Darrel Schmitz

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Darrel W. Schmitz is a geologist with research interests in hydrogeology. His research interests range from the physical (groundwater movement and geologic controls on groundwater movement) and chemical (natural water composition and contaminant transport) aspects of hydrogeology to related environmental areas of hazardous and nonhazardous waste disposal (siting, seismic considerations, biodegradation, and the properties of earth materials). Recent studies have been conducted in Mississippi, other portions of the U.S., and internationally.

Education

Ph.D. (Geology), Texas A&M University, 1991
M.S. (Engineering Science-Geology), University of Mississippi, 1985
B.S. (Geology), Mississippi State University, 1980

Experience

Professor of Geology, Mississippi State University, 2000-Present.
Associate Professor of Geology, Mississippi State University, 1995-2000.
Assistant Professor of Geology, Mississippi State University, 1990-1995.
Teaching Assistant and Assistant Lecturer, Texas A&M University, 1988-1990.
Hydrogeologist and Project Manager, BCM Converse, Inc., Jackson, MS, 1986-1988.
Geologist, State of Mississippi, Jackson, MS, 1982-1986: Office of Pollution Control Groundwater Planning Section Coordinator, Office of Geology Groundwater Geology Section, and R & D Center Mineral Resources Research Institute.
Geologist, Exploration Services Inc., Tyler, TX, 1982.
Geologist, North American Exploration, Inc., Kaysville, UT, 1980-1982.

Selected Publications

Schmitz, D.W., and May, J.H., 1994, A Predictive Model to Optimize the Collection of Data Needed to Characterize Fluvial Sand Bodies: Technical Report GL-94-10, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS 121p plus Appendicies.

May, J.H. and Schmitz, D.W., 1996, Development of a Predictive Model for Defining Subsurface Sand Bodies, Engineering Geology, Vol.42, pp. 175-186.

Schmitz, D.W. and May, J.H., 1996, Test Applications of a Predictive Model for Delineation of Fluvial Sand Bodies Using Geologically Based Calculations, Engineering Geology, Vol. 42. pp. 187-203.

Schmitz, D.W. and Russell, E.E., 1998, An Earthquake and Environmental Assessment of Faulting in the Demopolis Chalk in Lowndes County Mississippi, Mississippi Geological Society Bulletin, Vol. 46, No. 8 pp. 5-7.

Charlton, J.E. and Schmitz, D.W., 1999, Shallow Groundwater Resources of the Proposed Red Hills Facility

and Mine Area, Proceedings of the twenty-ninth Mississippi Water Resources Conference, pp. 130-138.

Crowe, C.R. and Schmitz, D.W., 2001, A Systematic Approach to Determine the Existence or Non-Existence of Atrazine and its Major Degradation Products in Mississippi Groundwater, Proceedings of the thirty-first Mississippi Water Resources Conference, pp. 17-33.

Schmitz, D.W. and Wax, C.L., 2002, A Contrast in Water resource Development and Settlement Patterns: Black Prairie and North Central Hills Regions of Mississippi, Proceedings of the thirty-second Mississippi Water Resources Conference, pp. 176-187.

Schmitz, D.W., Wax, C.L., and Peacock, E.., 2003, Water-resource Controls on Human Habitation in the Black Prairie of North-Central Mississippi, in *Blackland Prairies of the Gulf Coastal Plain: Nature, Culture, and Sustainability*, Peacock, E. and Schauwecker, T., Ed., The University of Alabama Press.

Green, B.H., and Schmitz, D.W., 2004, Technical Note: Soil-Based Controlled Low-Strength Materials, Environmental and Engineering Geoscience, Vol. X, No. 2, pp. 169-174.

Beasley, R.W., Hamil, B., May, J., and Schmitz, D., 2007, An Experimental Exercise Used to Determine if Mississippi's Science Framework is Adequately Preparing High School Graduates to Make Informed Decisions about Groundwater, Journal of the Mississippi Academy of Sciences, v. 52, No. 3, pp. 172-177.

Rogers, J.D., Boutwell, G.P., Schmitz, D.W., Karadeniz, D., Watkins, C.M., Athanasopuolos-Zekkos, A.G., and Cobos-Roa, D. 2008, Geologic Conditions Underlying the 2005 17th Street Canal Levee Failure in New Orleans. *Journal of Geotechnical and Geoenvironmental Engineering*. 134: 583-601.

Recent research projects

- Feasibility Study for Potential Multi-Use/Multi-Purpose Impoundments in 1) Choctaw County & 2) Smith County, MS
- Functional Assessment of Moist-Soil Habitat Management Impact on Wetland Impoundments Created as Part of an Agricultural Lands Reclamation Plan
- Tombigbee National Forest Stream and Spring Baseline Monitoring
- Surface Water and Ground Water Monitoring at the Red Hills Mine, Choctaw County, Mississippi
- Surface Water and Ground Water Baseline Data-gathering and Monitoring Efforts for a Proposed Lignite Mine in MS.

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