation of Kettle Lake Associations), Cortland County Soil and Water Conservation District (CCSWCD) and SUNY-ESF (subcontractor)  
*Amount:* \$99,039.40 to CCSWC, with subcontracts to COFOKLA and SUNY ESF  
*Dates:* May 2016-April 2019  
*ESF undergraduate interns potentially will be supported on this grant*
  2. Research Proposals pending (include information as in B.1., above).

none

3. Research Proposals submitted, but rejected (include information as in B.1, above)

Farrell, J.M., K.L. Schulz and Ducks Unlimited partners. Lakeview Marshes Enhancement Monitoring Program (\$100,000). Proposal was not rejected, but funding became unavailable. Likely we will re-work the proposal for a formal call this year.

#### **IV. PUBLICATIONS** (Full bibliographic citation, i.e., do not use "with Jones," or "Jones, et al."; please list only publications published, in press, or actually submitted during this reporting period --- **do not list manuscripts in preparation**).

##### A. Refereed Publications

- Barlet, N.T., S.A.W. Diemont, M.A. Teece, **K.L. Schulz**. 2015. Emergent microbial food webs in ecological treatment systems for wastewater: Insight from stable carbon isotopes. *Ecological Engineering* 78: 62-71.
- Brainard, A.S. and **K.L. Schulz**. 2016. Deep impact: the cryptic macroalgal invader, *Nitellopsis obtusa*, has significant negative effects on native macrophytes. *Freshwater Science*, in review.
- Brown, B. L., N. H. Ringler and **K.L. Schulz**. 2015. Sediment and water quality limit survivorship in an urban lake undergoing remediation. *Lake and Reservoir Management* 31(2): 145-156.
- Effler, A.J.P., C.M. Strait, S.W. Effler, MG Perkins, A.R. Prestigiacomo, and **K.L. Schulz**. 2015. Linking CDOM patterns in Cayuga Lake, New York, USA, to terrigenous inputs. *Inland Waters* 5: 355-370.
- Effler, A.J.P., F. Peng, S.W. Effler, C.M. Strait, MG. Perkins, and **K.L. Schulz**. 2015. Light absorption by phytoplankton and minerogenic particles in Cayuga Lake, New York. *Inland Waters* 5: 433-450.
- Holmes, C.J., S. Figary, **K.L. Schulz** and C.E. Cáceres. 2016. Effects of diversity on community assembly in newly formed pond communities. *Ecosphere*, accepted.
- Holmes, C.J., J.H. Pantel, **K.L. Schulz** and C.E. Cáceres. 2016. Initial genetic diversity enhances population establishment and alters genetic structuring of a newly established *Daphnia* metapopulation. *Molecular Ecology in press*; doi: 10.1111/mec.13672
- **Schulz, K.L.**, L.G. Rudstam, X. Ji and K.T. Holeck. 2016. Oligotrophication, water clarity, and ecological stoichiometry – Evaluating food quantity and quality for zooplankton in Oneida Lake. Pages 227-244 in L.G. Rudstam, E.L. Mills, J.R. Jackson and D.J. Stewart, editors. *Oneida Lake: Long-term dynamics of a managed ecosystem and its fisheries*, American Fishery Society, Bethesda, Maryland.

##### B. Non-refereed Publications

none

##### C. Papers Presented at Science Meetings (give title, date, occasion, and location)

Schulz, K.L., C. Bachman, A. Looi, J.M. Farrell. 24 June, 2015. Flood regime effects on stoichiometry and plankton in riverine freshwater marshes – field and laboratory experimental tests suggest modifications to the classic paradigm. COBS: Conference on Biological Stoichiometry 2015, Trent University, Peterborough, Ontario, Canada.

Schulz, K.L. and S. Figary. 12 November 2015. Establishment and effects of predatory invasive zooplankton in the food webs of the Finger Lakes and Great Lakes” Finger Lakes Institute Research Conference, Invited presentation.

Brainard, A.S. and K.L. Schulz. Does increased propagule pressure lead to increased non-native abundance and reduced native diversity in lakes? Northeast Aquatic Plant Management Society (NEAPMS) Annual Meeting, January 2016. Saratoga Springs, N.Y.

D. Public Service Presentations (lectures, seminars, etc. to and for the public; give group or occasion, date(s), and attendance)

- The Finger Lakes conference (presentation listed above) was open to the public; 12 November 2015; ~100 people

## V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

1. Government Agencies (Federal, State, Local):

- National Science Foundation Division of Environmental Biology Panelist, 4-6 November

2. Industrial and Commercial Groups, etc.

N/A

B. Unfunded Service to Governmental Agencies, Public Interest Groups, etc.

- Upstate Freshwater Institute Board Member October 2011-current
- Onondaga County Water Protection Scientific Advisory Board 2012-current
- Mentoring of high school student (Asia Coulliard) in the North Syracuse School District Community Connection Mentor Program (professional development program)
- Advised Skaneateles Lake Association subgroup on lake foam
- Assisted C-OFOKLA in grant preparation for obtaining boat stewards and public outreach
- New York State Climate Change Clearing House Sector Expert (volunteer)

## VI. PROFESSIONAL DEVELOPMENT

A. Professional Honors and Awards (for teaching, research, outreach, etc.)

- none

B. 1. Activities in Professional Organizations (offices held, service as chairman, member, participant or consultant)

None this year

2. Professional Society Membership

American Association for the Advancement of Science  
 American Institute of Biological Sciences  
 Association for the Sciences of Limnology and Oceanography  
 American Association of University Professors  
 Ecological Society of America  
 International Association for Great Lakes Research  
 International Association of Theoretical and Applied Limnology (SIL)  
 North American Lake Management Society  
 Phycological Society of America  
 Sigma Xi  
 Society for Freshwater Scientists  
 Xerces Society

3. Other Professional Activities

a. Editorial activity

| <u>Journal (s)</u> | <u>Responsibility</u> |
|--------------------|-----------------------|
|--------------------|-----------------------|

None in this period

| <u>Other (books, symposia, etc.)</u> |
|--------------------------------------|
|--------------------------------------|

None in this period

b. Reviewer

| <u>Journal(s)</u> | <u>No. of manuscripts</u> |
|-------------------|---------------------------|
|-------------------|---------------------------|

None in this period

| <u>Agency</u> | <u>No. of proposals</u> |
|---------------|-------------------------|
|---------------|-------------------------|

|     |    |
|-----|----|
| NSF | 15 |
|-----|----|

| <u>Other</u> |
|--------------|
|--------------|

c. Participation (workshops, symposia, etc.)

| <u>Name of workshop, etc.</u> | <u>Date</u> | <u>Place</u> |
|-------------------------------|-------------|--------------|
|-------------------------------|-------------|--------------|

|  |  |  |
|--|--|--|
| Participant in 2 workshops at the Conference on Biological Stoichiometry |  |  |
|--|--|--|

|         |                      |
|---------|----------------------|
| 24 June | Peterborough, Canada |
|---------|----------------------|

|         |                      |
|---------|----------------------|
| 25 June | Peterborough, Canada |
|---------|----------------------|

|  |            |          |
|--|------------|----------|
| Participated in ESF Mentoring Conference | 12 January | SUNY ESF |
|--|------------|----------|

C. Further Education/Re-training Undertaken, Leaves, Workshops, etc.

D. Foreign Travel (Where, When, Purpose)

- Trent University, Peterborough, Ontario, Canada. 23-25 June 2015. Participant and presenter at the COBS: Conference on Biological Stoichiometry 2015.

## VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

### A. Department-level

- EFB Course and Curriculum Assessment Committee Chair
- Faculty mentor for Greg McGee, Beth Folta
- Occasional participant on GPAC

### B. College-level

- Capital Planning Committee member
- Participated in strategic planning meetings in September 2015
- Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science
- EFB representative to the Water Resources Minor
- Faculty advisor to the Nautilus Club (student marine science club)
- Marine Science Minor coordinator
- Member of AEC advisory board
- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Coordinating effort to develop CIRTAS – Center for Integrated Research and Teaching in Aquatic Science, to find funding to develop a collaborative aquatic science experimental facility for teaching and research at ESF, and participating in efforts to further organize aquatics group in EFB

### C. University-wide, including Research Foundation

- None this year

## VIII. SUMMARY OF SIGNIFICANT ACTIVITIES AND ACCOMPLISHMENTS DURING THIS REPORTING PERIOD, ESPECIALLY THOSE MOST NOTEWORTHY AND RELATIVE TO THE COLLEGE'S AND DEPARTMENT'S MISSION.

**One paragraph on each of the following (i.e., three paragraphs total) would be most helpful:** this past year, what have you done for our students, department/college, and self professionally? NOTE: The information in this section (along with the supporting specific information elsewhere in this report) should be your strongest case for being considered for a discretionary raise (when available), which I'll continue to award based on your contributions to the department and college this reporting period.

### **Students:**

This year was a heavy teaching load year with both Limnology (grad and undergraduate) and the 2 credit Limnology Practicum (very lab and field intensive, including independent student projects), taught in the fall as well as a relatively large Marine Ecology Class (90 students) and marine seminar taught in the spring. I implemented some significant changes in the courses:

- In Limnology Lecture, I began using more online (Blackboard) videos and auto-tutorial exercises to supplement class material or lead in to class discussions, and this was generally well-received. I also offered a short field trip to Onondaga Lake for the Limnology class and used Onondaga Lake as a case study lake throughout the class.
- Limnology Practicum again did service learning independent projects, some with COFOKLA, a local lake association, and the students presented posters to the public and some DEC representatives after the semester ended. Although this is a very labor-intensive class, it is often referred to as one of the main beneficial classes



by graduating AFS seniors, and several students presented their posters at professional meetings (e.g., NY AFS)

- In Marine Ecology I totally revamped the recitations, and continued to run a large field trip to Cape Cod. This year the field trip included more presentations and demonstrations by ESF alums and additional professional discussions, which were well-received. Of course the whales are the hit! Also we launched a film contest from footage we all shot and shared from the EFB GoPros, and were impressed with the winning student film, which might be useful to EFB or ESF in promotional events.
- I had one MPS student graduate in the fall, and have 3 additional graduate students (2 MS and 1 PhD) actively writing their dissertations, who will defend early in the next academic year. I have been working with these students and past students to submit their manuscripts for publication.

### **Department/College:**

I served the Department and College in several ways over the past term, which are outlined above. Most important, in my opinion, are:

- I helped shepherd CIRTAS facilities and externally-funded research there through the extremely disruptive long power outage in summer 2015, and worked to investigate and fix connectivity, water, electrical and other remaining issues over the past year.
- I continue to work with Greg McGee on assessment and to serve as the EFB Course and Curriculum Assessment Committee Chair
- I co-ordinate the Marine Science Minor and help to maintain an institutional arrangement with the Sea Educational Association, which has trained an increasing number of ESF students. I am also the EFB representative to the Water Resources Minor.

### **Self**

This year was a successful year for publication and grantsmanship as I began to submit grants again with the re-opening of my lab. We published six manuscripts, had one additional manuscript accepted, and one is in review. In addition I was part of teams that submitted three research grants, all of which were funded, and we successfully completed work on the research grant that was awarded last year, with a manuscript in preparation for fall submission. In addition, I decided to begin evaluation for promotion to full professor. I greatly enjoyed the opportunity to attend and present at the International Conference on Biological Stoichiometry as well as at the Finger Lakes conference. These meetings have resulted in some collaborations and ideas for future manuscripts and proposals that I am currently pursuing.

## **IX. A. FUTURE PLANS, AMBITIONS, AND POTENTIAL CONTRIBUTIONS FOR YOUR OWN PROFESSIONAL DEVELOPMENT AND THE ENHANCEMENT OF THE PROGRAM IN ENVIRONMENTAL AND FOREST BIOLOGY (brief summary)**

### **B. PROJECTED ACTIVITIES FOR NEXT YEAR**

#### 1. Summer 2016

##### a. Course(s) to be offered

- EFB 202 – project week advisor for Session D at Cranberry Lake
- I plan on shooting more informative videos for the Limnology classes (only 20 of the ~70-80 students can take the lab), and will make these available on the new website I am launching. I am making a new lab manual and new coursepack for these classes

##### b. Proposed research activity

- finish QAPP and begin work on Owasco Lake Harmful Algal Bloom project
- work on GLRC funded project analyzing CSLAP data
- work with several former undergraduates to complete submission of their honor's theses for publication
- rebuild the EFB culture collection of aquatic organisms
- work with 3 graduate students who will be defending this year on completion of manuscripts and dissertations
- complete several other manuscripts in progress
- develop at least one pre-proposal or proposal (likely pre-proposal for submission to NSF in fall)
- finish remaining nutrient analyses
- work on sabbatical plan
- work on promotion packet

c. University, professional society, and public service

- assist two Environmental Science students with projects (Brad Siegel, Shannon Cellan)
- work on EFB assessment report
- complete CIRTAS formalization and paperwork; work to establish formal re-billing system and web presence (I have been less successful than I hoped at getting CIRTAS formally approved during the past year and am committed to completing this task over the summer and early fall.)
- provide database to COFOKLA
- work with COFOKLA on public education related to their DEC grant

2. Fall Semester 2016

a. Course(s) to be offered

- Limnology (undergraduate) – EFB 424
  - Limnology (graduate) – EFB 624
  - Limnology Practicum – EFB 525
- (Formally describe Advanced Topics in Marine Science Course)

b. Proposed research activity

- Work on two HAB grants (GLRC and Oswego Lake)
- Completion of 3 graduate students and help with manuscript submission from these projects
- Work with COFOKLA
- Submission of preproposal or proposal
- Manuscript writing from past projects
- 

c. University, Professional society, and public service

- Serve on search committee for Vice Provost for Research
- Capital Planning Committee member
- EFB Course and Curriculum Assessment Committee Chair; help co-ordinate SUNY Assessment of EFB
- EFB representative to the Water Resources Minor
- Faculty advisor to the Nautilus Club (student marine science club)
- Marine Science Minor coordinator
- Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science
- Member of AEC advisory board

- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Formally open Center for Integrated Research and Teaching in Aquatic Science
- Upstate Freshwater Institute Board Member
- Onondaga County Water Protection Scientific Advisory Board

### 3. Spring Semester 2017

#### a. Course(s) to be offered

- Graduate Seminar: Managing and Archiving of Research Data (second year; with J. Stella and J. Clemons) – (and then formally propose as a course; may offer online as well)
- Advanced Topics in Marine Ecology

#### b. Proposed research activity

- Work on two HAB grants (GLRC and Oswego Lake)
- Completion of graduate student manuscript submission from students defending in fall
- Work with COFOKLA
- Submission of full proposal
- Manuscript writing from past projects

#### c. University, professional society, and public service

- Capital Planning Committee member
- EFB Course and Curriculum Assessment Committee Chair; help co-ordinate SUNY Assessment of EFB
- EFB representative to the Water Resources Minor
- Faculty advisor to the Nautilus Club (student marine science club)
- Marine Science Minor coordinator
- Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science
- Member of AEC advisory board
- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Direct Center for Integrated Research and Teaching in Aquatic Science
- Upstate Freshwater Institute Board Member
- Onondaga County Water Protection Scientific Advisory Board