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PROJECT MANAGEMENT / ECOLOGY

New Research | Agency Representation | Writing (peer-reviewed), Speaking & Training

Eleven years of hands-on experience (six years as post-doctoral Federal Principal Investigator) in Federal ecological and biological programs; academia, and business endeavors. Lead complex and diversified research projects, keeping a pulse on environmental problems; deliver quality research to aid federal, state, and local governments develop and implement strategies to protect water resources.

CORE COMPETENCIES

Project & Research Management / Science Advisor

Plan, develop, and administer multidisciplinary, high-level scientific analysis and research programs • Initiate and lead new research thrusts; create new, pioneering experiments and oversee scientific contracts • Write interagency agreements, Quality Assurance Project Plans, Project Management Plans, and Work Breakdown Structures • Create and manage budgets • Hire and supervise technicians / oversee work of expert scientists

Peer Reviewed Author & Speaker

Write grant proposals, protocols, status reports, technical memos, scientific papers, presentations, book reviews, book proposals, book chapters, and books • Critique scientific manuscripts and grant proposals • Present complex scientific concepts to scientists, untrained audiences, congressional delegates, and the media
Create workshops; present seminars to undergraduates & the public

Freshwater Research Areas

Streams • Lakes • Watersheds • Coasts • Community, Ecosystem, & Landscape Ecology
Benthic macroinvertebrates • Mussels • Phytoplankton • Zooplankton • Terrestrial arthropods • Fish
Ecosystem Connectivity • Food Webs • Biological Invasion • Ecotoxicology • Biogeochemistry

... Please request addendum for detailed information ...

EDUCATION & CERTIFICATIONS

- Ph.D.** **Ecology, Evolutionary Biology and Behavior (EEBB) & Zoology** (dual degree), Dept. of Zoology & W. K. Kellogg Biological Station, Michigan State University, East Lansing, MI, 2002; Obtained grants, created new experiments, conducted advanced research projects, instructed and mentored undergraduate students in field and laboratory.
- M.S.** **Biological Sciences**, Ecology & Evolution Program, University of Pittsburgh, Pittsburgh, PA, 1996.
- B.S.** **Biological Sciences**, University of Pittsburgh, 1993.
- B.A.** **History and Philosophy of Science**, University of Pittsburgh, 1993.

Certified Ecologist, Ecological Society of America, 2003.

Certified Teaching College Science & Mathematics, Michigan State University, 2002.

PROFESSIONAL EXPERIENCE

Ecologist

U.S. Environmental Protection Agency (EPA), Cincinnati, OH

09/2006 - present

National Exposure Research Laboratory (NERL), Ecological Exposure Research Division (EERD)

- **Create and lead multidisciplinary and inter-agency research programs.** Write research proposals and oversee scientific work contracts. Advise and counsel peers on technical scientific approaches. Review reports and manuscripts. Design and implement applied ecological research projects in the field and laboratory; apply working knowledge of aquatic ecosystem ecology, experimental design, methodology, and statistical analysis. Analyze scientific and environmental data. Draft peer-reviewed scientific publications and technical reports; present results at national conferences.

Project Management

- Create vision, developed proposal, created prospects; manage and monitor a coastal / ecological modeling water quality and ecosystem project including field investigations. Create and oversee multi-institution, multi-disciplinary (Ecologic-Hydraulic-Hydrologic) research project (EPA-NOAA-University at Buffalo). Plan and direct analysis and modeling; evaluate and manage coastal water and ecosystem resources with a future (10-years) years' strategic vision. Collaborate and share data and research results. Use ArcMap (ArcINFO) to organize, display, and evaluate watershed and in-lake sheds. Manage disciplinary team. Received \$150,000 grant from NY Sea Grant. Published paper, technical memo, 12 presentations, and web sites to disseminate maps.
Project: "Identifying source areas for water-borne materials using resource shed analysis"
- Conduct study on the Lake Hartwell/Twelve mile Creek superfund site near Clemson, SC, focusing on assessing the impact of stressors on ecosystems.
Project: "Spatial extent of PCB export to terrestrial invertebrate predators by emergent aquatic insects"
- Manage a contractor-conducted mesocosm experiment to determine the relationship between eutrophication and Hg biomagnification levels in aquatic ecosystems. Determine budgeting and schedules.
Project: "Effect of eutrophication on mercury biomagnification in aquatic food webs"
- Use multivariate analyses to correlate land use/cover with Hg concentration in stream fish tissue using EPA-EMAP data. Write MS Access database to manage data mining.
Project: "Land use and mercury exposure in aquatic ecosystems"

Research Aquatic Biologist

National Oceanic and Atmospheric Administration (NOAA), Ann Arbor, MI

11/2003 - 9/2006

Great Lakes Environmental Research Laboratory (GLERL)

- Led and managed biological research programs.** Wrote domestic and international collaborative research proposals, work plans, timelines, and Memoranda of Understanding to govern interagency projects and funds transfer. Wrote and managed budgets with spending authority. Hired, trained, and provided leadership for interns.
- Represented** the National Oceanic and Atmospheric Administration (NOAA), the Great Lakes Environmental Research Laboratory (GLERL), and the NOAA National Center for Research on Aquatic Invasive Species (NCRAIS) at scientific and regulatory meetings, workshops, conferences, and as the alternate NOAA representative to the Great Lakes Aquatic Nuisance Species Panel. Coordinated and maintained relationships between NOAA and federal agencies, universities, and non-government organizations (expert scientists, regulators, and other stakeholders) to collect and share data. Presented scientific information to the public.
- Designed** and managed applied biological research. Collected and analyzed data; presented and published results. Evaluated and recommended aquatic nuisance species research priorities to agency. Analyzed and critiqued scientific merit of proposed federal regulations. Reviewed and commented on biological invasion publications, studies, programs, and proposals including rapid emergency response plans.

Project Management

- Developed proposals and work prospects; hired team members; evaluated efficacy of treating ship ballast tanks to prevent new biological invasions. NOBOB-2: Identifying, Verifying, and Establishing Options for Best Management Practices; sample ship ballast tanks in the field. Created new methods to evaluate the effect of stressors on aquatic invertebrate resting eggs; produced 3 publications.
Project: "Resting Eggs in Ship Ballast Tanks - An Unaddressed Secondary Invasion Vector"
- Developed, planned, and created the first "one-stop" on-line resource of biological information on Great Lakes exotic species by using distributed database technology. Received a \$35,000 grant from the Great Lakes Fisheries Trust.
Project: "Great Lakes Aquatic Nonindigenous Species Information System (GLANSIS)"
- Recruited 10-member multi agency (NOAA, USGS, Great Lakes Commission, and University of San Diego) and international (USA, Germany, Lithuania, Ukraine) research team for aquatic risk assessment project.
Project: "Forecasting Potential Spread of Introduced Species" (\$2.5M proposal not funded)