

ANNUAL REPORT: June 1, 2014 – May 31, 2015
(i.e., Summer 2014, AY 2014-2015)
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				
FALL:	Classes:				
	EFB 424	Limnology: Study Inland Waters (UG)	3	65	N/A
	EFB 624	Limnology: Study Inland Waters (Grad)	3	7	N/A
	EFB 626	Limnology Practicum	2	20	1
	Individual instruction and mentoring:				
	EFB 420	Professional Internship/Envrn Biology	22 tot.	6	N/A
	EFB 495	Undergrad Exp/Coll Teach	1	5	N/A
	EFB 498	Independent Research/ Envrn Bio	10 tot	4	N/A
	EFB 798	Research Prob/Env&For Bio	1	1	N/A
SPRING:	Classes: (also see EFB 496 in non-scheduled offerings section below)				
	EFB/FOR797	Managing & Archiving/Rsrch Data	1	7	N/A
	Individual instruction and mentoring:				
	EFB 298	Research Internship/Envrn Biology	2	1	N/A
	EFB 498	Independent Research/ Envrn Bio	7 tot	3	N/A
	EFB 798	Research Prob/Env&For Bio	1	1	N/A
	ENS 498	Independent Research/ Envrn Sci	4	1	N/A

NOTE: PLEASE INDICATE WHICH COURSE(S) HAD A SERVICE-LEARNING COMPONENT AND BRIEFLY EXPLAIN THE NATURE OF THIS COMPONENT.

EFB 525, Limnology Practicum, had a significant service learning component for the fifth time this year. Students worked 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). This culminated in a scientific poster session and reception in 12 Illick Hall during finals week (12 December 2014) that was open to the public and attended by over 45 individuals including other undergraduate and graduate students not in the Practicum, faculty, and members of the Song Lake Association and COFOKLA, as well as the 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:

- Indications of Anthropogenic-Derived Nutrient Loading: Localized Concentrations of ¹⁵N Isotopes in Song Lake
- Invasion of Variable Leaf Milfoil in Little York Lake

- Effects of Turbidity on Phytoplankton and Planktivore Abundance in Four Central New York Lakes
- Stop Aquatic Hitchhikers! Implications for a Watercraft Steward Program in New York's Kettle Lakes
- Optical Characterization of Several Lakes in Upstate New York
- Trace Element and Nutrient Concentrations Across an Anthropogenic Gradient in Webster Duck Pond, NY
- Effects on Macrophyte & Macroinvertebrate Abundance Due to Eurasian Milfoil Treatments in Cazenovia Lake
- Macroinvertebrate Micro-Migration: Juxtaposition of Impounded and Free Flowing Streams of New York
- Do Introduced Salmonids Displace Native Brook Trout in the Salmon River Watershed of New York?

In spring 2015, the students working on the local lakes the previous Fall were invited to present their posters at a COFOLKLA meeting on March 17, 2015 (after the fall term limnology class and during a busy time in the spring term), and students brought the class posters to this meeting and met with the public and regional lake association members. The student-public interactions have been very positive, and helped the residents as they consider management alternatives on their lakes. This service learning component is highly beneficial for both students and the public, and I hope to continue similar efforts in the future with this class. I hope to continue and expand these interactions in the coming year

In addition, one of the senior projects for Environmental Science students that I mentored (Wendy Huang) involved an assessment of fecal and non-fecal coliform in a creek leading to Tully Lake and in Song Lake. The data we are compiling and collecting on the lakes from graduate student projects, undergraduate independent projects and capstone projects are being made publicly available during 2015-2016 and will be available for the benefit of homeowners and public users of the lakes with boater access. Wendy provided her poster and data to the lake associations.

Finally, another undergraduate project (Erik Hazelton) from the Fall 2013 Limnology Practicum class was continued and expanded as an honors project in 2014-2015 (co-supervised by me and Alex Weir) and has an outreach component. This project deals with foam build-up on Skaneateles Lake. The foam has been increasing in recent years and there is a lot of homeowner and drinking water concern about this foam. We meet with a small group of scientists, regulators involved in the lake's water management, and home owner association representatives about the foam issue and ESF involvement, and Erik is working on converting his honor's dissertation to a manuscript this fall; he has made his final poster (presented at the Spotlight on Student Research) available to representatives of the Skaneateles Lake Association.

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>
SUMMER:	EFB 899	Masters Thesis Research	1	1
FALL:	EFB 499	Honors Thesis/Project	1	3
	EFB 899	Masters Thesis Research	1	1
	EFB 999	Doctoral Thesis Research	13 tot	2
SPRING:	Class:			
	EFB 496	Undergraduate Seminar in Marine Ecology	1	10
	EFB 899	Masters Thesis Research	2 tot	2
	EFB 999	Doctoral Thesis Research	13 tot	2

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

- ESF Graduate Colloquium – 21 August 2014, “Facing the Challenge: Where the Rubber Meets the Road
- GSA Panel – 3 December 2014

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
ENS 132	Environmental Science Seminar,	1 (12 November 2014)
EFB 211	Diversity of Life	5
EFB 492	Senior Synthesis in AFS	1 (Exit interview panel: 24 April 2015)
EFB 797	Core Seminar: Proposal Writing in Ecology	1 (panel participant)

II. STUDENT ADVISING

A. Number of undergraduates for whom you are the student’s official advisor 25 (EFB and EnvSci) and unofficial advisor 5

Undergraduate honors and independent projects completed in 2014-2015 academic year:

Honors:

- Emily Hall: “A test of genetic variation for resistance to effects of seawater acidification on the skeletal development of sea urchin larvae”
- Erik Hazelton: “What’s in the foam? A look at the biota within lake foam” (co-advisor: Alex Weir)
- Gregory Kronisch: “Quantifying decomposition of allochthonous matter in forest pools of Central New York”

Senior project advisees:

- Wendy Huang: “Effects of different anthropogenic inputs on the presence of fecal coliform and nutrient concentration in the kettle lake region of Central New York”
- Ryan Shuart: “Potential benefits of hybrid willow plantings along highway right-of-ways in Anne Arundel County, Maryland”
- Joseph Sullivan: “A hierarchical grading matrix for the National Water Trails System”
- Paige Thompsen (graduating Dec 2015); she has completed her field work and currently we are working on her data analysis

Reader for honors projects:

- Abigail Jones, “The impact of human activity on sedimentary stored carbon levels within a mangrove forest” Primary advisor: Mark Teece, Environmental Chemistry

- 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. Adam Effler, Ph.D., GPES; 2014-2015 (deferred admission from 2013).
Defended successfully: April 21, 2015
Dissertation title: Optical Characterization of Cayuga Lake, New York
3. Alex Looi, M.S., August 2012-current
4. Zachary Lafaver, MPS student, August 2014-current

CO-MAJOR PROFESSOR

1. Ceili Bachman, M.S. August 2011-present (co-major professor, M. Mitchell)
2. Stefan Karkuff, M.S. August 2012-2014 (co-major professor, J. Stella)
Defended successfully: 8 September, 2014
Dissertation title: Quantifying Forest Subsidies to Food Webs in Woodland Pools

MEMBER, STEERING COMMITTEE (other than those listed above)

1. James Arrigoni (Ph.D., EFB Conservation Biology; James Gibbs, major professor); apparently separated from program fall 2014.
2. Nate Barlet (M.S., ERE Ecological Engineering; Stuart Diemont, major professor); completing field portion of dual Peace Corps/MS program. Defended successfully 29 April, 2015. Dissertation title: Emergent Microbial Food Webs in Ecological Treatment Systems for Wastewater: Insight from Stable Carbon Isotopes.
3. Michael Connerton (Ph.D., EFB Fish & Wildlife Biology and Mgt; Neil Ringler, major professor); on leave/inactive
4. Matt Gunderson (M.S., EFB Fish & Wildlife Biology and Mgt; Kevin Kapuscinski, and John Farrell, major professors)
Defended successfully 20 April, 2015. Dissertation title: Habitat-assemblage Relations and Seasonality of Aquatic Macrophytes in the Upper Niagara River.
5. Alison Halpern (Ph.D., EFB Ecology; John Farrell and Don Leopold, co-major professors); on leave/inactive
6. Matthew Isles (M.S., ESC Water & Wetland Resource Studies; Sharon Moran, Environmental Studies, major professor); on leave/inactive
7. Suman Maity (Ph.D., M. Sepulveda, Purdue University, major professor); Ph.D. student at Purdue University – serving as external committee member; passed candidacy exam fall 2010; on leave, inactive.
8. Joie Matillano (Ph.D., EFB Fish & Wildlife Biology and Mgt; Don Stewart, major professor)
9. Rebecca Meissner (MS, Environmental Chemistry; Greg Boyer, major professor)
10. Ian MacColl (M.P.S., ESC Water & Wetland Resource Studies; Steve Shaw, major professor)
Defended successfully 4 June 2014; internship presentation: “A Water Quality Assessment of Jamaica Bay”
11. Margaret Pavlac (Ph.D.; FCH Environmental Chemistry; Greg Boyer, major professor)

12. Rachel Radicello (M.P.S., ESC Water and Wetland Resource Studies, Greg Boyer, major professor)
Defended successfully 27 April, 2015 (internship presentation)
13. Marci Savage (Ph.D., FCH Environmental Chemistry; Greg Boyer, major professor)
14. Justine Schmidt (Ph.D., Biochemistry; Greg Boyer, major professor)
Defended successfully 21 November, 2014. Dissertation title: Fate and Detection of Microcystin-LR and its Metabolites in the Environment”
15. Jeremy Sullivan (M.S., Biochemistry; Greg Boyer, major professor)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

Was appointed to several committees as chair, but none of the students actually defended this year

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 Balogh and Andrew Brainard. 2% 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
 - *Source:* NOAA Coastal and Marine Habitat Restoration Project Grants under the American Recovery and Reinvestment Act.
Title: *“Recovery Act – Coastal Fisheries Habitat Restoration in the St. Lawrence River.*
PI: Farrell, J.M. (with D.J. Leopold, M. Mitchell, J. Gibbs, K.L. Schulz).
Amount: \$202,317 subcontract to ESF of \$1,086,010 Ducks Unlimited
Dates: 9/2011-8/2014
This grant supports Ceili Bachman, M.S. student working with Myron Mitchell and me beginning fall 2011 and supported Alex Looi, M.S. student, in Spring 2013 and for summers 2013 and 2014
- Graduate Student Led Grants (on which I am PI of record; other graduate student grants not listed):***
- *Funding Agency:* NOAA
National Estuarine Research Reserve Fellowship (Estuarine Reserves Division, Office of Ocean and Coastal Resource Management, National Ocean Service, NOAA)
PIs: Andrew Brainard and K.L. Schulz;
Amount: \$60,000;
Dates: May 2012-May 2015
This grant supports the Ph.D. research of Andrew Brainard

2. Research Proposals pending (include information as in B.1., above).

None – as stated in the annual report of 2012-2013, I would not submit proposals again until I had a serviceable laboratory for fulfilling grant obligations (lab rendered unusable due to construction – greenhouse project). After ~two years with no functional lab, I moved into the lab again in 2014 and shortly thereafter experienced a flood; we had to move all equipment out of the lab for floor repairs during spring/summer 2014; we returned to the lab after the floors were replaced at the start of Fall 2014 and are nearly back to normal functioning (with the exception of losses during the power outages), so I submitted the SUNY Passport Grant in April 2015 (successful, see above) and anticipate submitting additional grants during the coming academic year.

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

None

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.
- 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*; accepted with revisions.
- Effler, A.J.P., F. Peng, S.W. Effler, C.M. Strait, M.G. Perkins and K.L. Schulz. 2015. Light absorption by phytoplankton and minerogenic particles in Cayuga Lake, New York. *Inland Waters*; accepted with revisions.
- Figary and K.L. Schulz. Surplus and spines: Impacts of *Cercopagis pengoi*, an invasive predatory zooplankton, may be due to a lack of limiting resources and pre-adaptation of a likely prey species. *Hydrobiologia*; in revision
- Gillette, Jacob P., Kimberly L. Schulz, and Mark A. Teece. 2014. Light apparatus for mesocosm photo-manipulation (LAMP): An inexpensive waterproof lighting device for within-lake mesocosm experiments. *Limnology and Oceanography Methods* 12: 592-603.
- Holmes, C.J., J.H. Pantel, K.L. Schulz, and C.E. Cáceres. Limited evidence for the role of initial diversity or persistent founder effects in the genetic structuring of a newly established *Daphnia* metapopulation. *Molecular Ecology*, in review.
- Schulz, K.L., L.G. Rudstam, X. Ji and K.T. Holeck. Oligotrophication, water clarity, and ecological stoichiometry – Evaluating food quantity and quality for zooplankton in Oneida Lake. *Oneida Lake Book* (peer-reviewed) accepted, in revision.

B. Non-refereed Publications

none

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

- Brainard, A.S. and K.L. Schulz. 14 April 2015. On the influence of recreational boats and macrophyte communities: Does increased propagule pressure lead to increased non-native abundance and reduced native diversity in lakes? 2015 New York State Wetlands Forum, Syracuse, NY.
- Farrell, J. M., B. Brown, C. Bachman, A. Looi, M. Regan, S. LaPan, M. J. Mitchell, K. L. Schulz, D. J. Leopold, J. P. Gibbs, and S. Fleming. May 2015. From Biogeochemistry to Fauna: Holistic Evaluation of Habitat Enhancements in Cattail (*Typha*) Dominated Coastal Wetlands. St. Lawrence River Conference. Cornwall, Ontario, Canada.
- Hazelton, E., K.L. Schulz and A. Weir. April 2015. What's in the Foam? A look at the biota within lake foam. Spotlight on Student Research, SUNY ESF, Syracuse, N.Y.
- Huang, W. and K.L. Schulz. April 2015. Effect of different anthropogenic inputs on the presence of fecal coliform and nutrients in the kettle lake region of Central New York. Spotlight on Student Research, SUNY ESF, Syracuse, N.Y.
- Kronisch, G.R., S. Karkuff, J. Stella and K.L. Schulz. April 2015. Quantifying Decomposition of Allochthonous Matter in Forest Pools of Central New York. Spotlight on Student Research, SUNY ESF, Syracuse, N.Y.
- Looi, A., Schulz, K.L., Farrell, J. M., Kroll, C., Bachmann, C. May 2015. Linking the Moses Saunders Dam to Wetland Tributaries in the St. Lawrence River. 2015 River Symposium. Change is the New Normal: Identifying Environmental Challenges and Strategies for a Changing St. Lawrence River Great Lakes Ecosystem. St. Lawrence River Conference. Cornwall, Ontario, Canada.
- Looi, A., K.L. Schulz, J.M. Farrell, C. Kroll, and C. Bachmann. April 2015. Linking the Moses Saunders Dam to Wetland Tributaries in the St. Lawrence River. Spotlight on Student Research, SUNY ESF, Syracuse, N.Y.

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

- 17 July 2014 – WSYR radio interview shark in Great Lakes
22 July 2014 – WSYR radio interview microbeads in Great Lakes

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

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

- NSF Panel June 10-13, 2014

2. Industrial and Commercial Groups, etc.

none

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
- Skaneateles foam meetings (23 June 2014, meeting and follow up conversations by phone and with R. Abbott in person)
- Scientific advisory panel member on New York Climate Change Science Clearinghouse – Inland Natural Resources and Water Resources

VI. PROFESSIONAL DEVELOPMENT

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

- Best Faculty Advisor Award from Undergraduate Student Association

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 (formerly American Society of Limnology and Oceanography)

Ecological Society of America

International Association for Great Lakes Research

International Association of Theoretical and Applied Limnology

North American Lake Management Society

Phycological Society of America

Sigma Xi

Society for Freshwater Scientists (formerly North American Benthological Society)

Xerces Society

3. Other Professional Activities

a. Editorial activity

Journal (s)

Responsibility

n/a

Other (books, symposia, etc.)

n/a

b. Reviewer

Journal(s)

No. of manuscripts

n/a

<u>Agency</u>	<u>No. of proposals</u>
NSF	6

c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
Participated in seminar series on hydrofracking	ongoing 2014/2015	ESF a teleconferencing site
Attended annual Onondaga Lake Forum	2015	SUNY ESF

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

First aid re-training; 24 July 2014

D. Foreign Travel (Where, When, Purpose)

none

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

- College bioblitz at Onondaga Lake – co-ordinated plankton, macrophyte sampling and identification; presented at public forum on 13 September 2014
- Participated in Visioning workshop 8 January 2015
- With G. McGee represented EFB at college assessment meetings with Middle States Commission (2 Sept 2014 forum, 3 Sept 2014 Middle States meeting, 14 May 2015 MS meeting). With G. McGee, co-ordinators of majors, and D. Leopold finalized the 2015 EFB assessment report for all 7 majors administered by the department
- 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
- Participated in three meetings on development of the Onondaga Lake Center
- 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.

Students:

During this year I continued to teach a large Limnology (424/624) course and a fully subscribed Limnology Practicum course. I added some film and internet activities to Limnology and these were generally well-received. I will continue to revise this class to include more hands-on activities and interactive components, despite its relatively large size for an upper division course (~80), based on the positive reception this year. As in the past 5 years, the Limnology Practicum involved a large component of student independent projects, with many students choosing to work with local lake associations on questions of interest to them. Although this requires extra co-ordination, it is rewarding for all involved, and I plan to continue and expand these efforts in the next year.

I am also happy to see interest in marine science increase on campus, as the marine science minor I established last year is now well-subscribed and many students are taking advantage of our affiliation with Sea Education Association and other off-campus marine opportunities that I continue to work to expand.

In addition, John Stella, Jessica Clemons and I developed a new graduate seminar, "Managing and Archiving Research Data" that was very well-received this spring. We will teach it again this coming spring and likely then propose it as a formal graduate-level course, as it fills a large need for graduate students in multiple departments.

I was happy to have one co-advised (with J. Stella) M.S. student (Stefan Karkuff) and one Ph.D. student (Adam Effler) defended their dissertations successfully during this year. Two of Adam's chapters are already accepted for publication. A new M.P.S. student joined the lab, and two M.S. and one Ph.D. student are making good progress toward completion in this next academic year. In addition I continued to advise a number of honors students and students doing final capstone projects in Environmental Science. All of these students have continued on to graduate school or jobs in their fields, and that is rewarding for all. Two of them are continuing to work with me over the summer to prepare manuscripts for submission.

Department/College:

I have continued to spend a tremendous amount of effort writing reports, overseeing final renovations, and planning for the formal opening of the CIRTAS (Center for Integrated Research and Teaching in Aquatic Science) facility in Illick Hall, while working to make sure that current users have the facilities they need, and make sure that all equipment and services are functional. I am looking forward to a formal opening in late summer/early fall.

In addition, with Greg McGee, I have devoted a large amount of time working on the EFB assessment documents for both Middle States Commission and SUNY. We have established a number of new assessment plans, along with the major co-ordinators, and Greg and I are working to make the process more stream-lined and user-friendly in future. Although this has at times been a difficult process, I believe we are now better serving our students and I think our curriculum and internal communication have improved through this process.

Perhaps the most fun departmental service activity was participating in the well-organized Onondaga Lake bioblitz. Having time to muck around Onondaga Lake and identify plankton in the middle of the night was a pleasant reminder of why I love what I do.

Self

Although it was frustrating to have to move out of my lab due to the flood just a short time after things were recovering from two years of construction, I am extremely happy that this era of building chaos seems to be closing and the lab is getting back to a semblance of normalcy. During this time, I was happy to continue making progress with submission

of a number of backlogged and current manuscripts, with 8 papers either published, in press, or in revision during this year.

Perhaps the most surprising (and surprisingly satisfying) event this year from a personal standpoint was being awarded the Best Advisor Award by the Undergraduate Student Association. I spend a lot of time trying to be a good teacher, mentor and advisor, but am not always certain that I am effective. I advise a large number of students in many majors, and really take this responsibility seriously. Our students are generally fantastic and motivated people, and many are the first in their families to go to college or consider graduate school, so I try to make sure they all are on equal footing when choosing courses and career paths. Sometimes being a good advisor means telling people things they might not to hear, so it was nice to know that I'd helped someone enough for her/him to nominate me for an award.

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 2015

a. Course(s) to be offered

none

- After a successful partial revision of my Limnology Practicum handbook last year, I will finish some additional revisions and make more instructional films for limnology lecture (several trials were well-received last year) and for practicum
- Also will revise Marine Ecology to make for some flipped classroom and additional engagement activities

b. Proposed research activity

- Attend and present research at Conference on Biological Stoichiometry in Peterborough, Canada
- Continue to work through backlog of manuscripts to be published, including working with several former undergraduates to publish honors dissertations
- Experiments and field work related to the NOAA and Research Foundation grants (mentor SUNY Passport student from U. Buffalo) on climate change and invasive invertebrates in the Great Lakes
- Complete sampling of urban ponds with Steve Balogh and submit manuscript on that work
- Re-establish cultures (when possible) lost during renovation (and power outages)
- Launch of new website
- Work on CIRTAS (see next section)
- Assist two M.S. students for early fall graduation and submission of manuscripts
- Finish laboratory setup after construction/flood/power outage disruptions

c. University, professional society, and public service

- Work with G. McGee and D. Leopold to complete the EFB assessment documents for SUNY and prepare for the site visit SUNY assessment review in 2015
- Finalize CIRTAS paperwork; finalize and implement CIRTAS website and data procedures

2. Fall Semester 2015

a. Course(s) to be offered

- Limnology (undergraduate) – EFB 424
- Limnology (graduate) – EFB 624

- Limnology Practicum – EFB 525

- b. Proposed research activity

- Assist two M.S. students for early fall graduation and submission of manuscripts
- Assist Ph.D. student for spring graduation and submission of manuscripts
- Develop new research proposal
- Ongoing project completion and manuscript submission
- Development of sabbatical plan and request

- c. University, Professional society, and public service

- Formally open CIRTAS at start of Fall (date TBD with Professor Leopold and others)
- Continue directing CIRTAS and looking for additional research and funding opportunities related to the facility/expanding collaborations
- EFB Course and Curriculum Assessment Committee Chair; help co-ordinate SUNY Assessment site visit of EFB
- Marine Science Minor coordinator
- EFB representative to the Water Resources Minor
- Faculty advisor to the Nautilus Club (student marine science club)
- Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science
- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Member of AEC advisory board
- Upstate Freshwater Institute Board Member October 2011-current
- Onondaga County Water Protection Scientific Advisory Board 2012-current

3. Spring Semester 2016

- a. Course(s) to be offered

- Marine Ecology (undergraduate) – EFB 423
- Marine Ecology (graduate) – EFB 623
- Graduate Seminar: Managing and Archiving of Research Data (second year; with J. Stella and J. Clemons) – (and then formally propose as a course)

- b. Proposed research activity

- Assist Ph.D. student for spring graduation and submission of manuscripts
- Submit new research proposal
- Submit manuscripts
- Put forward requests for promotion and sabbatical

- c. University, professional society, and public service

- Continue directing CIRTAS and looking for additional research and funding opportunities related to the facility/expanding collaborations
- EFB Course and Curriculum Assessment Committee Chair – final semester as chair; will return to regular member after assessment process is complete
- Marine Science Minor proposer and current coordinator
- EFB representative to the Water Resources Minor
- Faculty advisor to the Nautilus Club (student marine science club)

- Environmental Science advisor and Curriculum Group Participant in Division of Environmental Science area of Watershed Science
- Roosevelt Wild Life Station Scientist-in-Residence: Roosevelt Aquatic Ecologist
- Member of AEC advisory board
- Upstate Freshwater Institute Board Member October 2011-current
- Onondaga County Water Protection Scientific Advisory Board 2012-current