

**Jonathan G. Kennen**  
US Geological Survey  
810 Bear Tavern Rd., Suite 206  
West Trenton, New Jersey 08628  
W: (609) 771-3948

## **EDUCATION**

State University of New York, College of Environmental Science and Forestry, Syracuse, New York, **Ph.D.**,  
December, 1993, Fisheries Biology  
State University of New York, College of Environmental Science and Forestry, Syracuse, New York, **M.S.**, May  
1989, Aquatic Entomology  
Longwood College, Farmville, Virginia, **B.S.**, December, 1985, Major: Biology (Environmental Science  
Emphasis)  
Suffolk Community College Selden, New York, **A.A.** August, 1983, Liberal Arts

## **EMPLOYMENT**

### **Biologist (GS-13)**

Lead Scientist for the NAWQA MRB1/NEMA and NJ Water Science Center Biological Specialist. Duties: Plans, directs, and conducts major integrated multidisciplinary biologic and ecologic investigations on a State, regional, and National scale including program development and initiation, study design, and budgeting. Investigations include specialized projects as well as projects that represent an important segment of the Survey's operating programs. Prepares papers and reports on specific aspects of research for publication in professional journals, and oral presentations at professional meetings. Represents the Agency on technical committees on complex ecological and hydrological issues within areas of expertise. Maintains liaison with employees of Federal and State governments, local offices, and private organizations who share interests in water resources in the state, and provides technical advice and information on water resource issues.

Employer: U.S. Geological Survey, 810 Bear Tavern Rd., W. Trenton, NJ 08628  
Supervisor: Jeff Fischer (609) 771-3953  
Dates: 5/03 – present

### **Aquatic Biologist**

Lead biologist of the Long Island – New Jersey NAWQA study. Duties: Plans, conducts, and coordinates all office and field components of integrated aquatic, ecological, hydrological, and water quality studies; responsible for the development and implementation of biological study design and strategy; as biological specialist, serves as the primary source of biological expertise to Project Chief and New Jersey Water Science Center; responsible for analysis of extant and collected data, timely preparation of oral and written summaries/interpretations of aquatic biological data, reviewing and authoring numerous comprehensive interpretive reports and papers, and teaching National level courses at the USGS National Training Center, Denver, Co. and elsewhere.

Employer: U.S. Geological Survey, 810 Bear Tavern Rd., W. Trenton, NJ 08628  
Supervisors: Mark Ayers (502) 493-1910 (5/95–8/02), Paul Stackelberg (518) 285-5652 (1/03–1/04)  
Dates: 5/95 – 5/03

### **Biologist (ECO Associate)**

Lead biologist of the Long Island – New Jersey NAWQA study. Duties: Contract position with the Environmental Careers Organization representing a government rank equivalent to a GS-12. Planned, conducted, and coordinated office and field components of integrated aquatic, ecological, and water quality studies.

Employer: U.S. Geological Survey, 810 Bear Tavern Rd., W. Trenton, NJ 08628  
Supervisor: Mark Ayers (502) 493 - 1910

Dates: 3/95 - 5/95

### **Postdoctoral Research Associate**

US Fish and Wildlife Service contract position with SUNY-College of Environmental Science and Forestry (SUNY-ESF) representing a government rank equivalent to a GS-11. Duties: Lead Biologist for USF&WS responsible for supervising, training, assessment, and QA/QC process for the implementation of the USEPA Environmental Monitoring and Assessment Program –NE Lakes.

Employer: SUNY College of Environmental Science and Forestry  
Supervisor: Dr. Neil H. Ringler (315) 470-6770  
Dates: 5/94 - 3/95

### **Visiting Instructor.**

Duties: Responsible for teaching all aspects of EFB-554, Aquatic Entomology and EFB 487/796, Fishery Biology, Fall 1993 &1994

Employer: SUNY College of Environmental Science and Forestry  
Supervisor: Dr. Neil H. Ringler (315) 470-6770  
Dates: 8/92 - 12/93

### **Research Fellow.**

Duties: Responsible for proper data analysis, statistical approaches, written reports, presentations, and publications in public and professional forums as part of Ph.D.

Employer: SUNY College of Environmental Science and Forestry  
Supervisor: Dr. Neil H. Ringler (315) 470-6770  
Dates: 1/93 - 6/93

### **Research Aid**

Duties: Responsible for the collection and assessment of juvenile Atlantic salmon in the Oswego River watershed to estimate potential survivorship and production.

Employer: SUNY College of Environmental Science and Forestry  
Supervisor: Dr. Neil H. Ringler (315) 470-6770  
Dates: 6/92 - 8/92

### **Sea Grant Scholar**

Duties: Planned and initiated a salmonid research and assessment program of Lake Ontario tributaries involving novel trapping methods.

Employer: SUNY College of Environmental Science and Forestry  
Supervisor: Dr. Neil H. Ringler (315) 470-6770  
Dates: 1/89 - 9/91

### **TRAINING**

- U.S. Geological Survey Water Resources Division, Northeast Region, New Jersey District, October, 2002, Report Tune-up Class
- U.S. Fish and Wildlife Service, National Conservation Training Center, Shepherdstown, WV, March, 1998, Multivariate Statistical Analysis
- U.S. Geological Survey, Water Resources Division, Northeast Region, Troy, NY, June, 1998, Motorboat Operator Certification Course

U.S. Geological Survey Water Resources Division, Northeast Region, Lemoyne, Pennsylvania, November, 1996, Report Construction and Writing  
U.S. Geological Survey, Water Resources Division, Southeast Region, Atlanta, Georgia, March, 1996, NAWQA Training and Methods Shakedown (TAMS) Course (QW2303)  
U.S. Fish and Wildlife Service, Phoenix, Arizona, March, 1996, Principles and Techniques of Electrofishing  
U.S. Geological Survey National Training Center, December, 1995, Geomorphic Analysis of Fluvial Systems (G1544)  
U.S. Geological Survey National Training Center, April, 1995, Multivariate Analysis of Hydrological, Geochemical, and Biological Data (G0452)  
U.S. Geological Survey, Water Resources Division, Southeast Region, Baton Rouge, Louisiana, April, 1995, Biological Field Methods (G0272)  
U.S. Geological Survey, Water Resources Division, Southeast Region, Raleigh, NC, March, 1995, NAWQA Biological Data Analysis System Training Course

## **OTHER SKILLS**

Experienced in gill netting, trap netting, seining, fish marking, and small research Vessel operation and maintenance  
Experienced in Macintosh, PC, and UNIX based platforms/operating systems and associated applications  
Experienced in fish aging techniques  
Experienced in multivariate data analysis and associated software  
Certified in animal care and use  
Certified National Association of Scuba Diving Schools Sport Diver  
Certified in American Red Cross Basic First Aid, Adult CPR/AED  
Certified in Principles & Techniques of Electrofishing  
Certified motorboat operator

## **PROFESSIONAL ORGANIZATIONS**

Sigma Xi, The Research Society  
North American Benthological Society  
The American Institute of Fishery Research Biologists  
American Fisheries Society (National, Northeast, New Jersey, New York State, and Mid-Atlantic Chapters)

## **GRANTS, AWARDS, HONORS AND FELLOWSHIPS**

Evaluating climate change effects on hydrology and stream integrity in selected basins in the Northeast, Principle Investigator, IPA with USEPA \$40,000, 2009-11.  
Integrated watershed scale response to global change in selected basins across the United States, USGS Global Change Program, 1 of 15 Co-PI's with Lauren E. Hay, \$388,800, 2008-10.  
Stormwater-runoff TMDL project, Principle Investigator, JFA with NJDEP, \$500,000, 2006-10.  
Modeling Catchment Hydrology project, Principle Investigator, Eastern Region Integrated Partnership publication grant, \$39,000, 2005-06  
Hydroecological Classification of Missouri Streams, Co-Principle Investigator with Jim Henriksen (BRD) \$10,000 2005-06  
Modeling Catchment Hydrology project, Principle Investigator, Eastern Region Integrated Partnership grant, \$65,000, 2004-05  
Kirkwood-Cohansey Project, Principle Investigator for Stream fish and Habitat component, JFA with Pinelands Commission \$485,000, 2003-2007  
Urban Growth Project, Principle Investigator, IPA with USEPA \$19,200, 2002-03  
Ecological Flow Goals Project, Co-Principle Investigator with Jim Henriksen (BRD), JFA with NJDEP: CBT-Total: \$710,000 DEP + USGS match, 2001-05  
Watershed Indicators Project, Principle Investigator, JFA with NJDEP \$217,500, 2000-03  
National Institutes for Water Resources and U.S. Geological Survey National Competitive Grants Program, \$115,000, Co-Principle Investigator with Joan Ehrenfeld, Rutgers University, 2000-02  
U.S. Geological Survey, Rating Based Individual Cash Award, \$1000, December 2008

U.S. Geological Survey, Cash Award, \$500, September 2008  
U.S. Geological Survey, STAR Award, \$500, September 2005  
U.S. Geological Survey, STAR Award, \$1500, September 2004  
U.S. Geological Survey, STAR Award, \$100, June 2003  
U.S. Geological Survey, STAR Award, \$1,500, September 2002  
U.S. Geological Survey, STAR Award, \$1,000, August 2002  
U.S. Geological Survey, Quality Step Increase, June 2001  
U.S. Geological Survey, STAR Award, \$1,500, August 2000  
U.S. Geological Survey, STAR Award, \$3,270, September 1999  
U.S. Geological Survey, STAR Award, \$1,500, April 1998  
U.S. Geological Survey, STAR Award, \$1,000, December 1996  
Wilford A. Dence Memorial Fellowship, \$5,000, 1993  
Edna Bailey Sussman Award, \$2,700, 1992  
NOAA/New York Sea Grant \$8,500, 1991  
NOAA/New York Sea Grant \$102,125, 1989-1990  
Outstanding Young Men of America Award, 1988  
New York Great Lakes Research Consortium \$16,600, 1987  
Henry Willet III Scholar-Athlete Award, Longwood College, 1985

## RELEVANT PUBLICATIONS:

- Kennen, J.G.**, 1998, Relation of macroinvertebrate community impairment to basin characteristics in New Jersey streams: U.S. Geological Survey Fact Sheet FS-057-98. available at: <http://nj.usgs.gov/nawqa/linj/pdf/fs-057-98.pdf>
- Kennen, J.G.** 1999. Relation of macroinvertebrate community impairment to catchment characteristics in New Jersey streams. *Journal of the American Water Resources Association* vol. 35, p. 939-955. available at: [http://water.usgs.gov/nawqa/urban/pdf/Kennen\\_JAWRA1999.pdf](http://water.usgs.gov/nawqa/urban/pdf/Kennen_JAWRA1999.pdf)
- Long, G.R., Chang, M. and **Kennen, J.G.**, 1999, Trace Elements and organochlorine compounds in bed sediment and fish tissue at selected sites in New Jersey—sources and effects: USGS Water-Resources Investigation Report 99-4235, 29 p.
- Ayers, M.A., **Kennen, J. G.**, and Stackelberg, P.E., 2000, Water quality in the Long Island-New Jersey Coastal Drainages, New York and New Jersey, 1996-98: U.S. Geological Survey Circular 1201, 40 p. available at: <http://pubs.usgs.gov/circ/circ1201/pdf/circ1201.pdf>
- Chang, M., **Kennen, J.G.**, and Del Corso, E.J., 2000, Evaluating temporal changes in stream condition in three New Jersey basins using an index of biotic integrity: *Bulletin of the New Jersey Academy of Sciences*, vol. 45. p. 1-12. available at: [http://water.usgs.gov/nawqa/urban/pdf/Chang-Kennen-DelCorso\\_BNJAS2000.pdf](http://water.usgs.gov/nawqa/urban/pdf/Chang-Kennen-DelCorso_BNJAS2000.pdf)
- Kennen, J. G.**, and Ayers, M.A., 2002, Relation of environmental characteristics to the composition of aquatic assemblages along a gradient of urban land use in New Jersey, 1996-1998: Water-Resources Investigations Report 02-4069, 77 p. available at: <http://pubs.usgs.gov/wri/wri024069/pdf/wri024069.pdf>
- Moulton, S.R., II, **Kennen, J.G.**, Goldstein, R.M., and Hambrook, J.A., 2002. Revised Protocols for sampling algal, invertebrate, and fish communities as part of the National Water-Quality Assessment Program: Open-File Report 02-150, 87 p. available at: <http://water.usgs.gov/nawqa/protocols/OFR02-150/OFR02-150.pdf>
- Rashleigh, B., and **Kennen, J.G.**, 2003, Beyond the indices: relations of habitat and fish characteristics in the Georgia Piedmont: Proceedings of the 2003 Georgia Water Resources Conference, April 23-24, 2003, at the University of Georgia. Kathryn J. Hatcher, editor, Institute of Ecology, The University of Georgia, Athens, Georgia. available at: <http://cms.ce.gatech.edu/gwri/uploads/proceedings/2003/Rashleigh%20and%20Kennen.pdf>
- Kennen, J.G.**, Chang, M., and Tracy, B.H., 2005, Effects of landscape change on fish assemblage structure in a rapidly growing metropolitan area in North Carolina, USA: Pages 39–52 in Brown, L.R., Gray, R.H., Hughes, R.M. and Meador, M.R., editors: Effects of urbanization on stream ecosystems: American Fisheries Society, Symposium 47, Bethesda, Maryland. available at: <http://water.usgs.gov/nawqa/urban/pdf/Kennen039-052.pdf>

- Henriksen, J.A., Heasley, J., **Kennen, J.G.**, and Nieswand, S., 2006, Users' manual for the Hydroecological Integrity Assessment Process software (including the New Jersey Assessment Tools). U.S. Geological Survey Open-File Report 2006-1093. 71p. available at: <http://www.fort.usgs.gov/products/publications/21598/21598.pdf>
- Kennen, J.G.**, Henriksen, J.A., and Nieswand, S.P., 2007, Development of the Hydroecological Integrity Assessment Process for Determining Environmental Flows for New Jersey Streams: U.S. Geological Survey Scientific Investigations Report 2007-5206, 55p. available at: <http://pubs.usgs.gov/sir/2007/5206/pdf/sir2007-5206-508.pdf>
- Kennen, J.G.**, Kauffman, L.J., Ayers, M.A., and Wolock, D.M., 2008, Use of an Integrated Flow Model to Estimate Ecologically Relevant Hydrologic Characteristics at Stream Biomonitoring Sites: Ecological Modelling vol 211, p. 57-76. available at: <http://dx.doi.org/10.1016/j.ecolmodel.2007.08.014>
- Kennen, J.G.**, Henriksen, J.A., Heasley, J., Cade, B.S., and Terrell, J.W. 2009, Application of the Hydroecological Integrity Assessment Process for Missouri Streams: U.S. Geological Survey Open File Report 2009-XXXX (in Review).
- Kennen, J.G.**, Murray, K.R., and Beaulieu, K.M., 2009, Effects of hydrologic modification on stream macroinvertebrate assemblages in the northeastern United States (in review, Hydroecology).
- Poff, N.L., Richter, B.D., Arthington, A.H., Bunn, S.E., Naiman, R.J., Kendy, E., Acreman, M., Apse, C. Bledsoe, B.P., Freeman, M.C., Henriksen, J.A., Jacobson, R.B., **Kennen, J.G.**, Meritt, D.M., O'Keeffe, J., Olden, J.D., Rogers, K.H., Tharme, R.E., and Warner, A.T., 2009, The Ecological Limits of Hydrologic Alteration (ELOHA): A new framework for developing regional environmental flow standards: Freshwater Biology (In Press).
- Waite, I.R., Brown, L.J., **Kennen, J.G.**, May, J.T., Cuffney, T.F., Orlando, J.F., and Jones, K.A., 2010, Comparison of watershed disturbance predictive models for stream benthic macroinvertebrates for three distinct western ecoregions (in review, Ecological Applications)
- Kennen, J.G.**, and Riskin, M.L., 2010, Evaluating natural and human-induced changes in stream flow regime on fish and aquatic invertebrate assemblages in the New Jersey Pinelands: U.S. Geological Survey Scientific Investigations Report 2010-XXXX (in review).
- Kennen, J.G.**, Sullivan, D.J., May, J.T., Bell, A.H., and Beaulieu, K.M., 2010, Temporal changes in fish and benthic invertebrate communities in streams of the North Central and Northeastern US (in preparation).