

Paul F. Ziemkiewicz

West Virginia Water Research Institute
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EDUCATION:

- B.S.** Utah State University, 1969-73. Major: Biology, Minor: Chemistry.
Professional Secondary Teaching Certificate in Biology and Chemistry
M.S. Utah State University, 1973-75. Range Ecology
Ph.D. University of British Columbia, 1975-78. Forest Ecology

POSITIONS:

Since 1978 I have been responsible for securing funding for, organizing, directing and conducting mine reclamation and other energy and environmental research programs. My current responsibilities focus on acid mine drainage research and technology transfer programs relating to the coal industry. In addition to my research roles I have served in a regulatory capacity with government agencies, developed regulatory and R&D policy and currently serve on state and federal policy advisory committees focusing on reclamation and acid mine drainage.

- 1978-1987:** Director, Reclamation Research, Alberta Energy, Edmonton, Alberta.
1982-1987: Deputy Chairman, Development and Reclamation Review Committee, Alberta Energy, Edmonton, Alberta.
1985-1987: Senior Research Manager, Alberta Office of Coal Research and Technology, Alberta Energy, Edmonton, Alberta.
1987-1988: Director, Research Management, Alberta Technology, Research and Telecommunications, Edmonton, Alberta.
1988-1991: Program Coordinator, Energy & Water Research Ctr., West Virginia Univ.
1991-Present: Director, West Virginia Water Research Institute, National Research Center for Coal and Energy, West Virginia University

CURRENT APPOINTMENTS:

- ! Director, West Virginia Water Research Institute, West Virginia University
- ! Director, National Mine Land Reclamation Center, West Virginia University,
- ! Adjunct Associate Professor of Plant and Soil Science, West Virginia University,
- ! Adjunct Professor, Department of Biology, West Virginia University,
- ! Member, Prevention and Control Technical Committee, MEND (A Joint Canadian Government and Industry Program for AMD Control in the Metal Mining Industry).
- ! Director, West Virginia Water Resources Research Institute
- ! Member, West Virginia Acid Mine Drainage Task Force
- ! Member, Governor's Committee for Reclamation Bonding Policy Review
- ! Member, Eastern Mine Drainage Federal Consortium
- ! Secretariat: Appalachian Clean Streams Initiative/Acid Drainage Technology Initiative

AWARDS:

- 1975-77** Kaiser Resources Ltd. Graduate Fellowship-University of British Columbia.
1977-78 University of British Columbia Graduate Fellowship.
1985 E.M. Watkin Award for Outstanding Contribution to the Betterment of Land Reclamation in Canada, Presented by The Canadian Land Reclamation Assoc.

NOMINATIONS:

- 2001** The Athalie Richardson Irvine Clarke Prize

PROFESSIONAL AFFILIATIONS:

- X Xi Sigma Pi
- X Sigma Xi
- X American Assoc. for the Advancement of Science
- X Director, Vice-President and President of The Canadian Land Reclamation Assoc. (1980-87)
- X President of the Alberta Chapter of The Canadian Land Reclamation Assoc. (1979-1986)
- X National Executive Com., American Society for Surface Mine Reclamation. (1988-1992)

ACADEMIC TEACHING EXPERIENCE:

- X Univ. of Alberta Faculty of Mining and Petroleum Engineering. MinSci 404. Environmental Management in Oil Shale Mining. Taught as an adjunct professor with J.D Scott and M.B. Dussault. fall 1981,1982.
- X Lectures in the WVU Colleges of Agriculture/Forestry and COMER in mine reclamation and environmental technology.
- X Biology Graduate Seminar, West Virginia University

FUNDING ACQUISITION:

Since 1988, as director of the Environmental Technology Division, it has become one of the strongest research centers at West Virginia University. Over the past eight years we have developed and managed research projects worth roughly \$38M. Funding has been generated from a variety of federal agencies: Office of Surface Mining, EPA, USGS, Bureau of Mines, USDOE as well as state and industry sponsors. A detailed summary of sponsored projects is available on request. The Center has a full-time staff of seven.

PARTIAL LISTING OF PUBLICATIONS:

- Donovan, J.J., Frazier, J., Daly, M., Werner, E., Ziemkiewicz, P.F. and Black, D.C. 2000 Experimental Injection of Alkaline Lime Slurry for In-Situ Remediation of an Acidic Surface-Mine Aquifer. ICARD 2000, May 21-24, 2000, Denver, Colorado
- Demchak, J., Skousen, J.G., Ziemkiewicz, P.F. and Bryant, G., 2000 Comparison of Water Quality from Fifteen Underground Coal Mines 1968 and 1999. ICARD 2000, May 21-24, 2000, Denver, Colorado

- Ziemkiewicz, P.F., Black, D.C., 2000 Disposal and Use of Coal Combustion Products in Mined Environments. ICARD 2000, May 21-24, 2000, Denver, Colorado
- Ziemkiewicz, P.F and Skousen, J.G. 1998. The Use of Steel Slag for Acid Mine Drainage Treatment. Gray, D.D., Reddy, T.P., Black, D.C. and Ziemkiewicz, P.F., 1998 Filling Abandoned Mines with Fluidized Bed Combustion Ash Grout. In. A.K. Howard and J.L. Hitch, Eds The Design and Application of Controlled Low-Strength Materials (Flowable Fill), American Society for Testing and Materials Standard Technical Pub. 1331 (ASTM STP 1331).
- Ziemkiewicz, P.F., Skousen, J. and Brant, D.L., Sterner, P.L. and Lovett, R.J. 1997 Acid Mine Drainage Treatment with Armored Limestone in Open Limestone Channels. J. Environ. Qual. 26: 1017-1024 (1997).
- Skousen, J., Renton, J., Brown, H., Evans, P., Leavitt, B., Brady, K., Cohen, L., and Ziemkiewicz, P.F., 1997 Neutralization Potential of Overburden Samples containing Siderite. J. Environ. Qual. 26: 673-681(1997).
- Ziemkiewicz, P.F., Brant, D.L. and Skousen, J.G. 1996 Acid Mine Drainage Treatment with Open Limestone Channels. Green Lands, Spring 1996. pp. 33-40.
- Skousen, J.G., Sexstone, A. and Ziemkiewicz, P.F. 1995. Acid Mine Drainage Control and Treatment. In Barnheisel et al. (eds) Reclamation of Drastically Disturbed Land. ASA Publication.
- Skousen, J.G. and Ziemkiewicz, P.F. (eds.) 1995. Acid Mine Drainage Control and Treatment. National Mine Land Reclamation Publication. 27 ch. 254 pp. 2nd edition.
- Ziemkiewicz, P.F. Black, D.C., Head, W.J., Gray, D.D., Siriwardane, H.J., Sack, W.A., Burnett, M. 1995. Disposal of Fluidized-Bed Combustion Ash in an Underground Mine to Control Acid Mine Drainage and Subsidence. In. Proceedings: 1995 International Ash Utilization Symposium, Lexington, KY. 6-8 Oct. 1995.
- Burnett, J.M., Burnett, M., Ziemkiewicz, P.F. and Black, C.D. 1995. Pneumatic Backfilling of coal combustion residues in underground mines. Proceedings Sudbury '95, Mining and the Environment. Sudbury, Ontario, Canada 28 May-1 June 1995.