



2010 West Virginia Water Conference

West Virginia's Water Resources: Threats and Opportunities
Waterfront Place Hotel Morgantown, WV - October 6-7, 2010

Speaker Bios

The West Virginia Water Research Institute
is Extremely Grateful to All the Speakers for Their Contributions.

Abstracts, Presentations and Attendee List
are available on the Conference Web Site:

www.wvwaterconference.org

A Special Thanks To Our Sponsors & Hosts!



Office of Environmental Health Services
West Virginia Department of Health and Human Resources



Joe Altizer

Joe Altizer graduated from Marshall University in 1983 and 1986 with a BA in Criminal Justice and an MA in Political Science. His employment began at the West Virginia Legislature as an Analyst for Legislative Services from 1988 to 1991, and he served as Committee Clerk for the House Judiciary Committee. Upon completion of his JD from West Virginia School of Law in 1994, he was hired by the House of Delegates as Counsel to the Judiciary Committee and the Legislative Rule-Making Review Committee. He has worked for these two committees since 1994, and was made Chief Counsel of House Judiciary in August of 2000.

He has managed all state legislative rules relating to environmental issues for the House of Delegates since 1994, and in his capacity as counsel to House Judiciary has participated in developing several significant pieces of legislation, including various environmental laws, such as the state Brownfields program, the Quarry Reclamation Act, the Water Resource Preservation Act, and many revisions to Department of Environmental rules relating to all aspects of the state's regulatory program.

Katlyn Amos

Katlyn Amos is a fourth-year biology student at Concord University in Athens, WV. Her areas of interest include stream biology, ecology, and restoration, and she plans to continue her education in these or similar areas with a graduate degree upon matriculating from CU. Presently, she is continuing to research fungal decomposition in streams while completing her undergraduate degree. She is very thankful for the opportunity to attend and share her research at this year's conference.

Emily Anneken

Emily Anneken is currently a Master's candidate at Marshall University College of Science, Huntington West Virginia, where she studies under Dr. Gary E. Schultz, Jr. Her thesis focuses on identifying bacterial communities from aquatic environments. Emily went to Thomas More College, Crestview Hills Kentucky, for her Bachelors of Arts degree in Biology with a concentration in Ecological Studies which she received in 2009. She plans to gradu-

ate from Marshall University in 2011 with a Masters of Science degree in Biology, with a thesis in Microbiology

Micahel Arcuri

Michael A. Arcuri is a water quality specialist with the West Virginia Department of Environmental Protection's Division of Water and Waste Management. He has more than 25 years experience dealing with water pollution control issues and water quality assessment. During his tenure with the DEP, he has been involved in a variety of programs, including NPDES compliance, lake water quality assessment, volunteer monitoring, 305(b) reporting, and watershed assessment.

Mr. Arcuri currently works in the Water Quality Standards Program, where he is involved with various projects, including development of lake and stream nutrient criteria and putting together a comprehensive database of trout waters. He holds a B. S. in Zoology and a M. S. in Biological Sciences, both from Marshall University.

John T. Atkins, Jr.

A month after finishing a Ph.D. a man was found digging a ditch in the snow in Sutton, West Virginia. He is John T. Atkins, Jr., Hydrologist with the West Virginia Water Science Center, a Chemical Engineer from Va Tech, and Registered P.E. with 37 years with USGS after four years as chemical process engineer with the DuPont Co. in Linden, NJ and Belle, WV. Interests include hydrologic studies of flood frequency, low flow, watershed simulation, water use, and other computer, mathematical, or statistical applications in hydrology.

Katharine "Lee" Avary

Katharine Lee Avary retired in July, 2010 from the West Virginia Geological and Economic Survey, where she served as a Petroleum Geologist and Manager of the Oil and Gas Program. She received a BS in Geology from Emory University, Atlanta, GA and an MS in Geology from the University of North Carolina-Chapel Hill. Her expertise is in subsurface stratigraphy and petroleum geology of the Appalachian basin, with a focus on unconventional gas reservoirs including the Devonian shales, tight sands and coalbed methane. Ms. Avary joined the West Virginia Geologi-

cal and Economic Survey in 1978. She also holds an appointment as an Adjunct Associate Professor in the Department of Geology and Geography at West Virginia University (WVU). She is active in the American Association of Petroleum Geologists (AAPG) and is the faculty advisor for the WVU AAPG Student Chapter. She is currently a consulting petroleum geologist in Morgantown, WV.

Paul Baker

Paul J. Baker currently is a Trustee with the Save The Tygart Watershed Association and resides at 438 Grist Mill Road, Fairmont, WV 26554. He earned a Bachelor's degree in chemistry at Fairmont State prior to employment at Weirton Steel Company. After his graduate work in chemistry at WVU, he worked for Wheeling-Pittsburgh Steel and Kenna-Metal companies. He owned and operated Nova Analytical Laboratories in Latrobe, PA until 1979 and the Alternative Testing Laboratory near Uniontown, PA from until 2007.

Jerad Bales

Dr. Jerad Bales is the USGS Chief Scientist for Hydrology. In his more than 23 years with the USGS, he has served as a research hydrologist, supervisory hydrologist and, most recently, Director of the USGS North Carolina Water Science Center. He has experience in the use of a wide variety of hydrologic, hydraulic, and surface-water quality models and has authored numerous scientific articles and technical reports. He has been a strong champion of innovation in the measurement of streamflow and water quality and has served as Chair of the American Society of Civil Engineers' Committee on Hydraulic Instrumentation.

Dr. Bales received the Department of the Interior's Superior Service Award for his successful efforts to build an estuarine research program for the USGS in North Carolina. He is well known for promoting scientific collaborations and partnerships. He holds a B.S. in Civil Engineering and a M.S. in Environmental Engineering from the University of Tennessee and a Ph.D. in Water Resources Engineering from the University of Texas.

Karin Bencala

Karin Bencala is a Water Resources Planner at the Interstate Commission on the Potomac River Basin and the coordinator of the Potomac River Basin Drinking Water Source Protection Partnership. Prior to joining the Commission, she worked for the Woodrow Wilson Center's Environmental Change and Security Program in Washington, D.C. on issues of environmental security and water conflict and cooperation. She received her master's from the Bren School of Environmental Science and Management at the University of California, Santa Barbara, where she focused on sustainable watershed planning.

Jeff Brown

Is an economist, and management consultant with over 30 years experience in the energy industry. Jeff has served as a senior executive in the development of oil and gas, pipeline and power generation projects internationally and in North America. He founded the first independent energy management company in the US and managed fuel and electric supplies for power plants, industrial facilities and municipal utilities. He currently advises senior management, elected officials and civic groups on strategic planning, business process and development of people in the energy, natural resources, health care and financial services industries.

Exploring ways to conserve water and increase power plant fuel efficiency Jeff has conceived of a novel approach that may achieve both goals while reducing green house gas and NOx emissions.

Patrick Campbell

Patrick is currently an Assistant Director in the DEP's Division of Water and Waste Management. His section, the Watershed Assessment Branch, is responsible for statewide water quality monitoring & reporting and leads the state effort to write pollution reduction plans (also known as Total Maximum Daily Loads (TMDLs)), for impaired waters in West Virginia. His programs are active in a variety of environmental education activities and in current environmental matters including antidegradation implementation, selenium, abandoned mine drainage treatment, biological degradation and nutrient criteria. He formerly served DEP as manager of

the Division's Laboratory Program and worked as geologist in the Groundwater/Underground Injection Control Program.

Brian Carlson

Brian is from Troy, Ohio, graduated from The Ohio State University with a B.S. in Environment and Natural Resources. He is working with Friends of Deckers Creek by way of a partnership between Americorps VISTA and the Office of Surface Mining, known as the Appalachian Coal Country Watershed Team. Brian has been conducting water quality testing, benthic and fish community sampling, and habitat assessments throughout the Deckers Creek watershed since August 2009. He is also involved in organization fundraising and volunteer coordination efforts.

Douglas Chambers

Doug has worked with the U. S. Geological Survey's West Virginia Water Science since June 1992. He has served as project chief of investigations of wetlands biogeochemistry, organic contaminant uptake by biota, groundwater and surface-water water-quality monitoring, land use effects on aquatic communities, and the occurrence of endocrine disruptors in West Virginia streams. Doug is currently the Water-Quality Discipline Specialist for the West Virginia Water Science Center and the Maryland-Delaware-District of Columbia Water Science Center and is working on an ecosystem-scale model of selenium bioaccumulation in the mountaintop mining region of Southern West Virginia.

Martin Christ

Martin Christ holds a Ph.D in ecology from Rutgers University after studying interactions between forest soils and acid rain. He came to West Virginia to conduct research at WVU, but left academia to work for Friends of Deckers Creek, where he serves as Water Remediation Director. Martin conducted the monitoring and compiled the information for the first four years of the Clean Creek Program, and has also monitored and analyzed data from several acid mine drainage sources. Martin is an active volunteer for the Save the Tygart Watershed Association and Friends of Cheat.

Dan Cincotta

Dan Cincotta has been a fish biologist for the West Virginia Division of Natural Resources for 32 years and has published several papers and given many presentations on the distribution and ecology of West Virginia's fishes. He has a BS in Biology from York College of Pennsylvania and a MS in Fisheries Management from Frostburg University. For the first sixteen years with the DNR Dan served as an Environmental Coordination Biologist, where he reviewed and evaluated water resource projects and made recommendations to mitigate impacts and enhance fisheries habitat and angler opportunities. Since 1995 he has been working for the Wildlife Diversity Unit where he is the project leader of the Aquatic Community Assessment and Restoration Program, which classifies streams and inventories and monitors fish communities statewide. Mr. Cincotta is also an Adjunct Assistant Professor at West Virginia University, where he teaches undergraduate Ichthyology.

Alan R. Collins

Dr. Collins is a Professor and Chair of the Agricultural and Resource Economics program at West Virginia University. He teaches graduate and undergraduate classes in environmental and natural resource economics along with serving as undergraduate coordinator. His primary research areas include: water quality and watershed management; agricultural waste management; and environmental attitudes and risk perceptions. He has received research grants from the USDA National Research Initiative, Mid-Atlantic Regional Water Program, and the Tennessee Valley Authority. He has conducted numerous surveys of the general public dealing with water and water quality throughout the mid-Atlantic region. His 63 publications include papers in Agricultural and Resource Economics Review, American Journal of Agricultural Economics, Journal of Environmental Management, Review of Agricultural Economics, Risk Analysis, and Water Resources Research. He holds a Ph.D. in Agricultural and Resource Economics from Oregon State University and a M.S. in Range Resource Economics from Utah State University and a B.S. in Agriculture from University of Arizona.

George Constantz

Born in Washington, D.C. in 1947, George spent six years of his childhood in Baranquilla, Colombia, among the iguanas of the Magdalena River's floodplain, and in Chihuahua, Mexico, where he chased roadrunners through the desert. Since receiving a B.A. in biology from University of Missouri-St. Louis and a Ph.D. in zoology from Arizona State University, George has worked as a park naturalist, a teacher of biology and environmental science, a fish ecologist, researcher, and writer. George founded Cacapon Institute, a nonprofit organization dedicated to conserving Appalachian rivers. At the West Virginia divisions of Natural Resources and Environmental Protection, George planned and implemented watershed management programs; at the Canaan Valley Institute, he managed the Education and the Research & Development programs. He served as the Science Writer and on-camera Ecologist for Appalachia: a History of Mountains and People, a 4-part documentary film that premiered on PBS in April 2009. His current projects include writing a book on the ecology of the Rocky Mountains, writing/producing a documentary film about trees, and editing a series of books about the natural history of the Central Appalachians for WVU Press. George lives with his wife, Nancy Ailes, in the Cacapon River watershed of West Virginia.

Scott Copen

Scott Copen is a Senior Engineer, for the Morgantown Utility Board (Morgantown WV). Scott is also a Registered Professional Engineer. He received his Masters in Civil and Environmental Engineering from West Virginia University.

Nicholas "Corky" DeMarco

A lifelong resident of West Virginia, Nicholas "Corky" DeMarco, is currently the Executive Director of West Virginia Oil and Natural Gas Association. He's been in this position since November 2002. Prior to his current position, he was Director of Operations for the State of WV under Governor Cecil H. Underwood. He retired from the State of WV in 2002. Corky has a B.S. in Business Administration from WV State College, a post graduate from Marshall University and WV College of Graduate Studies.

Sam Dinkins

Sam Dinkins has been with Ohio River Valley Water Sanitation Commission (ORSANCO) since 1995. For much of that time he has been the project manager for the Ohio River Watershed Pollutant Reduction Program which has focused on assessing the extent and severity of contamination in the Ohio River from PCBs, dioxin, and bacteria. He is now assuming a new role with the Commission as Projects Coordinator of Research and Water Resources Programs. In this new capacity he is tasked with identifying and prioritizing research needs within the Basin, as well as, developing partnerships with other agencies, academia, watershed groups, and the private sector to address those needs. Endocrine disrupting compounds and emerging contaminants, in general, are among the Commission's current top research priorities and will be an active area of research development in the coming years.

Ronald D. Evaldi

Ronald D. Evaldi is a Supervisory Hydrologist with the U.S. Geological Survey (USGS) Water Resources Discipline. He has served with USGS since 1971 in Florida, Tennessee, Kentucky, and currently is Assistant Director of the USGS West Virginia Water-Science Center. His principal duties involve coordination of USGS water-resources investigation and data collection activities in West Virginia. He is expert in USGS techniques of water-resources investigations, including stream-flow measurement and records computation methods. Mr. Evaldi is responsible for quality assurance of hydrologic data collected by USGS staff in West Virginia and has participated on numerous reviews of other USGS data programs to assure national consistency of data-collection methods. He holds a Bachelor of Arts in Natural Sciences from the University of South Florida and a Masters Degree in Technology Management from Marshall University.

Don Garvin

Don Garvin is currently Legislative Coordinator and lead lobbyist for the West Virginia Environmental Council, a position he has held for the last eight years. Prior to taking this position he served three years as a member of the WVEC lobby team,

and has also served two terms as president of that organization.

Mr. Garvin is a long-time active member of Trout Unlimited. He served as secretary and newsletter editor of the Mountaineer Chapter of TU from 1983 until 1998, and as chapter president from 1998 to 2003. In 1999 he was retained by Trout Unlimited to edit and write major portions of the national organization's "Advocacy Manual," which continues to be used as TU's primary guidebook on interacting with federal and state regulatory agencies.

In addition, Mr. Garvin is a long-time board member of both the West Virginia Rivers Coalition and the West Virginia Highlands Conservancy.

From 1982 to 1998 Mr. Garvin was vice president and field manager of Braxton Oil and Gas Corp., a family-owned independent natural gas production company with offices in Buckhannon, West Virginia. Previously he attended Northwestern University where he majored in journalism and worked in that field prior to 1982.

Neil Gillies

W. Neil Gillies (Executive Director, Cacapon Institute, High View, WV) is an environmental scientist with over 25 years of experience. In the 70's and early 80s, his work was based in South Florida, where he worked on projects as diverse as using estuarine invertebrate communities to determine impacts from point source discharges to studies on the endangered American Crocodile at a nuclear power plant to documenting the absolute failure of a large environmental mitigation project. He also developed computer programs for analytical, database and graphics functions. In 1996, Neil joined Cacapon Institute, a non-profit environmental organization with a focus on water quality research and education. Since then, Neil co-authored a baseline study of West Virginia's Greenbrier River (using data collected by his predecessors), built a solid water quality research program focusing on land use influences on water quality, developed a Chesapeake Bay region centered education program that includes an innovative web-based e-school, partnered in an agricultural program niche marketing "environmentally-friendly"

beef, researched an innovative approach to increasing groundwater storage and summer stream flows, participated in an economic experiment on agricultural incentives that culminated in the construction of a wetland designed to remove nitrogen from groundwater, is studying an inexpensive approach to fencing deer out of riparian plants and upland forest sites, and is an active partner in WV's program to restore the Chesapeake Bay by restoring local waters. He has a B.S. from the University of Miami, Florida, and a M.S. from Florida International University.

David Gruber

Dr. David Gruber has been the President of Biological Monitoring, Inc. since its incorporation in 1980. Dr. Gruber holds B.S. and Ph.D. degrees in biology and a M.S. in marine science. To his credit, he has one book and over 70 scientific publications in the fields of ecological risk assessment and aquatic toxicology. He holds three patents related to an automated water quality monitor (Bio-Sensor®). As an active member of numerous scientific and technical societies, Dr. Gruber has influenced regulatory affairs and organized educational seminars. In addition to planning workshops, he has provided his technical expertise to industry, legal counsel, and technical associations. Dr. Gruber has served on his community Local Emergency Response Planning Committee (LEPC) ever since its inception in 1987 and is a charter member of the Department of Homeland Security, actively serving the U.S. Coast Guard Auxiliary as the District Marine Safety and Environmental Protection Officer.

Emily Grubert

Emily Grubert studies energy as an M.S. student in Environmental and Water Resources Engineering at The University of Texas at Austin. She is particularly interested in how energy development impacts water and land resources, with attention to how climate-focused energy policies affect decisions. Major projects include an analysis of Maui, Hawaii's freshwater system, a comparison of how natural gas and coal extraction affect water, and study of how coal-based carbon capture and sequestration could affect U.S. coal use. Emily holds an M.A. in Energy and Earth Resources from UT and a B.S. in Atmosphere/Energy Engineering from Stanford.

Brady Gutta

Brady Gutta is a Project Manager/Research Associate for the National Mine Land Reclamation Center within the West Virginia Water Research Institute where he oversees numerous watershed restoration projects involving the installation of treatment systems designed to combat acidic and alkaline mine drainage from abandoned mine sites. Mr. Gutta works with Federal agencies such as the Office of Surface Mining and the US Army Corps of Engineers; State agencies such as the West Virginia Department of Environmental Protection's Abandoned Mine Land Division and Non-Point Source Program as well as Stakeholder groups in their respective watersheds. Mr. Gutta holds a Bachelor of Science in Geology for West Virginia University and is currently completing a Masters of Science in Geochemistry and Hydrogeology from West Virginia University. He is an active member of the West Virginia Surface Mine Drainage Taskforce, the American Society for Mining and Reclamation as well as Trout Unlimited.

Joseph Hankins

Joseph Andrew Hankins is a Vice President of The Conservation Fund based in Arlington, Va., and is the Director of The Freshwater Institute, a field office and program of the Fund. Mr. Hankins earned a BS in General Science from Purdue University in 1979 and a Masters in Environmental Biology from Hood College.

In 1992, Mr. Hankins joined the Fund and the research team at Freshwater Institute to lead or manage projects in aquaculture, sustainable rural economic development, green infrastructure-based land use planning and community and on-site wastewater engineering. The Conservation Fund has long been an active partner in land conservation and protection in West Virginia. Working with federal, state and local partners, the Fund has protected over 38,000 acres with a Fair Market Value of over \$40 million in the state. These projects protected some of West Virginia's wild and wonderful special places such as the Lower Cheat River Canyon, the New River Gorge, and additions to Canaan Valley NWR.

Mr. Hankins currently serves on the Board of the Natural Capital Investment Fund, a

source of capital for socially and environmentally responsible business lending, and serves as the current Board Chair for the Jefferson County (WV) Public Service District. Mr. Hankins is personally active in local, statewide and national workgroups focused on the strategic importance of water, sustainability and community infrastructure planning. Mr. Hankins lives in Rockymarsh Run watershed and works in Shepherdstown, WV.

Evan Hansen

Evan Hansen founded Downstream Strategies, an environmental consulting firm in Morgantown, West Virginia, in 1997. He has 20 years of experience as an environmental consultant on energy, greenhouse gas, and water resource issues for non-profit organizations, government agencies, and private businesses. He has developed and applied computer models; provided training and expert testimony on issues related to environmental laws, policies, and permits; and led multi-disciplinary research teams that integrate science and policy.

He is currently researching the economic benefits of remediating acid mine drainage in the North Branch Potomac River for the State of Maryland, indicators for tracking TMDL implementation for the U.S. Environmental Protection Agency, and barriers to wind energy development in Appalachia for the U.S. Department of Energy.

Mr. Hansen received a B.S. in Computer Science and Engineering from M.I.T. and an M.S. in Energy and Resources from U.C.-Berkeley. He previously worked for Tellus Institute/Stockholm Environment Institute in Boston and the Natural Heritage Institute in San Francisco, and has consulted across sub-Saharan Africa and in China and Egypt.

Nathaniel "Than" Hitt

Dr. Nathaniel (Than) P. Hitt is a Research Fish Biologist in the Aquatic Ecology Branch of the U.S. Geological Survey's (USGS) Leetown Science Center in Kearneysville, West Virginia. He holds a B.A. in Biology from the College of Wooster, an M.S. in Organismal Biology and Ecology from the University of Montana, and a Ph.D. in Fisheries and Wildlife Sciences from Virginia Tech. Dr. Hitt's research investigates freshwater fish ecology and community ecotoxicology from a landscape-scale perspective, focusing

Nathaniel “Than” Hitt (continued) on stream ecosystems in the mid-Atlantic highlands. His work has demonstrated that landscape-scale dispersal affects fish community structure, and that an understanding of stream network topology may improve fish bioassessment in Appalachia. His current research evaluates selenium bioaccumulation in stream fishes within the coalfields of southern West Virginia. This research quantifies selenium concentration gradients across food webs (i.e., aqueous, periphyton, benthic macroinvertebrates, fishes) to calculate trophic transfer functions and to evaluate how local environmental conditions mediate selenium speciation and bioaccumulation in streams.

Michael Hohn

Dr. Hohn was appointed State Geologist and Director of the West Virginia Geological and Economic Survey in Morgantown West Virginia in 2006. He holds a B.S. in geology from Binghamton University, and a Master’s and Ph.D. in geology from Indiana University. He has published over fifty papers on energy resources, and a book on geostatistics, in its second printing. Research interests include carbon sequestration, production trends in oil and gas wells, reservoir heterogeneity, preferred upstream management practices in the Appalachian Basin, and estimation of coal resources. He is a Fellow of the Geological Society of America.

Brittney Holmes

Brittney Holmes is a second semester physical science master’s student at Marshall University in Huntington, WV. She received her Bachelor’s of Science in Chemistry from Marshall in December of 2009 and decided to further her education at the same institution. Her master’s area of emphasis is geology with a minor biology concentration. She currently works under the advisement of Dr. Aley El-Shazly of Marshall’s Geology program and Dr. Jeffrey Kovatch of the Biology Department as they are collaborating on a multidisciplinary project involving schlerochronology and environmental water and soil testing.

Leslie Hopkinson

Dr. Leslie Hopkinson is an assistant professor in Civil and Environmental Engineering at West Virginia University. The recipient of an EPA STAR Fellowship,

she earned her Ph.D. degree in Biological Systems Engineering at Virginia Tech specializing in natural resources management and ecological restoration. She has taught courses in hydrology, nonpoint source pollution, and stream classification. Dr. Hopkinson’s research focus is watershed management, stream restoration, bank stability, and vegetation fluid interactions.

Frank Jernejcic

District fishery biologist for the West Virginia Division of Natural Resources for 40 years with responsibility for 12 northern counties. Coordinates all bass tournaments in WV and compiles annual tournament catch data. He has conducted fishery surveys in the Ohio and Monongahela watersheds for 40 years and has documented the improvements in fish populations resulting from years of mining and industrial pollution. Represents West Virginia on the Mississippi River Basin Panel for Aquatic Nuisance Species, the North Central Walleye Technical Committee, and the Southern Division AFS Pollution Committee in addition to serving on the West Virginia Interagency Fish Consumption Advisory Committee.

Lawrence Johnson

Mr. Johnson has over 40 years of project management, construction management, planning and landscape architecture and upper level management experience in both the public and private sectors. Before joining Chester Engineers in 1989, Mr. Johnson was the Director of Planning and subsequently Director of Public Works for a total of 22 years in Frederick County, Maryland. He is experienced in the formulation, interpretation, implementation and enforcement of public policy, regulations, and plans affecting development. He has authored and implemented County Comprehensive Plans, Municipal Master Plans, County Comprehensive 10-year Water and Sewerage Systems Plans, Capital Improvements Program Plans and operating budgets; performed policy analyses for sewer and water; and has been extensively involved in public hearings, meetings and testimony before government officials, regulatory agencies, and citizen organizations. He provides assistance in obtaining grants and loans for municipal infrastructure projects including water and wastewater systems. His most recent project was the development of a

plan for the reuse of treated effluent from the Flowing Springs wastewater treatment plant in Jefferson County, WV. He currently sits on the Water Advisory Committee for Jefferson County.

Mark D. Kozar

Mark D. Kozar is a Hydrologist and is currently employed by the U.S. Geological Survey in Charleston, West Virginia. He serves as the USGS West Virginia Water Science Center’s ground-water specialist and has conducted numerous hydrogeologic investigations over his 25-year career. His most recent research has focused on ground-water flow in karst terranes in West Virginia’s eastern panhandle. Mark’s academic background includes B.S. and M.S degrees in Geology from West Virginia University.

Ben Mack

Ben is originally from Morgantown, WV. He graduated from West Virginia University (WVU) with a dual major in Agronomy and Environmental Protection in 1999. After working for Friends of the Cheat, a local watershed group, for two years, he went back to WVU for a Master of Science in Plant and Soil Sciences. He received his Masters in May 2008 and currently works for the West Virginia Water Research Institute at WVU. His current work focuses on Acid Mine Drainage (AMD) and its remediation.

Scott Mandirola

Scott Mandirola earned a Bachelor of Science degree in Chemistry/Geology and an Associate in Arts degree in General Studies from Keene State College.

He joined the West Virginia Department of Environmental Protection, Division of Water and Waste Management in April 2006 as an Environmental Resources Program Manager 2 to manage the state-wide Water Quality Standards Program. He became Acting Director of the Division in September 2008 and was named Director of the Division in March 2010.

Prior to joining the WVDEP Mr. Mandirola worked for 17 years with SGS Environmental Services Inc., the largest testing and certification company in the world. In his capacity as Production Manager at SGS facilities in Anchorage, Alaska and Charleston West Virginia, he managed 20 plus laboratory employees, performed technical review of data and aided sales

and marketing with technical issues.

Mr. Mandirola also worked for the Connecticut Department of Health Services, Water Supplies Section as a Planning Analyst collecting, analyzing and organizing water supply data.

Patricia Mazik

Pat Mazik is the Unit Leader and adjunct Associate Professor at the USGS/West Virginia Cooperative Fish and Wildlife Research Unit at West Virginia University where she has been employed since 1998. Her primary teaching and research areas are in aquaculture, fish physiology and toxicology. Pat received her B.S. from Mount Union College (1983), her M.S. from Southwest Texas State University (1985) and her PhD from Memphis State University (1989). Pat worked as a research physiologist at the Southeastern Fish Cultural Lab in Marion, AL from 1987 to 1995. In 1995, she transferred to the USFWS in Arlington, VA as a fishery biologist working with the Fish Technology Centers on program development and budget initiatives before joining the Coop Unit program.

Dave McMahon

Dave is originally from Wheeling, West Virginia. He graduated from West Virginia Wesleyan College in Buckhannon, West Virginia in 1972. He graduated from law school at George Washington University in 1975.

From 1975 to the present he has worked as a public interest lawyer representing low income people in civil legal matters such as consumer, landlord tenant, domestic relations law, and issues surface owners have with oil and gas drilling. He has also advocated at the Legislature on all of those issues since 1985.

He is a co-founder of the West Virginia Surface Owners Rights Organization. That organization has a web site that educates surface owners on a variety of oil and gas issues, and has introduced legislation increasing surface owner's rights. In 2008 he started a part-time private practice representing small and medium mineral owners in leasing and royalty issues.

Shanda Minney

Shanda Minney joined West Virginia Rivers Coalition as Executive Director in February of 2008. Shanda has worked in the environmental non-profit arena for

nearly 20 years. She has experience in working for a wide range of organizations on environmental campaigning, advocacy, international development, philanthropy, policy analysis, and has taught international environmental issues at the Masters level. In addition to time spent working for the Woodrow Wilson International Center for Scholars in Washington DC and the non-profit Center for Urban Watershed Renewal based in Massachusetts, Shanda has spent time living and working overseas, where former employers include Friends of the Earth UK, Care International, Marie Stopes International and the School of Oriental and African Studies at the University of London. Shanda has an Undergraduate Degree in International Relations and International Politics from George Washington University, and a Masters degree in Development Studies from the University of London.

Heidi Moltz

Heidi Moltz is a Senior Water Resources Scientist at the Interstate Commission on the Potomac River Basin. She has previous professional experience working for state and local government, private industry, and non-profit organizations. She holds a Ph.D. in Aquatic Resources from Texas State University-San Marcos, where she developed a novel methodology for identifying critical areas for non-point source pollution control in large basins. She received her M.S. in Water Resources Management from the University of Wisconsin-Madison, focusing on the design and implementation of land management techniques to control pollution.

Duane Nichols

Duane G. Nichols is President of the Cheat Lake Environment & Recreation Association and an Advisor to the Ft. Martin Community Association on environmental issues. He is a graduate of West Virginia University and the University of Delaware in chemical engineering. He taught chemical engineering at WVU for ten years, spent three years in the Fossil Energy Section at the Research Triangle Institute in North Carolina and 20 years in research and development activities on coal cleaning and coal conversion technologies at CONSOL R & D.

Andrew "Nick" Schaer

Nick currently works for the West Virginia Department of Environmental Protection/

Division of Mining and Reclamation as a Program Development Geologist. He received his BS Geology from The Ohio State University. Nick has 22 years experience in mining and karst related geology, hydrogeology and regulation. Nick has also worked for over 13 years with various GIS and water modeling technologies.

Shikha Sharma

Shikha Sharma graduated with a PhD in Geology from Center of Advanced Studies in Geology, India. She is a stable isotope geochemist and Assistant Professor in department of Geology and Geography at West Virginia University. Before moving to WVU she was Director of the central stable Isotope facility at University of Wyoming. Dr. Sharma has authored/co-authored 22 peer review publications and has acquired more than \$1 million grant funding as PI or Co-PI.

Her research interests revolve around the application of stable isotopes as natural tracers to understand impact of different geochemical, biological and climatic processes on our environment. Here recent research efforts have primarily been focused on role of stable isotopes in addressing critical water-energy nexus issues.

Benjamin M. Stout III

Dr. Benjamin M. Stout III is Professor of Biology at Wheeling Jesuit University, now in his 20th year. Originally from Morgantown, Ben studied at West Virginia University, Tennessee Tech, and Virginia Tech. Ben experienced a life-changing moment in 1999 while testifying in Federal Court on behalf of citizens in southern West Virginia. At issue was the very existence of headwater streams that did not appear on maps and were largely ignored by coal companies, state, and federal regulators. Since then Ben has worked to address citizen concerns in coalfield communities through research, convening meetings between citizens and scientists, grant writing, testimony, and by making himself available to the media. For this work Ben was named Environmental Steward in 2007 by the North American Benthological Society. For his rails-to-trails work in the Wheeling community, Ben along with Robert "Scat" Scatterday will receive the "Trail Advocacy Award" for 2010 from American Trails.

Robert Vagnetti

Mr. Robert Vagnetti has over twenty years experience in the energy and environmental areas. Eighteen these years have been spent providing analytical and technical consultation to various offices responsible for research and development within the U.S. Department of Energy (DOE) including; the Office of Fossil Energy (FE), the Office of Energy Efficiency and Renewable Energy, the Office of Policy, Planning, and Analysis, and the Office of Environmental Management. Currently, Mr. Vagnetti is project manager at the DOE National Energy Technology Laboratory in Morgantown, West Virginia. He manages a broad RD&D portfolio of unconventional resource projects including those associated with shale gas, methane hydrates, and western oil shales. Mr. Vagnetti holds a MS in Mineral Economics and a BS in Geology from the University of Arizona.

Sarah Veselka

Sarah Veselka is currently the Executive Director of Friends of Deckers Creek. She received her bachelor's degree in biology from the University of Georgia and holds a master's degree in Wildlife and Fisheries Resources from West Virginia University. Sarah has over nine years of experience in aquatic ecology and watershed science including research and teaching of stream and wetland ecosystems. She has managed the Clean Creek Program for the past four years and is passionate about aquatic ecosystems, particularly invertebrates.

Jeremy White

Jeremy White is a Hydrologic Technician with the U. S. Geological Survey (USGS) Water Resources Discipline. He has served as a hydrologic technician with the West Virginia Water Science Center for 12 years. His principal duties include the collection and processing of surface and groundwater-quality data, as well as the collection and processing of streamflow data. He has authored reports in the field of groundwater quality. He is expert in USGS methods for the collection and analysis of water-quality data and has participated on numerous reviews of other USGS Water Science Centers to ensure national consistency in water-quality programs. He holds a Bachelor of Science in Biology from the University of Charleston.

Gary Wick

West Virginia native Gary Wick was educated in Tyler County, WV and Marshall University, Huntington, WV - where he earned bachelor and Masters of science degrees. Gary also received advanced education at the Federal Bureau of Investigation National Academy, Quantico, VA; and the Federal Law Enforcement Training Center, Glenco, GA; extensive training in Personnel management through Northwestern University, Chicago, IL; and Police Internal Affairs matters through the Institute of Police Technology, Orlando, FL.

Gary retired from the West Virginia State Police in 1994 after a 25 year career, as Inspector in charge of all Internal Affairs investigations for the Department.

Gary began a second career with the FBI November 1994 as the Senior Supervisory Police Officer, where he was tasked with development of the CJIS FBI Police force. In 1998, Gary became Unit Chief of all Operations and Customer Service for the National Instant Criminal Background Check System (NICS).

Presently, Gary is a Management and Program Analyst with the N-DEX, a National Law Enforcement Information data sharing program.

David Yaussy

David is a member in the Charleston, West Virginia office of Robinson & McElwee PLLC. Mr. Yaussy practices in the area of energy and environmental law, principally NPDES, hazardous waste, and air permitting; oil and gas permitting; and water quality standards development. He has recently written on such topics as brownfield redevelopment, coalbed methane effluent guidelines, spill reporting and groundwater protection programs, and has lectured on a variety of environmental issues. Mr. Yaussy received his J.D. Degree from the Ohio State University College of Law in 1984 and his Bachelor of Arts degree from Otterbein College in Westerville, Ohio in 1981. He is admitted to practice before the Supreme Court of Ohio, the Supreme Court of Appeals of West Virginia, and the United States Court of Appeals for the Fourth Circuit.

Paul Ziemkiewicz

Paul Ziemkiewicz is the Director of the West Virginia Water Research Institute (WVWRI). The WVWRI has a staff of thirteen and works with the faculty of WVU and other universities to manage programs that range from local, regional, national, to international in scope. Major programs include mine drainage, watershed management, biofuels, industrial site restoration and treatment of drilling brines.

Dr. Ziemkiewicz's responsibilities focus on addressing high priority environmental issues by developing research opportunities, assembling and managing research teams and responding to the needs of sponsors. In addition to his research roles, Dr. Ziemkiewicz serves on both state and federal policy advisory committees focusing on energy and water. Dr. Ziemkiewicz is a member of the West Virginia Acid Mine Drainage Task Force, the Eastern Mine Drainage Federal Consortium, the West Virginia Special Reclamation Trust Fund Advisory Council and the Ohio River Basin Water Availability and Management Work Group

Dr. Ziemkiewicz received the E.M. Watkin Award in 1985 for Outstanding Contribution to the Betterment of Land Reclamation in Canada, presented by the Canadian Reclamation Association. In 2005 he received the Environmental Conservation Distinguished Service Award, presented by the Society for Mining, Metallurgy and Exploration

He holds a Bachelor's in Biology and a Master's in Range Ecology from Utah State University, and Doctorate in Forest Ecology from the University of British Columbia.

