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Dr. Zhuping Sheng, Professional Engineer and Professional Hydrogeologist, is an Associate Professor at the Texas AgriLife Research and Extension Center at El Paso, and Department of Biological and Agricultural Engineering, Texas A&M University System. His areas of expertise are in hydrogeology and numerical modeling, management strategies of water resources, aquifer storage and recovery, and aquifer mechanics. As part of his transboundary water resources – geohydrology research program for the Rio Grande Basin and other arid and semi-arid areas, his current research includes improvement of irrigation efficiency, conjunctive uses of surface and ground water resources, coordinated water resources database and Geographic Information System, protection of water quality and extension of the useful “life” of stressed regional aquifers to sustain regional development and improve the quality of life of communities that depend on these aquifers.

Since joining TAMU, in support of his research program Dr. Sheng has been awarded 20 grants as PI and co-PI with total funding of more than \$1.2 million. He has published over 30 journal articles, conference proceedings papers and technical reports from his research. His professional service includes the National Research Council, Advisory Committee on the Sustainable Underground Storage of Recoverable Water, and numerous national society technical committees and regional water resources management and planning organizations.

I. EDUCATION

- Ph. D.** Hydrology/Hydrogeology, Minor in Geological Engineering, 1996
University of Nevada, Reno, Nevada, USA
- M. Sci.** Engineering Geology/Hydrogeology, 1987
Institute of Geology, Chinese Academy of Sciences, Beijing, China
- B. Eng.** Hydrogeology/Engineering Geology, 1983
Tongji University, Shanghai, China

II. EMPLOYMENT HISTORY

- Associate Professor**, Department of Biological and Agricultural Engineering, Texas A&M University, AREC, El Paso, TX, 2007 - present
- Assistant Professor**, Department of Biological and Agricultural Engineering, Texas A&M University, AREC, El Paso, TX, 2001 – 2007
- Adjunct Professor**, Institute Geographical Sciences and Natural Resources Research, Chinese Academy of Sciences, Beijing, China, 2007-2009
- Adjunct Professor**, Department of Civil, Agricultural and Geological Engineering, New Mexico State University, Las Cruces, New Mexico, 2004 - present
- Hydrogeologist**, El Paso Water Utilities, El Paso, TX, 1998 - 2001
- Visiting Assistant Professor/Post Doctoral Fellow**, Department of Civil Engineering, Morgan State University, Baltimore, Maryland, 1997 – 1998
- Research Assistant**, Nevada Bureau of Mines and Geology, Reno, Nevada, 1991 - 1996
- Assistant Professor**, Institute of Geology, Chinese Academy of Sciences, Beijing, China, 1989 - 1991
- Research Assistant**, Institute of Geology, Chinese Academy of Sciences, Beijing, China, 1983 - 1988

III. CURRENT PROJECTS AND FUNDING

Transboundary aquifer assessment, U.S. Department of Interior, U.S. Geological Survey, Co-PI

Membrane treatment of impaired irrigation return and other flows for creating new sources of high quality water, AWWARF, U.S. Bureau of Reclamation & El Paso Water Utilities, Co-PI

Installation of River and Drain Instrumentation Stations to Monitor Flow and Water Quality and Internet Data Sharing, sponsored by USBR, EPWU and TAES: PI.

Evaluation of alternatives for improvement of water delivery efficiency, hydrological modeling of the Rio Grande basin (Soil and Water Assessment Tool), and decision support system for irrigation district management (Rio Grande Basin Initiative on Irrigation Efficiency, USDA): Co-PI.

Coordinated Water Resources Database and GIS (El Paso Water Utilities, U.S. Army Corps of Engineers, and PdN Watershed Council): PI.

Integrated Management Strategies to Protect and Extend the Life of the Stressed Aquifers in the Paso Del Norte Region (USDA Hatch Project): PI.

Conceptual model for the Rio Grande flow between Elephant Butte Reservoir and El Paso (U.S. Army Corps of Engineers and Paso del Norte Watershed Council): PI.

Saltcedar Control and Water Uses Studies and Monitoring; Watershed Protection Plan Development for the Pecos River, PI, C. Hart, sponsored by USEPA and Texas State Soil and Water Conservation Board; Co-PI.

The Use of Reclaimed Effluents and Salty Groundwater as Irrigation Sources for Cotton Culture and vegetable production; the Texas Cotton Incorporated and USBR; PI.

Regional water resources plan for the Far West Texas (Senate Bill 2, TWDB): Co-PI.

Water conservation through reuse of gray water (USBR): Co-PI.

Seepage losses and water salvage by canal lining (TWRI, USBR and El Paso County Water Improvement District No. 1): PI

IV. SELECTED PUBLICATIONS

National Research Council, 2008. *Prospects for Managed Underground Storage of Recoverable Water*, Committee Chair: Dr. Edward Bouwer; **Z. Sheng**, Committee Member and contributing author to the report, Committee on Sustainable Underground Storage of Recoverable Water, Water Science and Technology Board; The National Academies Press, 337p.

Sheng, Z., Arthur, J., Restrepo, J. and R. Allen-King, 2007. On Recovery Efficiency of Managed Underground Storage of Recoverable Water Systems, *Proceedings of the 6th Biennial International Symposium on Managed Aquifer Recharge*, Phoenix, Arizona, USA, October 29 – November 2, 2007.

Brown, C., **Z. Sheng**, M. Bourdon, 2007. *Phase II Final Project Report Paso del Norte Watershed Council Coordinated Water Resources Database and GIS Project*, Joint New Mexico State University, Water Resources Research Institute (TR-341) and Texas A&M University, Texas Water Resources Institute Technical Report (TR307). October: 85p Abstract: <http://twri.tamu.edu/report-abstract/TR-307/>

Sheng, Z., A. K. McDonald, C. Hart, W. Hatler, J. Villalobos, 2007. *Quantity and Fate of Water Salvage as a Result of Saltcedar Control on the Pecos River in Texas*, Texas A&M University, Texas Water Resources Institute Technical Report (TR-304), June: 42p.

Tillery, S., **Sheng, Z.**, J. P. King, B. Creel, C. Brown, A. Michelsen, and R. Srinivasan and A. Granados, 2006. *The Development of Coordinated Database for Water Resources and Flow Model in the Paso del Norte Watershed*, Joint New Mexico State University, Water Resources Research Institute (TR 337) and Texas A&M University, Texas Water Resources Institute Technical Report (TR297). December: 98p

Sheng, Z., A. McDonald, G. Xiang and C. Hart, 2006. Characterize interaction of surface and ground water along the Pecos River by using time-series analysis of observed water levels, *Proceedings of the International Conference on Hydrological Sciences for Managing Water Resources in Asian Developing World*, June 8 -10, Guangzhou, China, CD-ROM.

- Sheng, Z.** and J. Devere. 2005. Understanding and managing the stressed Mexico-USA transboundary Hueco bolson aquifer in the El Paso del Norte region as a complex system, *Journal of Hydrogeology*. 13(5-6): 813-825.
- Sheng, Z.**, Sturdivant, A., Michelsen, A. and R. Lacewell. 2005. Rapid economic assessment of flood-control failure along the Rio Grande: A case study, *International Journal of Water Resources Development*, Vol. 21 No. 4: pp. 629-649.
- Sheng, Z.**, Y., Liu, A. Michelsen and D. Xu. 2005. Comparative study in water resources development of western regions in the United States and China, *Trans. ASAE*, 48/3, pp.1015-1024.
- Sheng, Z.** 2005. An aquifer storage and recovery system with reclaimed wastewater to preserve native groundwater resources in El Paso, Texas, *Journal of Environmental Management*, 75/4, pp. 367-377.
- Hart, C. R., White, L.D., McDonald, A. and **Z. Sheng**. 2005. Saltcedar control and water salvage on the Pecos River, Texas, 1999-2003, *Journal of Environmental Management*, 75/4, pp. 399-409.
- Sheng, Z.**, J. Villalobos, and A. M. Michelsen. 2005. Integrated GIS method for estimation of riparian coverage along the lower Rio Grande, River and Lake Resotoration, Universities Council on Water Resources, Portland, Maine. July 12-14. 7 pages, CD-ROM.
- Sheng, Z.** 2005. Challenges Faced by Aquifer Storage and Recovery System for the Reclaimed Wastewater in El Paso, Texas, at the ASR Workshop of AWWA 2005 Annual Conference, San Francisco, California, June 12-15, 2005 (Invited).
- Brown C., **Z. Sheng**, and M. Rich. 2004. *Coordinated Water Resources Database and GIS*. Joint New Mexico State University, Water Resources Research Institute and Texas A&M University, Texas Water Resources Institute Technical Report No. 327. January 2004.
- Sheng, Z.**, A. Michelsen, M. P. Fahy and J. Ashworth. 2003. Conflicts and cooperation: water resources planning in Far West Texas, *Proc. Of World Environmental and Water Resources Conference*, ASCE, Philadelphia, PA, June 23-26, 2003, 10p. CD-ROM.
- Sheng, Z.**, J. P. King, L. S. Aristizabal, J. Davis. 2003. Assessment of water conservation by lining canals in the Paso Del Norte region: The Franklin Canal case study, *Proc. Of World Environmental and Water Resources Conference*, ASCE, Philadelphia, PA, June 23-26, 2003, 7p. CD-ROM.

V. PROFESSIONAL ACTIVITIES

- Invited Committee Member, Advisory Committee on Sustainable Underground Storage of Recoverable Water, National Academy of Sciences, National Research Council, Water Science and Technology Board; 2005-06.
- Environmental and Water Resources Institute (EWRI of ASCE)
- Chair for Professional Programs and Sessions, Committee of Groundwater Management, 2007-08; Vice Chair (2006-2007).
 - Chair of the Task Committee for Guide on Economics of Development of Environmental Impact Statement (EIS)/Environmental Impact Report (EIR)/Environmental Assessment (EA), 2001-03,
 - Member of Groundwater Hydrology Committee, 2001-present.
 - Member of Artificial Recharge Standard Committee, 2002-present.
 - Secretary (2007 to present) of Land Subsidence Guideline Committee, 2002-present.
- Chair of Technical Committee on Aquifer Storage and Recovery (ASR), American Water Resources Association, 2002-03.
- National Academy of Sciences, Reviewer, the Aquifer Storage and Recovery system for the Comprehensive Everglades Restoration Plan, Florida, 2000, 2002.
- IAH IHP-UNESCO Programme, ISARM Americas (Internationally Shared Aquifer Resources Management), National Coordinator, 2003-04.
- Executive Committee Member of the Paso Del Norte Watershed Council, 2002-present.
- Member, Upper Rio Grande Water Operation Model Technical Team, U.S. Army Corps of Engineers, 2006-present.