

ANNUAL REPORT
ENVIRONMENTAL AND FOREST BIOLOGY
SUNY College of Environmental Science and Forestry
(June 1, 2011-- May 31, 2011; Summer 2010, AY 2010-2011)

NAME: Dr. John M. Farrell

I. INSTRUCTIONAL ACTIVITIES

1. Regular Course Offerings

	<u>Course No.</u>	<u>Title</u>	<u>Credit Hrs.</u>	<u>No. Students</u>	<u>No. of Lab. Sections</u>
SUMMER:	EFB 388	Adirondack Fish Ecology	3	12	
FALL:	EFB 681	Aquatic Restoration Ecology	2	13	

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

	<u>Course No.</u>	<u>Title</u>	<u>No. Students</u>	<u>Credit Hrs.</u>
SUMMER:	EFB 899	Master's Research	1	1
	EFB 999	Doctoral Research	2	2
FALL:	EFB 420	Internship EFB	1	3
	EFB 498	Research Problems	4	6
	EFB 798	Research Problems	1	3
	EFB 899	Master's Research	4	9
	EFB 999	Doctoral Research	2	9
SPRING:	EFB 498	Research Problems	4	4
	EFB 899	Master's Research	5	18
	EFB 999	Doctoral Research	2	2

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

4. Guest Lecture Activities

<u>Course No.</u>	<u>Title</u>	<u>No. of Lectures</u>
EFB 525	Limnology Practicum	1 weekend field trip
EFB	Conservation Biology Senior Synthesis	1
EFB	Diversity of Life	1

II. STUDENT ADVISING AND COUNSELING

A. Number of undergraduates for whom you are the student's official advisor. 9

- B. Graduate Students - (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. Geof Eckerlin, PhD (began Jan 2009), Viral haemorrhagic Septicaemia Virus Type: Evaluation of fish hosts as a viral reservoir, a community perspective.
2. Kevin Kapusinski, PhD (graduated 5/11), 8/06, Ecology of Great Lakes Muskellunge stock identification and contributions of individual spawners to young of year production as inferred from genetic analyses.
3. Scott Schlueter, MS (current, EBT), 1/07, Lake sturgeon restoration in the Oswegatchie River: movement and habitat use following reintroduction.
4. Derek Crane, PhD (current, August 2009) Walleye habitat restoration – role of substrate particle size and flow in egg redistribution: an indicator of habitat quality?
5. Brian Henning, MS (Defended 5/2012) Fish habitat enhancement – role of aquatic excavation in cattail-dominated wetlands on fish movement.
6. Katherine DeVilbiss, MS (began June 2010) Potential mechanisms of relative success of three sympatric esocids in the St. Lawrence River.
7. Christina Kilourney, MS (began August 2010) Effects of round goby predation on reproductive success of native species based on spawning strategy
8. Mark Leopold, MS (began August 2010) Possible causes of skewed sex ratios of northern pike (*Esox lucius* L.) on the St. Lawrence River

CO-MAJOR PROFESSOR

1. Alison Halpern, PhD (EBT, Co-advised with Dr. Donald Leopold) 5/00, Aquatic nuisance species: ecology and control of the invasive plant *Hydrocharis Morsus-ranae* in Eastern Lake Ontario and St. Lawrence River wetlands.
2. Stewart LaPan, MS (Co-advised with Dr. James Gibbs) starting fall 2012, Avifauna and Herpetofaunal Response to Coastal Wetland Enhancement in the Upper St. Lawrence River.

MEMBER, STEERING COMMITTEE (other than those listed above)

1. Kapil Mandraker, EFB, (Stewart)
2. Errol Sheid, EFB, MS (McGrath)
3. Ceili Bachman, EFB (Mitchell and Schulz)
4. Matt Regan, EFB (Leopold)
5. James Costello, EFB (Kimmerer)
6. Eric Bauer, EFB (Whipps)

CHAIRMAN OR READER ON THESIS EXAMS, ETC.

PhD Examiner, Tian Zhou, ERE (Endreny)
MS Examiner, Michael Fay, ERE (Endreny)

PhD Comprehensive exam Chair, Anna Ebers, FNRM (Newman)

III. RESEARCH COMPLETED OR UNDERWAY

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

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)

Farrell, J. M. 6/2009-6/2012. Development of the Fish Habitat Conservation Strategy: An Evaluation of Toolkit Implementation, Fish Enhancement, Research and Mitigation Fund, National Fish and Wildlife Foundation, Two Years, \$563,836.

Derek Crane
Brian Henning

Also Senior Research Support Specialists Gillian Avruskin and Brandy Brown

Farrell, J. M. 4/1/2011-6/30/2013. Development and Management of St. Lawrence River Fisheries. Federal Aid in Sportfish Restoration, NYS Department of Environmental Conservation. \$640,963

Geof Eckerlin
Katherine DeVilbiss
Mark Leopold

Also Senior Research Support Specialist Chris Barry

Farrell, J. M. and B. Henning. 3/18/11-12/31/12. Evaluating the Near-Shore Fish Community Response to Restored Habitat Connectivity in a Robust Cattail marsh. \$16,275.

Farrell, J. M. and K. Kapuscinski. 3/1/11 – 2/28/12. Evaluation of Nearshore Fish Assemblages, Habitat, and the Effects of Herbivorous Rudd (*Scardinius erythrophthalmus*): Determining the Efficacy of Fish Habitat Restoration Efforts in the Buffalo Harbor and Niagara River. Niagara River Greenway Fund, Greenway Ecological Fund Standing Committee \$188,881

Derek Crane
Post-Doctoral Associate, Kevin Kapuscinski

Farrell, J. M., D. J. Leopold, M. Mitchell, J. Gibbs, K. Schulz. 9/2011-8/2013, Recovery Act – Coastal Fisheries Habitat Restoration in the St. Lawrence River. NOAA Coastal and Marine Habitat Restoration Project Grants under the American Recovery and Reinvestment Act \$197,344 (subcontract to ESF from Ducks Unlimited)

Ceili Bachman
Matt Regan
Stewart LaPan

Ringler, N. H., K. A. Schulz, J. M. Farrell, M. A. Teece, and J. Brunner. 1/1/10-12/31/12. Renovation of Wet Labs and Cyber-Infrastructure to Enhance Integrated Research and Teaching. National Science Foundation \$1,470,000
K. Kapuscinski and J. M. Farrell., 1/1/12-12/31/13. Evaluation of Nearshore Fish Assemblages, Habitat, and the

Effects of Herbivorous Rudd (*Scardinius erythrophthalmus*): Determining the Efficacy of Fish Habitat Restoration Efforts in the Buffalo Harbor and Niagara River. Niagara River Greenway Fund, Greenway Ecological Fund Standing Committee \$254,944

Derek Crane

Leopold, D. J. and J. M. Farrell. 7/1/10-6/30/13. Review of Honeywell Onondaga Lake Shoreline Restoration Projects \$23,580

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

Hanchin, P., B.L. Sloss, L. Miller, C. Wilson, K. L. Kapuscinski, K. Schribner, and J. M. Farrell. Delineation of natural boundaries of muskellunge in the Great Lakes and the effects of supplementation on genetic integrity of native stocks. Great Lakes Fisheries Commission (\$42,721; ESF share \$4,705)

KL Kapuscinski, JM Farrell, and DC Crane. Evaluation of Nearshore Fish Assemblages, Habitat, and the Effects of Herbivorous Rudd (*Scardinius erythrophthalmus*): Determining the Efficacy of Fish Habitat Restoration Efforts in the Buffalo Harbor and Niagara River. New York Power Authority Fish and Wildlife Habitat Enhancement and Restoration Fund (HERF) (\$519,246)

JM Farrell. The St. Lawrence River Fish Habitat Conservation Strategy: Evaluation of Habitat Enhancements and Development of Novel Restoration Approaches National Fish and Wildlife Foundation Special Project administered by the US Fish and Wildlife Service (\$651,072).

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 --- **do not list manuscripts in preparation**).

A. Refereed Publications

Kapuscinski, K. L., **Farrell, J. M.**, and M. A. Wilkinson. 2012. Feeding patterns and population structure of an invasive cyprinid, the rudd *Scardinius erythrophthalmus* (Cypriniformes, Cyprinidae), in Buffalo Harbor (Lake Erie) and the upper Niagara River. *Hydrobiologia* DOI 10.1007/s10750-012-1106-0.

Kapuscinski, K. L., **Farrell, J. M.**, and M. Wilkinson. 2012. First report of abundant rudd populations following 100 years of invasion history. *North American Journal of Fisheries Management* 32(1):82-86.
DOI:10.1080/02755947.2012.661391

Kapuscinski, K. L., **Farrell, J. M.**, and B. A. Murry. *In press*. Selection of native and non-native prey by young-of-the-year muskellunge (*Esox masquinongy*) within large river ecosystems. *North American Journal of Fisheries Management*

Kapuscinski, K. L., and **J. M. Farrell** (*in revision*) Habitat Factors Influencing Fish Assemblages at Nearshore Sites of Two Great Lakes Connecting Channels. *Journal of Great Lakes Research*.

Kapuscinski, K. L., B. L. Sloss and **J. M. Farrell**. (*in review*) Genetic population structure of Great Lakes muskellunge (*Esox masquinongy*). *Transactions of the American Fisheries Society*

Kapuscinski, K. L., **J. M. Farrell**, and M. A. Wilkinson. (*in review*) Trends in the muskellunge (*Esox masquinongy*) population and fishery of the Buffalo Harbor (Lake Erie) and upper Niagara River. *Journal of Great Lakes Research*

Farrell, J.M., H. Brian Underwood, and K.L. Kapuscinski. (*in review*). Fine scale habitat use by sympatric age-1 muskellunge and northern pike in a shared St. Lawrence River bay

Crane, D. C., and **J. M. Farrell** (*in review* in preparation). Fine sediment deposition decreases walleye (*Sander vitreus*) egg adhesion.

Crane, D. C., and **J. M. Farrell** (*in review* in preparation). Walleye Spawning Habitat Restoration: Substrate Size and Shape Influence Egg Retention in Hydraulic Flume Experiments.

B. Non-refereed Publications

Farrell, J. M and M. T. Distler 2012. Coastal Wetland Integrity in the Upper St. Lawrence River: Status and Considerations for Restoration and Enhancement. Great Lakes Research Review Volume 8 (2012).

Wilson, C. and **J. M. Farrell**. 2012. Genetic analysis of walleye population structure in Lake Ontario and the St. Lawrence River and adjoining waters of New York. NYS Department of Environmental Conservation 2011 Lake Ontario Annual Report.

Farrell, J. M., and C. C. Barry 2012. Muskellunge Monitoring and Management in the Thousand Islands section of the St. Lawrence River. NYS Department of Environmental Conservation 2011 Lake Ontario Annual Report.

Farrell, J. M., C. C. Barry. 2012. Northern Pike Monitoring in the Thousand Islands Section of the St. Lawrence River. NYS Department of Environmental Conservation 2011 Lake Ontario Annual Report.

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

Crane, D. P. and J. M. Farrell. 2012. Walleye spawning habitat restoration in streams and the influence of substrate size and shape on egg retention. 68th Annual Northeast Fish and Wildlife Conference, Charleston, WV

Crane, D. P. and J. M. Farrell. 2012. Walleye spawning habitat restoration: substrate size, shape, and condition influence egg retention. Bi-annual meeting of the Fisheries Advisory Committee to the Fish Enhancement, Mitigation, and Research Fund, Cortland, NY

Crane, D. P. and J. M. Farrell. 2011. Walleye spawning habitat restoration: substrate size, shape, and condition influence egg retention. Lake Ontario Fisheries Coalition monthly meeting.

Crane, D. P. and J. M. Farrell. 2011. Walleye spawning habitat restoration: substrate size and shape influence egg retention. American Fisheries 141st Society, Seattle, WA

G.E. Eckerlin and J. M. Farrell. 2012. Smallmouth bass nesting in the St. Lawrence: Have strategies shifted in the wake of key biological invasions? New York Chapter of the American Fisheries Society Annual Meeting, Lake Placid NY.

G.E. Eckerlin, J. M. Farrell, M. A. Teece, P. R. Bowser and J. Casey 2012. Longterm trends in VHSV in smallmouth bass and trophic dynamics associated with this important pathogen. New York Chapter of the American Fisheries Society Annual Meeting, Lake Placid NY.

G.E. Eckerlin and J. M. Farrell. 2011. Smallmouth bass nesting in the St. Lawrence River: What have we learned? New York State Bass Team Meeting, Shackelton Point, NY.

K. L. Devilbiss and J. M. Farrell. 2012. Using metabolic physiology to assess habitat suitability and potential success of sympatric esocids. New York Chapter of the American Fisheries Society Annual Meeting. Lake Placid NY.

Kevin L. Kapuscinski and John M. Farrell. 2012. Selective feeding among species of submersed aquatic vegetation by a non-native Cyprinid, the rudd. 55th Annual Conference on Great Lakes Research, Cornwall, Ontario, Canada.

Kevin L. Kapuscinski, John M. Farrell, and Brian L. Sloss. 2012. Genetic population structure of muskellunge in the Great Lakes. New York Chapter of the American Fisheries Society Annual Meeting, Lake Placid, NY.

Kevin Kapuscinski, John Farrell, and Derek Crane. 2011. Great Lakes muskellunge research. NYSDEC Great Lakes Section Meeting, Cortland, NY.

C. Killourhy and J. M. Farrell. 2012. Does Nest Site Selection and Habitat Affinity mediate egg predation risk for Sympatric Sunfishes? New York Chapter of the American Fisheries Society Annual Meeting, Lake Placid NY (WON BEST STUDENT PAPER AWARD)

C. Killourhy, J. M. Farrell, and H. B. Underwood. 2012. Does Nest Site Selection and Habitat Affinity mediate egg predation risk for Sympatric Sunfishes? Great Lakes Research Consortium Annual Meeting, Oswego NY (WON BEST STUDENT PAPER AWARD)

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

Save The River, In the Schools Program Teacher Training Workshop June 2011 (20 participants)

Save The River, In the Schools Program Teacher Training Workshop August 2011 (15 participants)

Lake Ontario Fisheries Coalition Jan 2012 (20 participants)

Thousand Islands Land Trust Lecture to Board of Directors, Restoration of Coastal Wetlands in the Thousand Islands Region July 2011 (20 attendees)

Zenda Farms Picnic June 2011 Thousand Islands Land Trust Interpretive display (250 participants)

Goose Bay Association August 2011 lecture - A Fish Habitat Conservation Strategy for the upper St. Lawrence River (30 participants)

Kevin L. Kapuscinski, John M. Farrell, and Brian L. Sloss. 2011. Genetic population structure of muskellunge in the Great Lakes. Niagara Musky Association

V. PUBLIC SERVICE

A. Funded Service (include consulting activities)

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

USFWS Fisheries Advisory Committee Presentation, October 2011, Cortland NY (25 attendees)
Restoration Site Visit, August 2011 Department of State, NOAA, Ducks Unlimited, DEC, Clayton NY (10 attendees)

2. Industrial and Commercial Groups, etc.

Review of Honeywell Onondaga Lake Shoreline Restoration Projects – development of restoration plan with group to restore habitat function for northern pike spawning (with Don Leopold and Neil Ringler).

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

Central Michigan University – CMU Biological Station Great Lakes Research Advisory Board members – travelled to Beaver Island for 2-day meeting, developed advisory report with board.

Cornell University – member of the Cornell Biological Station Advisory Board – attended CBFS Advisory Committee Meeting and provided recommendations on CBFS development.

NYSDEC – water levels research and policy – service to inform managers of research outcomes regarding water levels management influences on habitat and fauna

International Joint Commission– expert consulting on water levels issues

Thousand Islands Land Trust Zenda Farms Picnic, Provided live fish and poster displays as part of community event (June 2011; ~250 attendees)

Save The River, Clayton, NY, 2012 Board of Directors, advisory roles on environmental issues, development of teacher training initiative for North Country districts.

Ontario Ministry of Natural Resources – assisted with development of northern pike monitoring program.

Environment Canada, Montreal – worked with genetics study on muskellunge in Montreal Harbor (with Dr. Kapuscinski).

St. Regis Mohawk Tribe, Consulting meeting and tour of potential wetland enhancement initiatives on tribal lands with SRMT Environmental Division Staff

VI. PROFESSIONAL DEVELOPMENT

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

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

International Association of Great Lakes Researchers, Session Chair at the 2012 Annual Meeting in Cornwall, Ontario, Habitat Restoration in the Great Lakes.

American Fisheries Society, Hutton Scholar Mentor for 2011 - applied to serve as mentor, sought applicants and an individual (Erica Mincerella) was awarded an 8 week scholarship to assist with research at TIBS (co-mentor with Chris Barry).

Board of Directors, Save The River Inc. – 1200 member Environmental Advocacy organization on the St. Lawrence River.

Thousand Islands Land Trust – service as conservation partner for TIBS.

2. Professional Society Membership

American Fisheries Society (AFS), NY Chapter AFS, International Association of Great Lakes Researchers, Great Lakes Research Consortium, Society of Wetland Scientists

3. Other Professional Activities

a. Editorial activity

<u>Journal(s)</u>	<u>Responsibility</u>
J. of Great Lakes Research	Guest Editor for special issue on GL Connecting Channels

Other (books, symposia, etc.)

Hosted Session at International Association of Great Lakes Research (IAGLR) annual meeting on habitat restoration in the Great Lakes

b. Reviewer

<u>Journal(s)</u>	<u>No. of manuscripts</u>
Journal of Great Lakes Research	6
North American Journal of Fisheries Management	1

<u>Agency</u>	<u>No. of proposals</u>
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Other

USGS	Annual Report Review
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c. Participation (workshops, symposia, etc.)

<u>Name of workshop, etc.</u>	<u>Date</u>	<u>Place</u>
International Assoc. of GL Researchers	5/12	Cornwall, Ontario
Smallmouth Bass Management Workshop	12/11	Cornell Biological Field Station

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

Niagara River Partnership Workshop, Niagara Falls, NY

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D. Foreign Travel (Where, When, Purpose)

Ontario, Canada Serve a session Chair at the International Association of Great Lakes Research Meeting

VII. ADMINISTRATIVE AND SERVICE RESPONSIBILITIES (include committee participation)

A. Department-level

- Served as member of the Invertebrate Conservation Biologist Search Committee (with Teale, Gibbs, Schulz, Dovciak) within EFB
- Served on Promotion and Tenure Committee
- Mentored an Assistant Professor in EFB
- Supervised two EFB funded Federal Work-study assistants at TIBS
- Served with team lead by Kim Schulz, Neil Ringler and Brian Boothroyd in execution of \$1.4M NSF award to enhance EFB's aquatics program via improvements at CIRTAS and TIBS laboratory facilities and cyberinfrastructure. Participated in numerous meetings and site visits and reporting and served as lead for TIBS component of project leading to laboratory renovation construction start in April 2012.
- Served as mentor to TIBS undergraduate intern who is starting independent research in spring 2012

College-level

- Served as Director of the Thousand Islands Biological Station (TIBS). Including oversight and supervision and participation in activities at TIBS including research, community outreach, facilities and development.
- Continued work on development initiative for new TIBS multipurpose building with Gary Pedan, Brenda Greenfield, Bob Quinn leading to A&E firm hire and projected start August 2012 of new building.

C. University-wide, including Research Foundation

- Worked closely with RF on multiple grant contracts during this period and supervision of numerous staff including three Senior Research Support Specialists (Barry, Brown and Avruskin).

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. A paragraph on each of the following would be very helpful: this past year, what have you done for our students, department/college, and self professionally? **NOTE: PLEASE CONSIDER THE INFORMATION IN THIS SECTION** [along with the supporting specific information elsewhere in this report] **AS ESSENTIAL TO HELPING ME DETERMINE DISCRETIONARY RAISES**

For the students:

My research program continues to grow and over 20 people (students and staff) were of the payroll again this summer fulfilling grant and contract requirements and gaining significant research experiences. So much has happened its difficult to report it all. I wrote dozens and dozens of recommendation letters for current and past students and supported five undergraduates working in my lab during spring and fall semester. For teaching I have offered experiential learning experiences with EFB 388 Adirondack Fish Ecology and EFB 681 Aquatic Restoration Ecology and Management. I try to provide some theory and rigor while integrating students in real-world issues through experiences. An example is examining fish life history and migration and examining effects of large and small hydropower by visiting and touring a fish ladder and major NYPA project. They also have designed restorations and met with many difference agency personnel.

Department/college:

The TIBS renovations and research activity have kept us very busy this past year and we are starting to realize benefits of this initiative. Construction on our aquatics labs has begun and will nearly be complete in July 2012. With the help of physical plant we set up two temporary structures to house our research program while the construction occurs. We started a new major research project with three new graduate students and a team of faculty (Drs. Gibbs, Leopold, Mitchell, Leopold) and staff looking at the response of enhanced wetlands and reference wetlands with a holistic approach including biogeochemistry, lower trophic levels, plants, avifauna and herpetofauna, fish and mammals. This NOAA funded partnership with Ducks Unlimited led to several significant restoration efforts that will be evaluated in the context of water levels regulation in Lake Ontario and the upper St. Lawrence River. This project comes with three other major projects ongoing for the St. Lawrence and Niagara Rivers (with Dr. Kapuscinski) involving fish and their habitat requirements. In all the program currently manages over \$3M in contracts including the CIRTAS project led by Dr. Schulz.

Professional/self

I continue to strive to balance many facets of managing a large research program, directing a growing field station and fulfilling professional commitments and responsibilities while being a strong mentor to students and a dependable colleague. To accomplish this sometimes enormous workload, I try to give young people opportunities to participate in all aspects and it seems to be working. I assisted my PhD graduate and Post-Doctoral fellow Kevin Kapuscinski by nominating him for Adjunct status to begin his own program which he has by serving as PI of a significant grant and mentoring his first graduate student. He will also teach the fisheries course this fall. I also served as a Guest Editor for the International Association of Great Lakes Research to publish a special issue on Connecting Waters of the Great Lakes and it is nearing completion. For myself, I have been invited to help organize a major international conference IS.Rivers 2012 – 1st international conference Integrative Sciences and sustainable development of rivers, Lyon, France – June 26-28, 2012. I served as a scientific advisor, helped plan sessions and review submitted papers and select participants. I proposed and will host a session on Aquatic Habitat Restoration and Enhancement.

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)

The TIBS renovations and research activity have kept us very busy this past year and we are starting to realize benefits of this initiative. Construction on our aquatics labs has begun and will nearly be complete in July 2012. With the help of physical plant we set up two temporary structures to house our research program while the construction occurs. We started a new major research project with three new graduate students and a team of faculty (Drs. Gibbs, Leopold,

Mitchell, Leopold) and staff looking at the response of enhanced wetlands and reference wetlands with a holistic approach including biogeochemistry, lower trophic levels, plants, avifauna and herpetofauna, fish and mammals. This NOAA funded partnership with Ducks Unlimited led to several significant restoration efforts that will be evaluated in the context of water levels regulation in Lake Ontario and the upper St. Lawrence River. This project comes with three other major projects ongoing for the St. Lawrence and Niagara Rivers (with Dr. Kapuscinski) involving fish and their habitat requirements. In all the program currently manages over \$3M in contracts including the CIRTAS project led by Dr. Schulz.

B. PROJECTED ACTIVITIES FOR NEXT YEAR.

1. Summer 2012

a. Course(s) to be offered

EFB 388 Adirondack Fish Ecology

b. Proposed research activity

Multiple studies on fish ecology, wetland enhancement projects and the NOAA and mentoring students including a EFB funded TIBS intern, Mariah Taylor

c. University, professional society, and public service

Sending students to a National AFS conference in Minneapolis MN and directing the activities at the TIBS field station including two significant construction projects. Traveling abroad to participate on the Science Advisory Board and host a session on river restoration for the International Sustainable Rivers Conference at the University of Lyon, Lyon, France

2. Fall Semester 2011

a. Course(s) to be offered

EFB 681 Aquatic Restoration and Enhancement

b. Proposed research activity

Multiple funded projects including NOAA GLRI subcontract with Ducks Unlimited as a interdisciplinary project (with Gibbs, Mitchell, Schulz, Leopold). A new NFWF grant

c. University, Professional society, and public service

Hosting an Esocid Work Group Meeting with agencies and partners responsible for muskellunge management; hosting the ESF Board of Trustees at TIBS in September. We will begin construction of the student/researcher building at TIBS in August 2012.

3. Spring Semester 2012

a. Course(s) to be offered

I will teach the EFB AFS Major Senior Synthesis.

b. Proposed research activity

Multiple research obligations through funded contracts.

c. University, Professional society, and public service

Directorship at TIBS.