

Janet H. Vail

Associate Research Scientist, Annis Water Resources Institute
Grand Valley State University
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Professional Preparation:

Ph.D.	1998	Western Michigan University	Science Education with a specialization in Environmental Education
M.A.	1980	University of California, Santa Barbara	Biology
B.S.	1969	University of Michigan (Class honors)	Botany

Dissertation Title: *An Analysis of Fecal Coliform Bacteria as a Water Quality Indicator.*
(1998)

Teaching Certification: Michigan Permanent Secondary Credential, California Life
Secondary and Elementary Credentials

Appointments:

2001-present. Associate Research Scientist/Professor of Water Resources, Outreach &
Education, Annis Water Resources Institute, Muskegon, MI
2000-2004. Adjunct Instructor in Engineering, Grand Valley State University,
Allendale, MI
1990-2001. Research Associate/Senior Program Manager, Annis Water Resources
Institute, Muskegon, MI
1988-1990. Environmental Scientist, WW Engineering & Science, Grand Rapids, MI
1988-1990. Adjunct Instructor in Biology, Grand Valley State University, Allendale, MI
1986-1987. Water Quality Technician, Santa Cruz County Environmental Health
Department, Santa Cruz, CA
1971-1985. High School Science Teacher, Conejo Valley Unified School District,
Thousand Oaks, CA
1969-1970. Research Technician, University of California at Santa Barbara, CA

Grand Valley State University Courses Taught

Biology 105 Environmental Science
Biology 107 (lab) Great Lakes and Other Water Resources
Biology 215 (lab) General Ecology
Biology 303 (lab) Plants and Fungi
Biology 333 (lab) Systematic Botany
Engineering 602 Engineering Law, Ethics and the Environment
Science 225 Integrated Life Science for K-8 Teachers
Education 600 Curriculum/Content: Environmental Education
Education 600 Curriculum/Content Human Population
Education 600 Curriculum/Content: Earth Systems for K-4 Teachers
Science 580 Science Topics: GLOBE - Earth Systems
Science 580 Science Topics: Earth Systems Science – Climate Change
Environmental Studies 201 Introduction to Environmental Studies & Sustainability

Representative Publications

- Vail, J.H.** Holistic Aquatic Education: Great Lakes, Lakes and Rivers, Paper at Water Resources Education, Training, and Practice, American Water Resources Association Conference, Keystone, Colorado, 1997.
- Vail, J.H.** Fecal Coliform Bacteria as a Water Quality Indicator, Paper at International Association for Great Lakes Research Conference, 2000.
- Vail, J.H.** Point Source Discharges to Water in the Grand River Watershed, Grand Valley State University, 1993.
- Ram, J.L, R. Morgan, and **J.H. Vail.** 3M Petrifilm as a Medium for Volunteer Monitoring of Waterborne *Escherichia coli*, Paper at Monitoring and Modeling Nonpoint Source Pollution in Agricultural Landscapes, 2001.
- Vail, J.H.**, editor. Instructor's Manual for Scientific Educational Cruises aboard the *D.J. Angus* and *W.G. Jackson* Vessels, Grand Valley State University, 2002.
- Vail, J.H.**, R. Morgan, and J.L. Ram. Enumeration of *Escherichia coli* using 3M Petrifilm Plates: Comparison to Standard Water Quality Methods. *Journal of Environmental Quality* 32: 368-373, 2003.
- Vail, J.H.**, Volunteer Monitoring: *E. coli* and Fecal Coliform Bacteria. *Lakeline* 23(2): 33-35, 2003.
- Vail, J.H.**, A floating classroom for lake monitoring. *The Volunteer Monitor* 15(1): 10, 2003.
- Vail, J.H.**, editor. Michigan Air Use Permit Technical Manual, Michigan Department of Environmental Quality, Lansing, Michigan, 1995.
- Vail, J.H.** Michigan Environmental Education Curriculum Support (MEECS) Air Quality Unit, Michigan Department of Environmental Quality, Lansing, Michigan, 2006.
- Vail, J.H.** Chemical Management in Schools Workbook, Michigan Department of Environmental Quality, Lansing, Michigan, 2008.
- Vail, J.H.**, M. Smith and S. McIntire. Implementing Great Lakes Literacy Principles in onboard education programs. In preparation.
- Vail J.H.** Michigan Environmental Education Curriculum Support (MEECS) Climate Change Unit, Michigan Department of Environmental Quality, Lansing, Michigan. In preparation.

Synergistic Activities

- Co-Chair, U.S. Environmental Protection Agency Lake Michigan Forum – public input group for the Lake Michigan Lakewide Management Plan
- Chair, Lake Michigan: State of the Lake '99, '01, and '03 Conferences – papers from diverse disciplines were presented at these conferences
- Certified trainer for GLOBE, Project Learning Tree, Project Wild, Project WET, Population Connection, and Michigan Environmental Education Curriculum Support Project – environmental education programs for K-12 students and teachers
- Michigan Project WET (Water Education for Teachers) State Coordinator – state representative for a national/international program
- Advisory Council, West Michigan Great Lakes Stewardship Initiative and the Groundswell Initiative–programs to bring meaningful service learning into K-12 classrooms
- Member, Great Lakes Beach Association
- Member, Lake Michigan Monitoring Coordination Council
- Steering Committee, Great Lakes Association of Science Ships

- Member and former Board of Director, Michigan Alliance for Outdoor and Environmental Education
- Member and former Secretary, Air & Waste Management Association West Michigan Chapter
- Member, International Association of Great Lakes Research Education Committee
- Member, Muskegon County Environmental Coordinating Council

Awards

- William Stapp Environmental Education Lifetime Achievement Award 2010, Michigan Alliance for Outdoor and Environmental Education
- Community Service Award 2009, Grand Valley State University
- Outstanding Achievement Award 2003. Mallinson Institute for Science Education, Western Michigan University

Current Grants/Projects (2010-2012)

Lake Specific Onboard Education and Outreach. Grant to the GVSU Annis Water Resources Institute from U.S. Environmental Protection Agency Great Lakes Restoration Initiative. Janet Vail, Project Manager/Principal Investigator.

Award amount: \$291,721

Great Lakes Education (GLE). Contract from the University of Wisconsin funded by the U.S. Environmental Protection Agency Great Lakes Restoration Initiative. Janet Vail, GLE partner and workshop host.

Contract amount: pending, to be determined

Great Lakes Connections. Contract from the Michigan Department of Environmental Quality funded by the U.S. Environmental Protection Agency Great Lakes Restoration Initiative. Janet Vail, curriculum author.

Contract amount: pending, \$13,000

Observatory for Ecosystem Changes in Muskegon Lake. Grant to the GVSU Annis Water Resources Institute from U.S. Environmental Protection Agency Great Lakes Restoration Initiative. Janet Vail, Co-Principal Investigator, education advisor.

Award amount: \$568,449

Michigan Project WET Curriculum Alignment. Grant from Project WET funded by the U.S. Environmental Protection Agency. Janet Vail, Project Manager.

Contract amount: \$5,000

Making Lake Michigan Great: Education and Outreach. Grant to the GVSU Annis Water Resources Institute from U.S. Environmental Protection Agency. Janet Vail, Project Manager/Principal Investigator.

Award amount: \$25,000

Graduate Advisors:

M.A.: Dr. William Schlesinger, Cary Institute of Ecosystems Studies

Ph.D.: Drs. Robert Poel and Joseph Engemann (retired), Western Michigan University