

ROBERT L. SPEHAR

Aquatic Biologist

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Education:

B.S., Biology/Chemistry, University of Minnesota-Duluth, 1971

M.S., Zoology/Biochemistry, University of Minnesota-Duluth, 1974

Employment:

2004-present Aquatic Biologist, Immediate Office of the Director, U.S. EPA, Duluth, MN
2003-2003 Acting Associate Director for Science, U.S. EPA, Duluth, MN
2001-2002 Sup. Research Aquatic Biologist - Acting Chief Watershed Diagnostics Research Branch, U.S. EPA, Duluth, MN
2001-2001 Research Aquatic Biologist - Special Assistant to the Director, U.S. EPA, Duluth, MN
1992-2001 Research Aquatic Biologist - WQC Coordinator, U.S. EPA, Duluth, MN
1991-1992 Sup. Research Aquatic Biologist - Acting Chief, Risk Characterization Research Branch, U.S. EPA, Duluth, MN
1988-1991 Sup. Research Aquatic Biologist - Team Leader Water and Sediment Quality, U.S. EPA, Duluth, MN
1973-1988 Research Aquatic Biologist, U.S. EPA, Duluth, MN.
1970-1973 Biological Technician and Aid, U.S. EPA, Duluth, MN

Research Interests and Skills:

Ecotoxicological research planning and coordination with the Office of Water and Office of Research and Development Laboratories and Centers. Specific activities include development of protective aquatic life and aquatic-dependent wildlife water quality criteria.

Professional Societies:

North American Benthological Society
American Fisheries Society
Society for Environmental Toxicity and Chemistry
American Society for Testing and Materials

Selected Appointments/Honors/Major Awards:

EPA's Bronze medal for work on CADDIS (2006)
NHEERL Leadership Award (2006)
ORD lead for developing a suspended and bedded sediments synthesis for CADDIS (2005-2007)
ORD lead for developing a framework for suspended and bedded sediments water quality criteria (2003-2007)
Member of EPA/FWS/NMFS committee for national consultations on endangered species and WQC (1999-2007)
EPA Charter Employee (35 years of service)(2005)
Outstanding Web Achievement Award for CADDIS (2005)
NHEERL lead for ORD's multi-year research planning committee for Goal 2 Clean and Safe Water (2000-2005)
Chair of NHEERL's Aquatic Stressors Research Steering Committee (1999-2005)
Acting Associate Director for Science MED-Duluth (2003)
Special Assistant to the MED-Director (1999-2002)
American Society for Testing and Materials (ASTM) - Biological Effects and Environmental Fate (1991-Present)
Standard Methods - APHA, AWWA, WEF Research Committee (1985-1993)
Certificate of Recognition - Development of MOA with US EPA, NMFS, and US FWS (2001)
Scientific and Technological Achievement Award - Level III (2001)
Scientific and Technological Achievement Award in Ecology (1987)

Selected Publications:

Cormier, S.M., J. Paul, R. Spehar, P. Shaw-Allen, W. Berry, and G. Suter. 2008. Using Field Data and Weight of Evidence to Develop Water Quality Criteria. *Integrated Environmental Assessment and Management*. 4(4).

- Paul, J.F., S.M. Cormier, W. Berry, P. Kaufmann, R. Spehar, D. Norton, R. Cantilli, R. Stevens, W. Swietlik and B. Jessup. 2008. *Developing water quality criteria for suspended and bedded sediments*. Water Practice™ • Water Environment Federation. Vol. 2 • No. 1.
- Spehar, R.L., S. M. Cormier, P. Shaw-Allen, D.L. Taylor. 2006. Suspended and Bedded Sediments, Causal Analysis/Diagnosis Decision Information System (CADDIS) System (CADDIS), www.epa.gov/caddis/
- U.S. Environmental Protection Agency. 2006. Framework for Developing Suspended and Bedded Sediments (SABS) Water Quality Criteria, U.S. EPA, Washington DC, EPA-822-R-06-001, pp 150, May. Office of Research and Development: R. Spehar, W. Berry, P. Kaufmann. J. Paul, S. Cormier; Office of Water: R. Cantilli, R. Stevens, W. Swietlik, D. Norton.
- Hansen, D.J., D.M. DiToro, J.A. McGrath, R.C. Swartz, D.R. Mount, R.L. Spehar, R.M. Burgess, R.J. Ozretich, H.E. Bell, T.K. Linton. 2003. Procedures for the derivation of equilibrium partitioning sediment benchmarks (ESBs) for the protection of benthic organisms: PAH mixtures, Office of Research and Development, Washington, DC. EPA-600-R-02-013.
- Mulkey, L., B. Blaney, M. Dannel, B. Mintz, C. Nolt-Helms, L. Papa, R. Spehar. 2003. Water Quality Research Program Multi-Year Plan. Office of Research and Development, Washington, DC.
- Spehar, R., R. Bennett, W. Berry, J. Brazner, R. Burgess, L. Burkhard, D. Campbell, R. Church, G. Cicchetti, J. Compton, P. Cook, S. Cormier, N. Detenbeck, R. Devereux, P. Eldridge, V. Engle, R. Erickson, J. Garber, L. Goodman, R. Greene, J. Hansel, M. Hemmer, M. Johnson, P. Kaufmann, J. Kelly, R. Kreis, J. Kurtz, R. Lackey, J. Latimer, M. Lewis, E. Lores, R. Luebke, J. Macauley, R. MacPhail, M. Mitro, J. Morrice, M. Murrell, D. Nacci, W. Nelson, S. Norton, J. Orme Zavaleta, S. Paulsen, S. Peterson, J. Power, W. Richardson, S. Schimmel, S. Schmelling, M. Sierszen, W. Swietlik, D. Tanner, J. Thompson, A. Trebitz, W. Walker, B. Walton, C. Wigand, J. Wigington, 2002. Aquatic Stressors: Framework and Implementation Plan for Effects Research, National Health and Environmental Effects Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Research Triangle Park, NC. (EPA 600/R-02/074).
- Spehar, R.L., S. Poucher, L.T. Brooke, D.J. Hansen, D. Champlin, and D. Cox. 1999. Comparative toxicity of fluoranthene to freshwater and saltwater species under fluorescent and Ultraviolet (UV) light. *Arch. Environ. Contam. Toxicol.* 37:496-502.
- Elonen, G.E., R.L. Spehar, G.W. Holcombe, R.D. Johnson, J.D. Fernandez, R.J. Erickson, J.E. Tietge, and P.M. Cook. 1998. Comparative toxicity of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD) to seven freshwater fish species during early-life-stage development. *Environ. Toxicol. Chem.* 17:472-483.
- Spehar, R.L. and J.T. Fiandt. 1986. Acute and chronic effects of water quality criteria-based metal mixtures on three aquatic species. *Environ. Toxicol. Chem.* 5:917-931.