National Academy of Sciences Review Committee Texas Tri-Agency Instream Flow Program

Committee Members (As of November 17, 2003)

Gail E. Mallard, chair

Dr. Mallard is with the U.S. Geological Survey where she serves as a Senior Advisor to the Associate Director for Water. She is the co-Chair of the National Water Quality Monitoring Council. She has over 15 years of experience in planning and managing water resources programs, including planning for the USGS National Water Quality Assessment Program, the USGS National Research Program, and the USGS Toxic Substances Hydrology Program. Within the USGS, she has also provided advice on workforce planning issues and technical support for water resources programs. She served as Chair of the Freshwater Work Group and member of the design Committee for the Heinz Center report, "The State of the Nation's Ecosystems: Measuring the Lands, waters, and Living Resources of the United States". Her technical interest and expertise is water quality and environmental monitoring. She received a Ph.D. from the Ohio State University in microbiology in 1975.

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Kenneth L. Dickson

Dr. Dickson is the Regents Professor of Biological Sciences at the University of North Texas. Dr. Dickson created the Elm Fork Education Center in 1998 and serves as its Director. He is past Director of the Institute of Applied Sciences at UNT. Dr. Dickson conducts research in applied problem solving in aquatic biology, development of methods to evaluate the fate and effects of chemicals in the aquatic environment, hazard assessment, biomonitoring, aquatic toxicology, limnology of reservoirs, restoration and recovery of damaged ecosystems, environmental education, and applications of remote sensing and GIS to environmental impact assessment. Dr. Dickson earned a BS in education (1966) and an MS in biology (1968) from North Texas State University, and a Ph.D. in aquatic biology from Virginia Polytechnic Institute and State University (1971).

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Kirk O. Winemiller

Dr. Winemiller is a Professor in the Department of Wildlife and Fisheries Sciences at Texas A&M University. Dr. Winemiller earned a BA (1978) and an MS (1981) in zoology from Miami University in Oxford, Ohio, and a Ph.D. (1987) from Texas A&M University in 1987. Dr. Winemiller's research interests include work on aquatic food webs, fish population and community ecology, and fish reproductive ecology. Dr. Winemiller's lab conducts a considerable amount of research on the ecology and management of Texas riverine and estuarine fishes, and has conducted research on Texas streams (with emphasis on macroinvertebrates and fishes) for development of ecological assessment tools.

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Clark Hubbs

Dr. Hubbs is the Regents Professor of zoology, Emeritus, of the University of Texas at Austin. Dr. Hubbs studies how fish relate to their environment and how anthropogenic changes impact their survival. He investigates the causes and cures of endangered species status. His studies involve geographic variation in life history traits and interactions between a gynogenetic sexual parasite and its male host species. Dr. Hubbs received an AB in zoology from the University of Michigan in 1942, and a Ph.D. from Stanford University in 1951.

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Thomas B. Hardy

Dr. Hardy is the Director for the Institute of Natural Systems Engineering, and a professor at the Utah Water Research Laboratory in civil and environmental engineering. Dr. Hardy has worked for advancements in hydraulic simulation techniques for use in stream habitat modeling and optimization techniques in water resource allocation studies involving instream flow determinations for fisheries, application of multispectral remote sensing techniques for the classification and quantification of stream/riparian ecosystem elements for GIS applications, development of computer simulation models and software interfaces for use with assessment tools. Dr. Hardy earned BS degrees in both education (1977) and biology (1978) from the University of Nevada, and an MS degree in aquatic biology (1982) also from the University of Nevada. Dr. Hardy received his Ph.D. from Utah State University in civil engineering in 1988.

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Gregory V. Wilkerson

Dr. Wilkerson is an Assistant Professor in the Department of Civil and Architectural Engineering at the University of Wyoming. Dr. Wilkerson's research interests include research and development of solutions to water resource problems, multi-disciplinary approaches to stream restoration, river mechanics, sedimentation and erosion, environmental hydraulics, engineering hydrology, and statistics. His current research involves developing improved methods for physical modeling of rivers and developing a GIS program for predicting the impact of increased water discharges, a by-product of coal-bed methane production, into natural rivers. Dr. Wilkerson is currently a P.I. with the NSF Science and Technology Center, National Center for Earth-Surface Dynamics. Dr. Wilkerson earned a BS degree in civil engineering from the Georgia Institute of Technology in 1989, and an MS (1995) and a Ph.D. (1999) both in civil engineering from Colorado State University.

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David A. Woolhiser

Dr. Woolhiser (NAE) received his Ph.D. in Civil Engineering from the University of Wisconsin in 1962. Dr. Woolhiser retired from the USDA Agricultural Research Service in 1991 after a 30 year career and is currently a Faculty Affiliate in civil engineering at Colorado State University and a hydrologist in Fort Collins, Colorado. He is known for his work on the hydrology and hydrometeorology of arid and semiarid rangelands, simulation of hydrologic systems, numerical modeling of surface runoff, erosion and chemical transport, and probabilistic models of rainfall and runoff. Dr. Woolhiser was elected as a member to the National Academy of Engineering in 1990 for advancing the use of mathematical and statistical techniques to rationalize the description of hydrologic phenomena. Dr. Woolhiser has served the NRC on several committees, including the Committee on Water Resources Research, the Special Fields and Interdisciplinary Engineering Peer Committee, and the Steering Committee on Climate Change and Water Resources Management.

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Patricia F. McDowell

Dr. McDowell is Professor of geography and Professor of environmental studies at the University of Oregon. She teaches courses in fluvial geomorphology, watershed science and policy, and soils geography. Her research focuses on response of river systems to human impacts and environmental change. At the University of Oregon, she served as Associate Vice President for Research from 1990 to 1993 and as Chair of the Department of Geography from 1993 to 1996. She has served the NRC as a member on the Committee on Research Priorities in Geography at the USGS. Dr. McDowell earned a BA (1971) and MA (1977) from the Illinois Institute of Technology, and a Ph.D. (1980) from the University of Wisconsin.

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Brian D. Richter

Mr. Richter is the director of The Nature Conservancy's Freshwater Initiative, an international effort to protect freshwater systems. Brian Richter has been involved in river conservation for more than 20 years. His current responsibilities focus on the global challenges of meeting human needs for water while keeping river ecosystems healthy. He works with public agencies, academic institutions, and other private organizations involved in river conservation, and he leads a staff that includes hydrologists, aquatic ecologists, policy specialists, educators and communicators. He has published numerous scientific papers on the importance of ecologically sustainable water management in international science journals. He has also co-authored a new book with Sandra Postel entitled *"Rivers for Life: Managing Water for People and Nature*," to be published by Island Press in summer 2003.

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David R. Maidment

Dr. Maidment is the Ashley H. Priddy Centennial Professor of Engineering and Director of the Center for Research in Water Resources at the University of Texas at Austin. He is an acknowledged leader in the application of geographic information systems (GIS) to hydrologic modeling. His current research involves the application of GIS to floodplain mapping, water-quality modeling, water resources assessment, hydrologic simulation, surface water–groundwater interaction, and global hydrology. Dr. Maidment serves the NRC as chair of both the Committee on Water Resources Research and the Committee on Review of the USGS National Streamflow Information Program. From 1992 to 1995 he was Editor of the Journal of Hydrology, and he is currently an associate editor of that journal and of the Journal of Hydrologic Engineering. He received his B.S. degree in Agricultural Engineering from the University of Canterbury, Christchurch, New Zealand, and his M.S. and Ph.D. degrees in civil engineering from the University of Illinois at Urbana-Champaign.

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James Martin

Mr. Martin is the director of the Natural Resources Law Center at the University of Colorado, School of Law. He is responsible for defining the center's strategic direction as well as management of the program and staff. He is currently conducting research on a wide range of public lands and resources issues and teaches advanced natural resources law seminars on land use planning and energy law. Before coming to the center, he served as a senior attorney at Environmental Defense where he worked on air quality, energy, endangered species, and water resources issues. From 1986 to 1992, he served Congressman and then Senator Tim Wirth as counsel for energy, environment and natural resources and as the senator's state director. He has a bachelor's degree in biology from Knox College (1973) and a J.D. degree (1981) with a certificate in environmental and natural resources law from Northwestern School of Law of Lewis and Clark College in Portland, Oregon.

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