

**Audra N. Morse, Ph.D., P.E.**  
**Curriculum Vita**

**Contact Information**

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**Education**

Ph.D. Civil Engineering	May, 2003	Texas Tech University, Lubbock, TX
M. Environmental Engineering	May, 1999	Texas Tech University, Lubbock, TX
B.S. Environmental Engineering	May, 1999	Texas Tech University, Lubbock, TX

**Professional Experience**

Assistant Professor	2003-present	Department of Civil Engineering, Texas Tech University
Research Associate	1999-2003	Department of Civil Engineering, Texas Tech University
Research Assistant	1998-1999	Department of Civil Engineering, Texas Tech University
Student Assistant	1997-1998	Department of Civil Engineering, Texas Tech University
Environmental Scientist	1997-1997	Compliance Services Group, Lubbock, Texas

**Professional Certifications**

Licensed Professional Engineer in Texas, No. 96917

**Professional Affiliations**

American Society of Civil Engineers, Water Environment Federation, American Water Works, Association, American Society for Engineering Educators, Society of Automotive Engineers, Association of Environmental Engineering and Science Professors, American Society for Microbiology

**Awards and Achievements**

ASCE 2006 ExCEED New Faculty Excellence in Teaching Award  
Texas Tech Association of Parents, 2006 Hemphill Wells New Professor Excellence in Teaching Award  
Texas Tech Alumni Association's New Faculty Award for 2006, College of Engineering Recipient  
Recognized Faculty, Mortar Board Apple Polishing Banquet, 2006  
Recognized Faculty, College of Engineering, Honors Convocation, 2004 and 2006  
Second Place in the WEFTEC 2002 Poster Competition  
Chi Epsilon, Honors Association, Tau Beta Pi, Honors Association

**Research Experience**

*Research Grants*

Budek, A. and Morse, A. Handling Issues for Lead and Asbestos in Bridge Construction, TxDOT, 01/01/07-12/31/07, \$80,288.  
Morse, A. and Jackson W.A. RO Membrane Anti-Fouling Effectiveness Test, Lynntech Corporation, June 2006. \$1,847.

- Thompson, D. and Morse, A. Transport Spill Containment for Texas Highways, TxDOT, 9/1/2006 to 8/31/08, \$112,405.
- Morse, A., Jackson, A., and Rainwater, K. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications, NASA, 2005-2006 (Year 5), \$428,617.
- Morse, A. Recycling of Biofilm to Reduce Organic Carbon Limitations of the Early Planetary Base Wastewater, Texas Space Grant Consortium, New Investigator Program, 2005-2006, \$10,000.
- Morse, A., Pharmaceuticals and Personal Care Products in two unique scenarios in the El Paso Water Utilities, El Paso, TX, 2003-2004, \$15,000.
- Jackson, A., Morse, A., Rainwater, K., Anderson, T., Wiesner, T. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications, NASA, 2003-2004 (Year 4), \$538,763.
- Morse, A. and Jackson, A. Fate of a representative pharmaceutical in the environment, Texas Water Resources Institute, 2002-2003, \$5,000.
- Morse, A. and Jackson, A. Treatment of Perchlorate Contaminated Water Using Advanced Membrane Reactors, Texas Tech University, Water Resources Center, 2001-2002, \$12,000.
- Jackson, A., Rainwater, K. Morse, A., Muirhead, D., Anderson, T. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications, NASA, 2002-2003 (Year 3), \$459,164.

## Publications

- Diaz, T., Jackson, W.A., Morse, A. 2006. Alleviating Carbon Limitations of the Early Planetary Base Wastestream. Accepted SAE Transactions.
- Morse, A., Khatri, S., and Jackson, W.A. Treatment Efficiency and Stoichiometry of a High Strength Graywater, submitted Water Environment Research, accepted.
- Vairavan, B., Jackson, W.A., Green, C., and Morse, A. Identifying the Growth Limiting Physiochemical Parameter for Grows Grown in Biologically Treated Wastewater, submitted *Water, Air and Soil Pollution*.
- McLamore, E., Morse, A., and Jackson, W.A. Abiotic Transport in a Membrane Aerated Bioreactor, Submitted Bioengineering and Biotechnology.
- Ruiz, N., Jackson, W.A. and Morse, A. Ammonium-nitrogen loading rates in a microporous hollow-fiber membrane. submitted HABITATION - An International Journal for Human Support Research, in review.
- McLamore, E., Morse, A., Jackson, W.A. Bench-Scale Feed Tank Reactions in a Urine-Containing Wastestream, submitted HABITATION - An International Journal for Human Support Research, accepted.
- Padhye, L., Jackson, W.A.. and Morse, A. Kinetics for a membrane reactor reducing perchlorate, submitted Water Environment Research, accepted.
- Morse, A. and Jackson, A. 2004. Fate of Amoxicillin in two Water Reclamation Systems, *Water, Air and Soil Pollution*, 157 (1-4): 117-132.
- Morse, A. and Jackson, A. 2004. Antibiotic Resistance in three water reclamation systems, submitted to *Water, Air and Soil Pollution*, 159 (1):277-289.
- Diaz, T., Jackson, W.A., Morse, A. 2006. Alleviating Carbon Limitations of the Early Planetary Base Wastestream. Paper 2006-01-2887. International Conference on Environmental Systems (ICES), Norfolk, VA, SAE.
- Vairavan, B., Morse, A.N., Jackson, W.A., and Green, C. 2005. Chive Growth in Biologically Treated Early Planetary Base Wastewater. Paper 2005-01-2822. International Conference on Environmental Systems (ICES), Rome, Italy, SAE.
- Jackson, W.A. and Morse, A. (2005). Optimum Loading Rates and Design Limitations of Biological Reactors for Long-Term Space Habitation Waste Streams, Paper 2005-01-2979. International Conference on Environmental Systems (ICES), Rome, Italy, SAE.